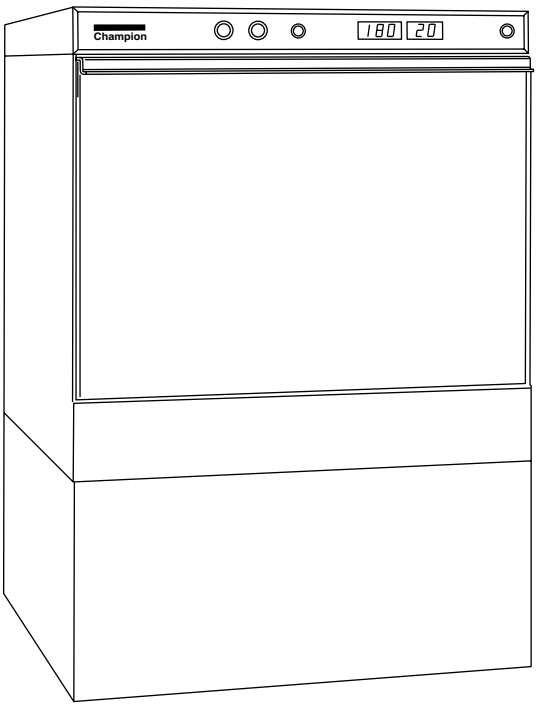
Champion®

The Dishwashing Machine Specialists

For machines beginning with Serial no. U-2239

Technical Manual



Model UH-200B Shown

Undercounter Dishwasher

Model

UH-200B High Temperature with Built-in Booster
Fresh Water Final Rinse

UH-200 High Temperature
Fresh Water Final Rinse

Machine Serial No.

June, 2005

Champion Manual P/N 113247 Rev. C

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Winston-Salem, North Carolina 27115-4149
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2674 N. Service Road
Jordan Station, Ontario, Canada L0R 1S0
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www.championindustries.com

Complete the information below for quick reference.

Model Number _____ Serial Number _____

Voltage and Phase _____

Champion Parts Supplier _____ Phone _____

_____

Champion Service Agency _____ Phone _____

_____

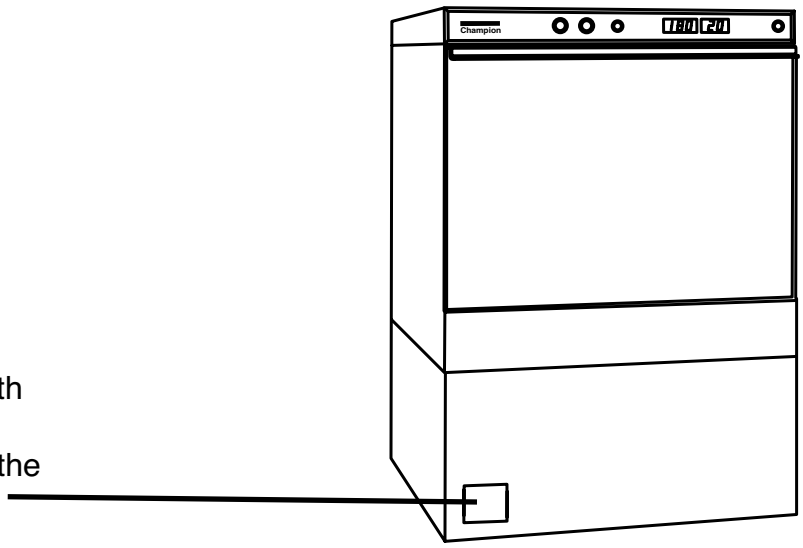
Champion (USA)
National Service Department

Phone: 1(336) 661-1556
1(800) 858-4477
Fax: 1(336) 661-1660

Champion (Canada)
National Service Department

Phone: 1(905) 562-4195
1(800) 263-5798
Fax: 1(905) 562-4618

Note: When calling to order parts, be sure to have the model number, serial number, voltage and phase of your machine.



Machine Data Plate with model & serial number located on the front of the lower panel.

REVISION RECORD

Revision Date	Revised Pages	Serial Number Effectivity	Comments
9/18/00	All	U-2239	First issue of manual and replacement parts lists
4/3/01	132	—	Removed UH100 rinse aid pump from drawing
5/1/01	127	U1938	Change touch pad P/N 112621 to 113292 and 900827
3/21/03	—	U2812	First machine to be shipped with Rinse Sentry system installed.
6/15/05	121		Corrected part number 104164 to 104165

SAFETY SUMMARY

Safety Symbols

- **The following symbols appear throughout this manual alerting you to potential hazards. Statements associated with each symbol are printed in *italics*.**

WARNING:
Warning statements indicate any condition or practice that could result in personal injury or possible loss of life.

CAUTION:
Caution statements indicate any condition or practice which, if not strictly observed or remedied, could result in damage to or destruction of the dishwasher.

NOTE:
Note statements indicate any condition or practice which, if observed, will help in the safe completion of a task.

General Safety Rules

- **The following general safety rules must be observed in addition to the specific cautions and warnings presented in this manual.**
- **Your Champion dishwasher uses hot water** to clean and sanitize a variety of wares. Machine surfaces and wares become hot during and immediately following normal operations. Operators should use caution when loading and unloading wares from the machine.
- **Operators must NOT bypass a safety interlock or control to operate the dishwasher.**
- **The service and maintenance instructions contained in this manual are intended for qualified service personnel.** These instructions assume that you are trained in basic electricity and mechanical theory. If you are not a trained technician, then do not attempt to adjust or repair the dishwasher as serious personal injury or damage to the dishwasher may result.

LIMITED WARRANTY

Champion Industries Inc. (herein referred to as Champion), P.O. Box 4149, Winston-Salem, North Carolina 27115, and P.O. Box 301, 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.] The warranty registration card must be returned to Champion within ten (10) days after installation. If warranty card 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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A701543 UH-200B **Single Phase**

A701542 UH-200 **Single Phase**

A701628 UH-200B **Three Phase**

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PART 1: GENERAL SPECIFICATIONS

1.1 About this Manual

All information, illustrations and specifications contained in this manual are based upon the latest product information available at the time of publication. Champion constantly improves its products and reserves the right to make changes at any time or to change specifications or design without notice and without incurring any obligation.

Manual Organization

This manual is divided into ten parts:

- Part 1, General Specifications, introduces this manual and the dishwasher models in general.
- Part 2, Installation, explains the installation of the dishwasher and describes the connection of utilities, chemical dispensing pumps, and initial start-up.
- Part 3, Daily Operation, explains operator controls and basic operation.
- Part 4, Cleaning and Maintenance, explains cleaning, deliming, preventive maintenance, and lubrication.
- Part 5, explains basic troubleshooting for the operator.
- Part 6, explains basic troubleshooting for the service technician.
- Parts 7-8, provide detailed repair procedures for the trained service technician.
- Part 9, contains parts diagrams and parts lists.
- Part 10, contains electrical schematics.

NOTE:
Unless noted otherwise, dimensions, capacities, temperatures, etc., given in this manual are **U.S. Customary Measures** *and the* **Metric Equivalents** *of the U.S. customary measures.*

1.2 Model Numbers

UH-200B

The UH-200B is a high temperature (180°F/82°C) sanitizing machine with a built-in booster. (40°F/22°C) rise booster is standard requiring a minimum incoming water supply temperature of 140°F/60°C. A (70°F/39°C) rise booster is available which requires a minimum incoming water supply temperature of 110°F/43°C. The UH-200B is a fresh water rinse machine. Final rinse water enters the final rinse spray system under line pressure. A portion of the final rinse water is retained for the next wash cycle.

UH-200

The UH-200 is a high temperature (180°F/82°C) sanitizing machine without a built-in booster. It requires a minimum incoming water supply temperature of 180°F/82°C. The UH-200 is a fresh water rinse machine. Final rinse water enters the final rinse spray system under line pressure. A portion of the final rinse water is retained for the next wash cycle.

1.3 Standard Equipment

All Models

- 304 stainless steel construction
- Interchangeable upper and lower spray arms
- 3/4 Hp pump/motor assembly
- Top mounted slide-out control cabinet
- Solid state electronic controls
- Pumped drain
- Flexible fill and drain hoses
- Door safety switch
- Easily removable scrap screen
- Dishracks (peg rack and flat bottom rack)

UH-200B

- 40°F/22°C rise booster
- Tank heater
- Low water tank heat protection
- Top and side panels

UH-200

- Tank heater
- Low water tank heat protection
- Top and side panels

1.3 Options

UH-200B

- 70°F/39°C rise booster
- Detergent pump kit (P/N 900799)
- Rinse aid pump kit (P/N 900803)
- Pressure reducing valve 3/4" (P/N 107550)

UH-200

- Detergent pump kit (P/N 900799)
- Rinse aid pump kit (P/N 900803)
- Pressure reducing valve 3/4" (P/N 107550)

All Models

- 6" Legs (set of 4) (P/N 324087)

1.4 Dimensions, Capacities, and Rough-in

Dimensions (All Models)

Height 33-3/4" [858mm]
Width 23-7/8" [607mm]
Length 23" [584mm]

Volume crated: 15 cu. ft. [.4 cu.m]
Approx. Shipping
weight crated: 215 lbs [98 Kg]

Total Cycle Time

UH-200B, UH-200 90 seconds

Racks per hour (NSF rated)

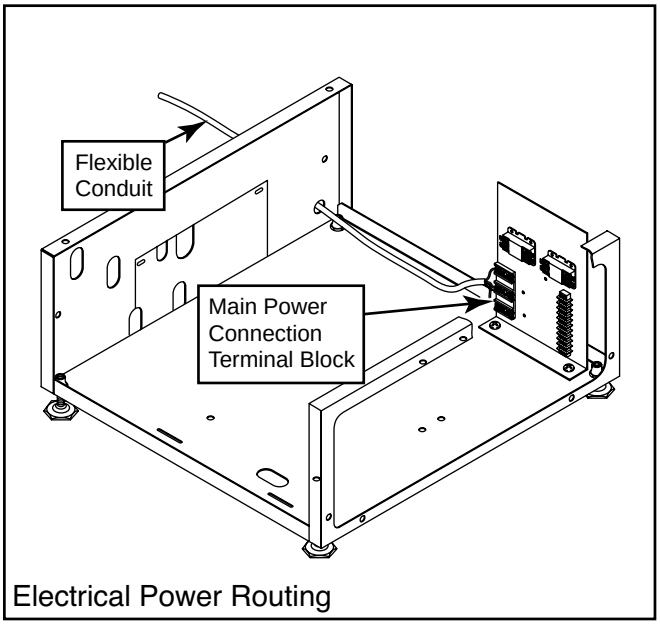
UH-200B, UH-200 30 racks/hr.

Wash Tank Capacities

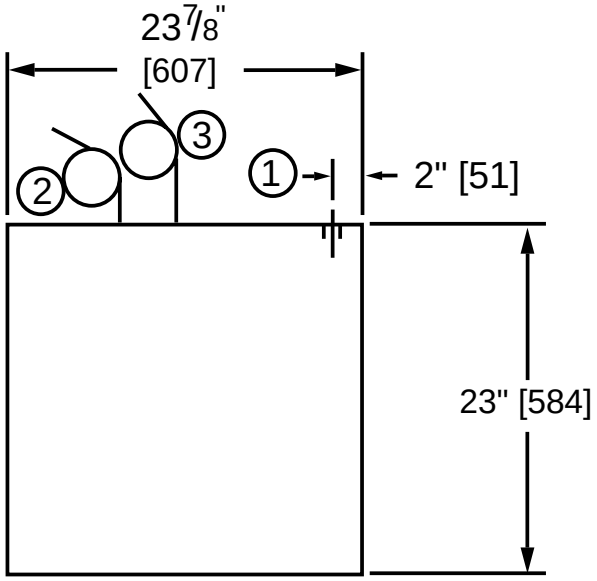
UH-200B, UH-200 ≅ 3.6 US gal. (14 liters)

Water Usage (per rack)

UH-200B, UH-200 1.1 US gal. (4.2 liters)



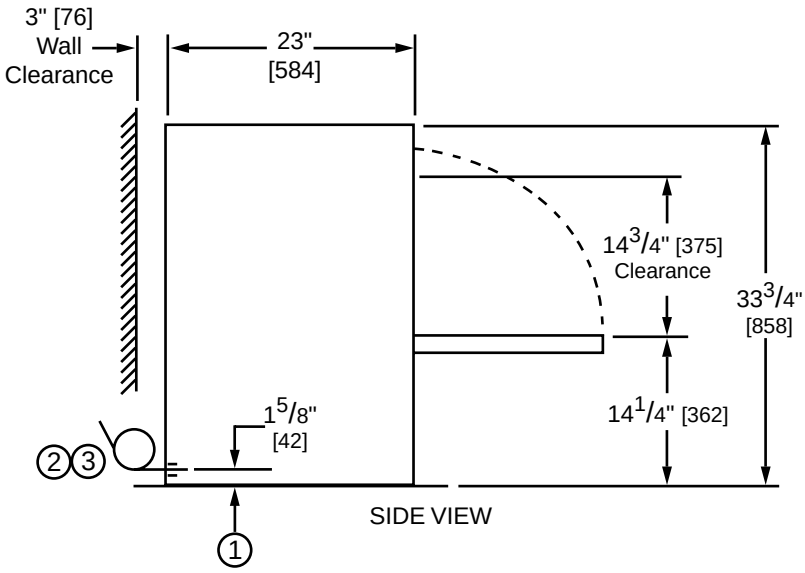
Electrical Power Routing



PLAN VIEW

Model UH-200B
Model UH-200

1.4 Dimensions and Capacities, and Rough-in



Model UH-200B
Model UH-200

① **Electric**

② **Water**

③ **Drain**

WARNING:
Refer to Part 2: Installation, Sections 2.1 through 2.9, before connecting the dishwasher to utilities.

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PART 2: INSTALLATION

2.1 Introduction

In This Part—

- Unpacking the dishwasher
- Permanent Placement
- Making Utility Connections
- Installing Optional Components

2.2 Unpack the Dishwasher

Your dishwasher was completely assembled, inspected, and thoroughly tested at our factory before shipment to your installation site.

- The dishwasher is shipped on a single pallet.
- Optional components may have been shipped separately.
- Check your packing list thoroughly.

NOTE:

Immediately after unpacking your machine, inspect for any shipping damage. If damage is found, save the packing material and contact the carrier immediately.

BE SURE TO COMPLETE AND RETURN THE WARRANTY CARD INCLUDED WITH YOUR MACHINE.

NOTE:

The installation of your dishwasher must meet all applicable health and safety codes and conform to good trade practice.

Perform the following steps to unpack the dishwasher:

1. Remove protective wrap and hold downs from the pallet.
2. Inspect for any shipping damage. If damage is found, save the packing material and contact the carrier immediately.
3. Check the interior of the dishwasher for the following items stowed inside:
   - 1 set of dishracks
   - Upper and lower spray arm assemblies
   - Round scrap screen
   - Rubber pads for leveling feet (set of 4)
   - 3/4" line strainer (P/N 110768) (Model UH-200B, UH-200 Only)
   - Warranty information packet
4. Remove the dishwasher from the skid.
5. Move the dishwasher to its permanent location.

   Refer to Section 2.3, Permanent Placement.

2.3 Permanent Placement

Special Tools —

- Bubble level (3 ft.)

Perform the following steps to place the dishwasher in its permanent location. Refer to the machine diagrams in Section 1.4, Dimensions and Capacities, page 4-5.

1. Before moving the dishwasher into position, inspect the location site to ensure the electrical, plumbing, and ventilation services (if required) are provided in the correct locations. Compare the site connections with the dishwasher to ensure they will match when the machine is set in its permanent location.

NOTE:
Some local codes may require that the dishwasher be sealed to the floor with silicon or comparable sealing method.

2. Lift the dishwasher and adjust the leveling feet out.
3. Position dishwasher in its permanent location.
   - Minimum clearance between the rear of the machine and back wall is 3" [76mm].
   - Minimum height of the machine with adjustable feet turned in fully is 33-3/4" [858mm].
4. Place a 3 ft. level on top of the dishwasher or inside the dishwasher on the track assembly to level the dishwasher front to back. Adjust level by turning the adjustable feet. Level side to side with the level placed on the top of the dishwasher.
5. Pull the dishwasher out far enough to gain access to the rear and prepare utility connections. A removable rear access door is located at the back of the machine.
6. Install the rubber pads on the leveling feet prior to returning machine to its permanent position.

2.4 Water Connections

The following warning and attention statements apply to all dishwasher models.

WARNING:
The installation of this unit must conform to local codes or, in the absence of local codes, to all National Codes governing plumbing, sanitation, safety and good trade practices.

!! ATTENTION INSTALLER !!

The dishwashers described in Section 2.4.1 are fitted with 6 ft. [1829mm], 1/2" I.D. flexible fill hoses located at the rear of the machine.

Make sure supply hose does not kink, resulting in a water flow restriction.

NOTE:
Your plumbing installation must allow the machine to be pulled out for repair.

2.4.1 (Water Connections) Models UH-200B, UH-200

Refer to the Table below for minimum water supply requirements.

Model	Minimum Incoming Water Supply Temperature	Minimum-Maximum Water Supply Flowing Pressure*
UH-200B with 40°F/22°C Booster	140°F/60°C	20-22 PSI (138-151 kPa)
UH-200B-70 with 70°F/39°C Booster	110°F/43°C	20-22 PSI (138-151 kPa)
UH-200 without Booster	180°F/82°C	20-22 PSI (138-151 kPa)

***Flowing pressure is observed when the fill water solenoid valve is open while the machine is in a final rinse operation. Refer to Part 3, Operation, Section 3.21. for a description of the front panel display final rinse pressure readings.**

1. If flowing pressure exceeds 22 PSI/151kPa, a pressure reducing valve, PRV, must be installed in the incoming water supply, and adjusted to the min/max listed above. The PRV is supplied by others or may be purchased (unmounted) from Champion.
2. Champion supplies a 3/4" line strainer (unmounted) and shipped inside the dishwasher. The line strainer must be installed in the water supply line upstream from the PRV.
3. A 3/4" manual shutoff valve (supplied by others) should be installed in the water supply line upstream from the PRV and line strainer. The valve must be the same size as or larger than the water supply line. The shutoff valve allows for servicing of the machine.
4. The dishwasher is supplied with a 1/2" I.D., 6 ft. [1829mm], reinforced flexible hose. The hose is fitted with a 3/4" female garden hose fitting.

CAUTION:
The reinforced fill hose supplied with the dishwasher is designed for high pressure and high temperature application and should never be replaced with common garden hose.

5. Connect a 3/4" I.D. minimum copper water supply line fitted with a 3/4" male garden hose fitting (supplied by others). Make sure the water supply line is flushed out before making connection to the machine.

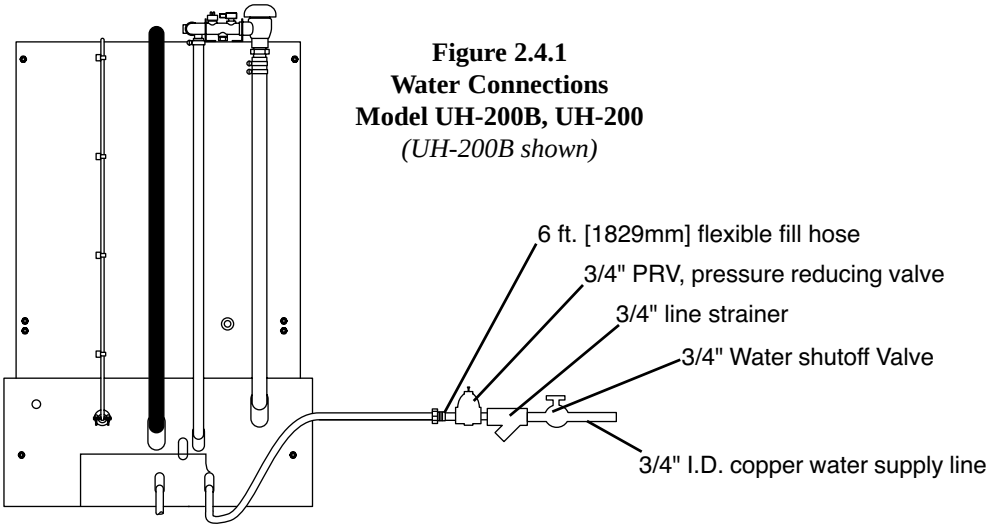

Figure 2.4.1
Water Connections
Model UH-200B, UH-200
(UH-200B shown)

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2.5 Drain Connections

The following instructions apply to all dishwasher models.
Refer to Fig. 2.5.3 below.

WARNING:

The installation of this unit must conform to local codes or, in the absence of local codes, to all National Codes governing plumbing, sanitation, safety and good trade practices.

!! ATTENTION INSTALLER !!

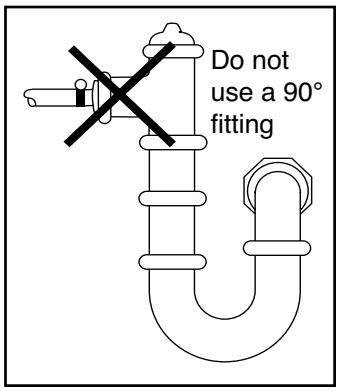
All dishwashers are fitted with 6 ft. [1829mm], 5/8" I.D. flexible reinforced drain hoses located at the rear of the machine.

Make sure drain hose does not kink, resulting in a water flow restriction.

NOTE:

Your plumbing installation must allow the machine to be pulled out for repair.

1. The dishwasher drain hose may be routed to an indirect floor drain (not shown), or connected directly to a sink drain (see Fig. 2.5.3). The installer must follow all local plumbing, sanitary, and safety codes where applicable. Local codes may vary from the recommended connections shown in Fig. 2.5.3 below.
2. Connect the 5/8" I.D. flexible reinforced drain hose supplied to a 1-1/2" wye (Y) drain fitting. Use a 5/8" hose adapter (supplied by others).
3. **Do not reduce the diameter of the drain hose connection or add additional length to the drain hose.**
4. **Do not connect the drain hose to a 90° drain fitting.**



CAUTION:

The drain must have a minimum flow capacity of 15 US gal. per min [54 liters per minute], and 12.5 Imperial gallons per minute.

5. The maximum height of the drain or the drain hose should not exceed 3 ft. [915mm].

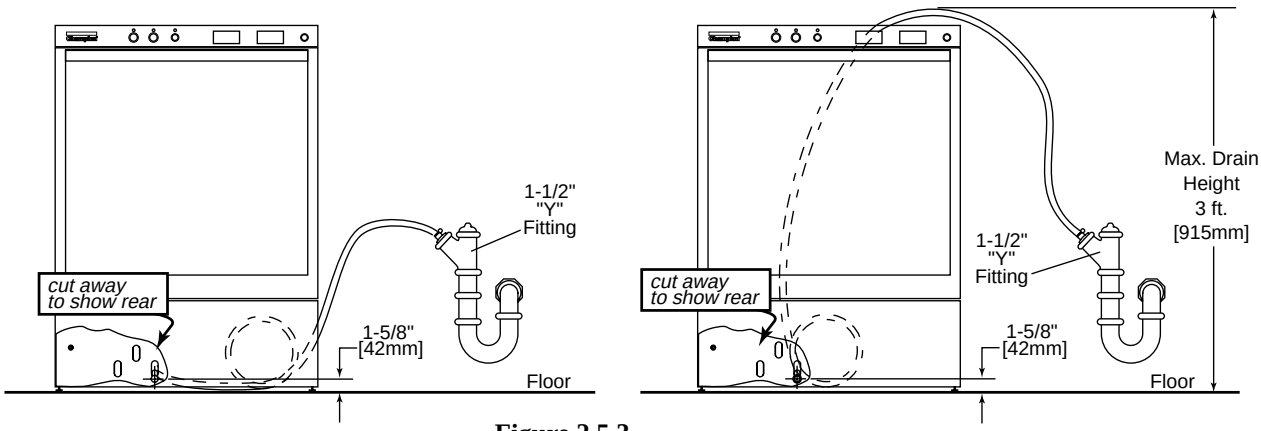


Figure 2.5.3
Recommended Direct Drain Connections for All Models

2.6 Installation and Service Switch (Model UH-200B Only)

The following instructions apply to Model UH-200B which is equipped with a Champion built-in booster.

The Booster Installation and Service Switch is provided to fill the built-in booster tank with water prior to placing the dishwasher in service for the first time. It can also be used by service technicians to interrupt 120VAC control power to service the machine.

!! ATTENTION INSTALLER !!

CAUTION:
Failure to fill the booster before operating the dishwasher will cause damage to the booster heater components and will void the machine warranty.

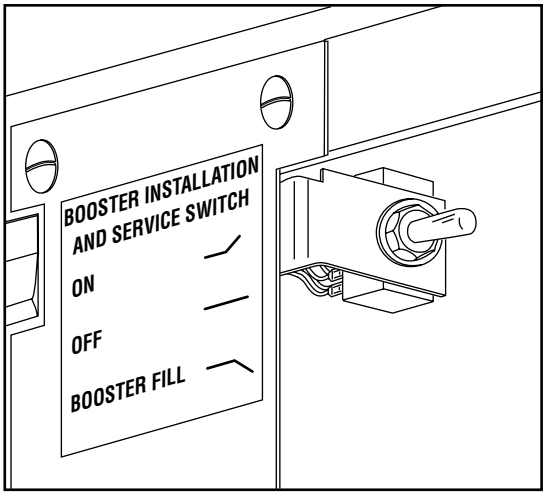


Figure 2.6.1
Installation and Service Switch
Model UH-200B Only

NOTE:
Switch is located behind the lower front panel on the left front of the dishwasher.

NOTE:
Perform the following procedure after all plumbing and electrical connections have been made. Make sure the interior of the machine is clean and free of debris.

1. Remove screws holding lower front panel. Lift panel up, forward and off.
2. Push and hold the switch in the BOOSTER FILL position until you hear water entering the wash tank of the machine.

   DO NOT FILL THE WASH TANK WITH WATER.
3. Release the switch.
4. Push the switch up to the ON position.
5. Booster fill is complete.

2.7 Electrical Connections (Single Phase)

2.7.1 Models UH-200B Only

WARNING:
The installation of electrical supplies and controls must conform to local codes or, in the absence of local codes, the National Electrical Code and good trade practices.

WARNING:
When working on the dishwasher, disconnect the electrical service and place a red tag at the disconnect switch to indicate work is being done on that circuit.

!! ATTENTION INSTALLER !!

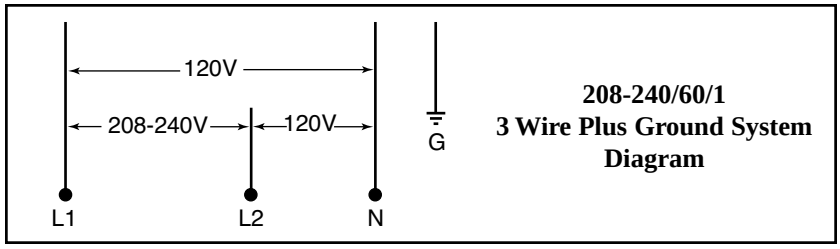
Use flexible conduit to connect incoming power to the dishwasher to allow the machine to be pulled out 5 ft. [1524mm] for servicing. A service loop is recommended. Service enters at the right rear corner of the machine. The main connection block is located on the right side of the dishwasher. See Section 1.4, page 4.

1. **A qualified electrician** must compare the electrical power supply with the machine electrical specifications stamped on the MACHINE ELECTRICAL CONNECTION PLATE before connecting to the incoming service through a fused disconnect switch or circuit breaker (supplied by others). The plate is located near the main terminal block.

CAUTION:
DO NOT CONNECT *model UH-200B to a 120VAC circuit or to a 208-240VAC (2 wire system) utilizing two power wires plus a ground.*

2. Model UH-200B utilizes a 208-240VAC (3 wire plus ground system) consisting of three power wires which includes a current carrying neutral wire. A fourth wire for machine ground also must be provided.

Refer to the diagram and table below for UH-200B power requirements.



208-240/60/1
3 Wire Plus Ground System Diagram

Voltage Hz Phase	40°F/22°C Rise Booster		70°F/39°C Rise Booster	
	Machine FLA	Min. Wire Amp/ Max. Fuse Size	Machine FLA	Min. Wire Amp/ Max. Fuse Size
208/60/1	44.4	50/50	58.9	60/60
220/60/1	46.4	50/50	61.7	70/70
230/60/1	48.1	50/50	64.0	70/70
240/60/1	49.8	50/50	66.4	70/70

Single Phase Power Requirements
Model UH-200B Only

2.7 Electrical Connections (Single Phase) Cont.

2.7.2 Model UH-200 Only

WARNING:
The installation of electrical supplies and controls must conform to local codes or, in the absence of local codes, the National Electrical Code and good trade practices.

WARNING:
When working on the dishwasher, disconnect the electrical service and place a red tag at the disconnect switch to indicate work is being done on that circuit.

!! ATTENTION INSTALLER !!

Use flexible conduit or cable to connect incoming power to the dishwasher to allow the machine to be pulled out 5 ft. [1524mm] for servicing. A service loop is recommended. Service enters at the right rear corner of the machine. The main connection block is located on the right side of the dishwasher. See Section 1.4, page 4.

1. **A qualified electrician** must compare the electrical power supply with the machine electrical specifications stamped on the MACHINE ELECTRICAL CONNECTION PLATE before connecting to the incoming service through a fused disconnect switch or circuit breaker (supplied by others). The plate is located near the main terminal block.

2. Model UH-200 utilizes a 120VAC power supply.
   Power cord and plug are supplied by others.

Voltage Hz Phase	Machine FLA	Min. Wire Ampacity/ Max. Fuse Size
120/60/1	23.4	25/25

Single Phase Power Requirements
Models UH-200 Only

2.8 Electrical Connections (Three Phase)

2.8.1 Model UH-200B Only

WARNING:
The installation of electrical supplies and controls must conform to local codes or, in the absence of local codes, the National Electrical Code and good trade practices.

WARNING:
When working on the dishwasher, disconnect the electrical service and place a red tag at the disconnect switch to indicate work is being done on that circuit.

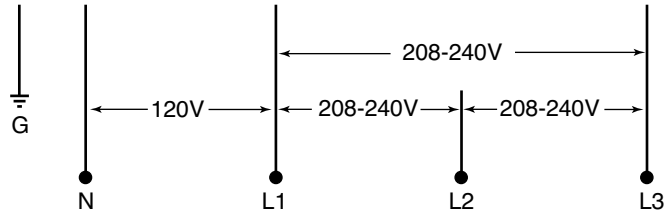
!! ATTENTION INSTALLER !!

Use flexible conduit to connect incoming power to the dishwasher to allow the machine to be pulled out 5 ft. [1524mm] for servicing. A service loop is recommended. Service enters at the right rear corner of the machine. The main connection block is located on the right side of the dishwasher. See Section 1.4, page 4.

1. **A qualified electrician** must compare the electrical power supply with the machine electrical specifications stamped on the MACHINE ELECTRICAL CONNECTION PLATE before connecting to the incoming service through a fused disconnect switch or circuit breaker (supplied by others). The plate is located near the main terminal block.
2. Model UH-200B utilizes a 208-240VAC (4 wire plus ground system) consisting of four power wires which includes a current carrying neutral wire.
   A fifth wire for machine ground also must be provided.

CAUTION:
Before connecting power to the machine *check that the voltage between the power wire chosen and the current carrying neutral does not exceed 120VAC ± 15VAC.*

Refer to the diagram and table below for UH-200B power requirements.



208-240/60/3
4 Wire Plus Ground System
Diagram

Voltage Hz Phase	40°F/22°C Rise Booster		70°F/39°C Rise Booster	
	Machine FLA	Min. Wire Amp/ Max. Fuse Size	Machine FLA	Min. Wire Amp/ Max. Fuse Size
208/60/3	32.0	35/35	40.3	45/45
220/60/3	33.2	35/35	42.0	45/45
230/60/3	34.3	35/35	43.5	45/45
240/60/3	35.4	40/40	45.0	50/50

Three Phase Power Requirements
Model UH-200B Only

2.9 Chemical Connections

2.9.1 General (All Models)

!! ATTENTION DISHWASHER OWNER !!

Your dishwasher is designed to work best with **liquid commercial dishwashing chemicals**. **Detergents must be a commercial non-foaming liquid.** Champion strongly recommends that you contact a qualified chemical supplier to supply these products and to setup your machine for the first time.

Your machine was shipped with the chemical dispensing adjustments set at their minimum settings, because of variations in chemical products. As a result of these variations, Champion is not able to advise you on the proper dispenser settings for any particular product nor can we recommend one supplier over another. You may wish to consult your equipment dealer or your Champion authorized service agent for help in contacting a chemical supplier in your area.

NOTE:
Residential automatic dishwashing detergents and rinse aids found in most grocery stores are designed to work in machines with cycles of 15 minutes or longer. Your Champion dishwasher cycle is complete in less than 3 minutes.

Champion does not recommend the use of residential automatic detergents and rinse aid products. These products may accumulate in your machine and produce poor washing results.

CAUTION:
Never use residential non-automatic dishwashing detergents such as **JOY™** *or* **DAWN™***, or any other liquid designed for the handwashing of wares, in your machine. Extreme foaming inside your Champion dishwasher will cause operation problems.*

2.9.1 General (All Models) Cont.

NOTE:
*The detergent and rinse aid chemical dispensing pumps are **optional** equipment on Models UH-200B and UH-200 dishwashers. The pumps may have been specified when the dishwasher was ordered and installed at the factory.*

The following instructions assume that your dishwasher was delivered to your installation site with the dispensing pumps installed and explains the procedures for placing the chemical dispensing system in service for the first time.

If optional pump(s) are not installed, Refer to Section 2.10, Installing Optional Chemical Pumps, to install the chemical pump(s) before proceeding with Section 2.9.2.

!! ATTENTION CHEMICAL SUPPLIER !!

WARNING:
*The instructions contained in Section 2.9.2 require adjustments to the **Fill/Chemical Dispenser Circuit Board** located inside the top mounted slide-out control cabinet. When working on the dishwasher, disconnect the electrical service and place a red tag at the disconnect switch to indicate work is being done on that circuit.*

NOTE:
Refer to Part 7, Solid State Circuit Board Set-up and Repair, Section 7.3.5, page 58, Fill/Chemical Dispenser Board, before making any adjustments to the dispenser board settings.

.

Perform the following steps in preparation for making dispenser pump adjustments.

1. Loosen – do not remove – the (2) retaining screws at the bottom of the lower front access panel. Lift the lower panel up and forward to remove.
2. Check for chemical dispensing pump(s) located at the front of the machine base.
3. Refer to Fig. 2.9.1.
   Open the dishwasher door.
4. Locate the two screws, one in each corner of the top hood, that retain the slide-out control cabinet.
5. Remove the screws and pull the slide-out cabinet forward to gain access to the Fill/Chemical Dispenser Circuit Board.

(continued on next page)

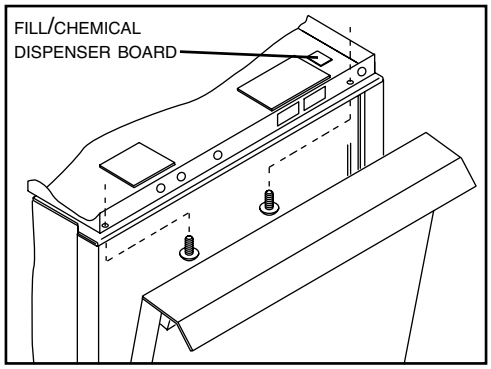


Figure 2.9.1
Control Cabinet
Retaining Screws

2.9 Chemical Connections (Cont.)

2.9.1 General (All Models) Cont.

!! ATTENTION CHEMICAL SUPPLIER !! *(continued from previous page)*

6. Refer to Fig. 2.9.2 showing the Fill/Chemical Dispenser Circuit Board.
7. There are (4) adjustable potentiometers.
   - Fill- 2 to 40 seconds
   - Detergent- 1 to 30 seconds
   - Sanitizer- 1 to 30 seconds
   - Rinse aid- 1 to 30 seconds
8. Two dots on one end of the potentiometer serve as the dial pointer.
9. Turn CW to increase time setting.

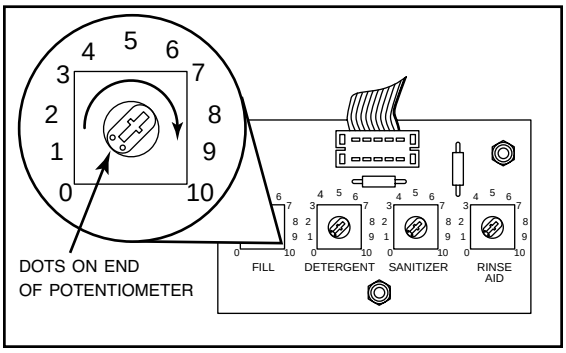
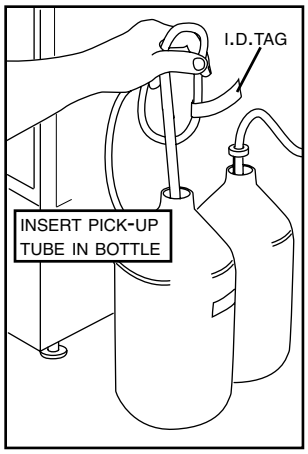


Figure 2.9.2
Fill/Chemical Dispenser Circuit Board

NOTE:
The graduated numbers (0-10) around the potentiometers ***DO NOT*** *correspond to time settings. Use them for position reference only, not an actual time setting indication.*

Refer to Section 2.9.2 for specific adjustments and chemical priming instructions for your model dishwasher.

10. Refer to Fig. 2.9.3. showing the recommended chemical bottle placement. Bottles may be placed on either side of the dishwasher.
11. Bottles must be placed no farther than 6 ft. [1829mm] from the machine.
12. I.D. tags identify chemical tubing.
13. Pick-up tubes are inserted directly in chemical bottles.



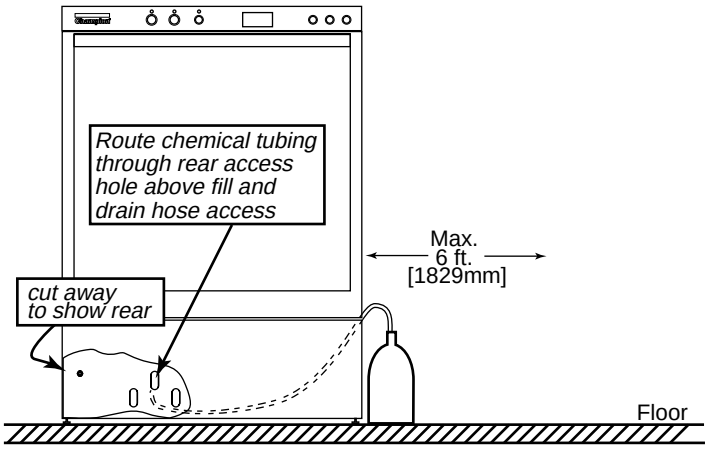


Figure 2.9.3
Chemical Bottle Placement

2.9.2 Models UH-200B, UH-200 (Chemical Adjust and Prime)

The following chemical adjustment information applies to UH-200B and UH-200 only. Refer to Section 2.9.1, page 18, for a description of the dispenser adjust potentiometers.

1. **The data below will assist in adjusting the time settings for the dispenser pumps:**
   - The wash tank holds 3.6 US gal. [13.6 liters] of water.
   - Initial fill receives three doses of detergent from the detergent pump.
   - Detergent is injected in the wash tank through a fitting at the rear of the wash tank.
   - Detergent is injected during the first 1 to 16 seconds of the wash cycle.
   - The final rinse utilizes 1.1 US gal [4.2 liters] of water per rack.
   - Rinse aid is injected into the final rinse manifold. The manifold is located in the top left rear corner of the dishwasher.
   - Rinse aid is injected during the last 11 seconds of the final rinse cycle.

   Dispenser pump output rates:
   - Detergent- 69 ml/min.
   - Rinse aid- 35 ml/min.

   Detergent time adjustment- Turn the POT CW to increase run time from the beginning of the wash cycle.

   Rinse aid time adjustment- The final rinse cycle is 11 seconds. Turning the POT CW moves the pump start point backward from the end of the rinse cycle.

2. **The following describes the operation of the chemical prime button. Refer to Fig. 2.9.4 below.**
   - The POWER button must be pushed ON to operate the prime button.
   - The PRIME button is enabled whenever the temperature display is active.
   - The PRIME button operates both dispensing pumps at the same time.

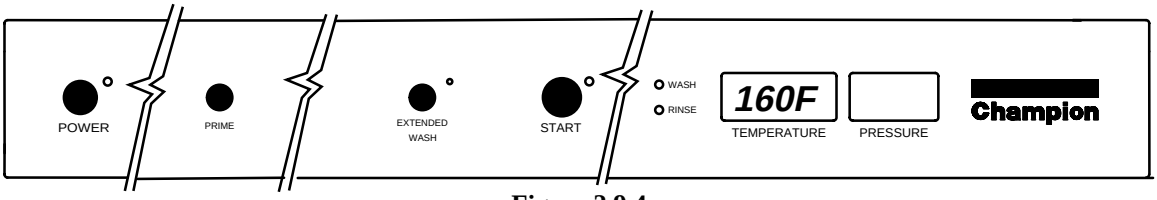


Figure 2.9.4
UH-200B, UH-200 Touchpad/Display

To prime the detergent and rinse aid pumps:

3. Insert pick-up tubes in the chemical bottles.
4. Push POWER button ON.
   Machine fills. Temperature is displayed.
5. Open dishwasher door and observe detergent injection point on rear wall of machine.
6. Push and hold PRIME button until detergent is observed entering the machine.
7. Push and hold the PRIME button and observe chemical flowing at the rinse aid injection point located in the final rinse manifold.
8. Priming is complete.

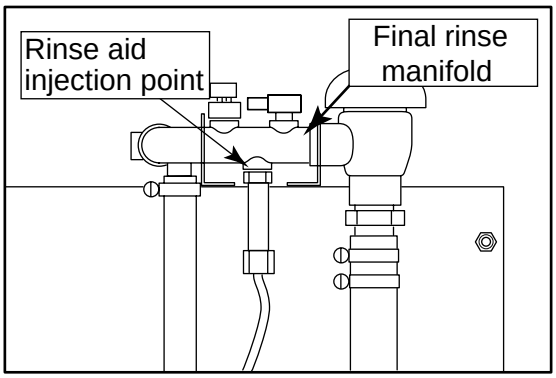


Figure 2.9.5
Rinse aid injection point
Models UH-200B, UH-200

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2.10 Installing Optional Chemical Pumps

Perform the following steps to install the optional detergent and rinse aid pumps for the models in Section 2.10.1.

WARNING:
When working on the dishwasher, disconnect the electric service and place a red tag at the disconnect switch to indicate work is being done on that circuit.

2.10.1 Models UH-200B, UH-200

Refer to Fig. 2.10.1 at right.
The illustration shows the typical installation of the detergent and rinse aid pumps. Pump kits contain the necessary parts for field installation and are available from your authorized Champion parts supplier.

• The detergent pump is a peristaltic pump enclosed in a black housing.

• The rinse aid pump is a peristaltic pump enclosed in a black housing..

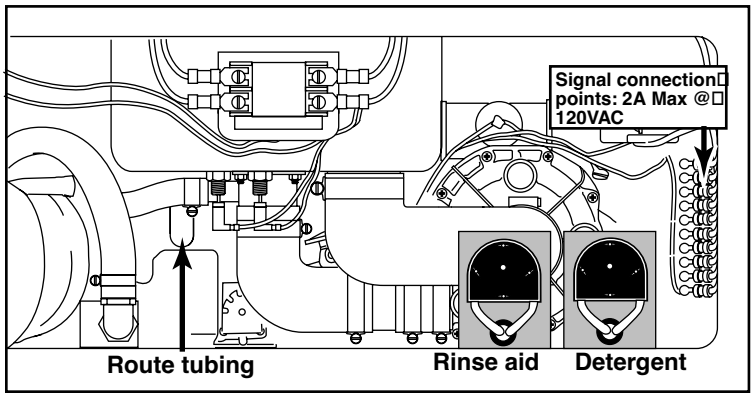


Figure 2.10.1
UH-200B, UH-200 Chemical Pumps

To install the detergent pump:

1. Remove the lower front access panel.
2. Mount the pump on the machine base with two screws.
3. Route the detergent tubing out the rear of the machine through the access hole located above and between the fill and drain hoses.
4. Pump rotation is clockwise. The supply tube connects on the left side of the pump the discharge tubing connects on the right side of the pump.
5. Remove the 1/8" plug at the rear of the machine and replace with the 90° detergent fitting. Apply teflon tape to the fitting threads to ensure a watertight seal.

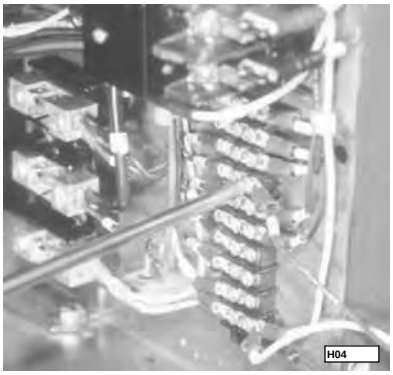
(continued on next page)

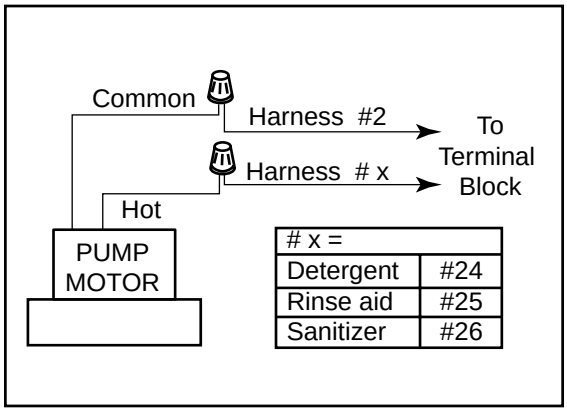
2.10.1 Models UH-200B, UH-200

(continued from previous page)

To install the detergent pump (continued):

6. Connect the detergent tubing from the outlet of the pump to the 90° fitting
7. Connect the pump motor wires to the harness wires supplied in the installation kit.
8. Refer to Fig. 2.10.2 below.
   Connect the wiring harness to the 10 pin terminal block located on the lower right side of the machine. Connect the #2 harness wire to the Common (#2) terminal on the block. Connect the #24 wire to the Detergent #24 terminal on the block.
9. Refer to Section 2.9.2, page 19, for pump priming and adjustment procedures.
10. Check all connections for leaks.
11. Installation is complete.

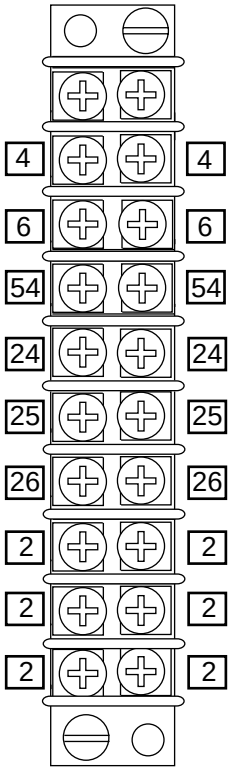




!!ATTENTION INSTALLER!!

If you are installing pumps not supplied by Champion then the chemical connection points are limited to 2 AMP maximum.

2 AMP maximum amp load per pump; 6 AMP total amp load.



24	DET
25	R/A
26	SANI
2	COM
2	COM
2	COM

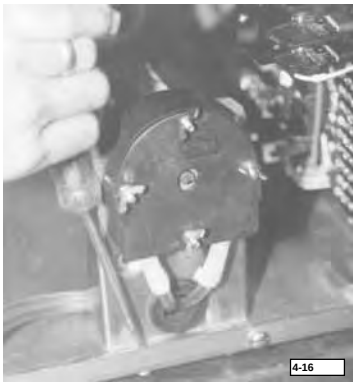
Figure 2.10.2
Chemical Pump Connection Terminal Block
(Lower right side of machine base)

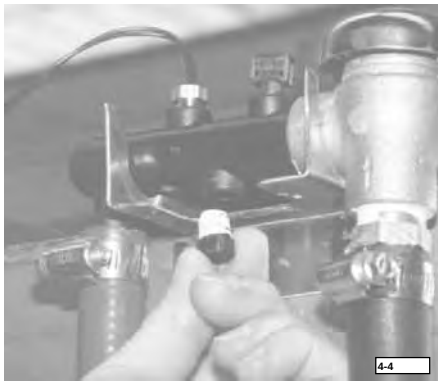
2.10 Installing Optional Chemical Pumps (Cont.)

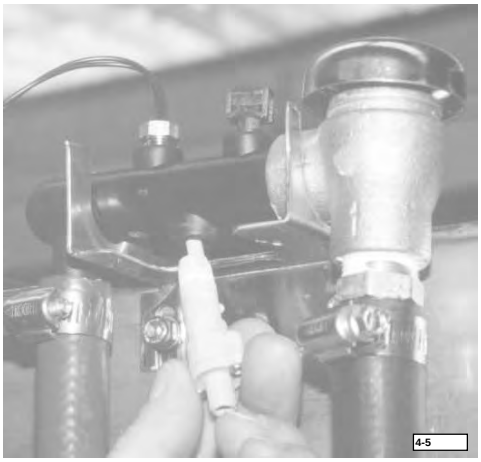
2.10.1 Models UH-200B, UH-200

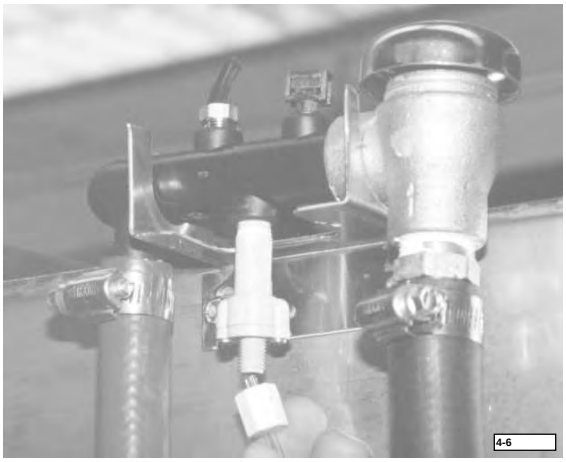
To install the rinse aid pump:

1. Remove the lower front access panel.
2. Mount the pump on the machine base with two screws.
3. Route the rinse aid tubing out the rear of the machine through the access hole located above and between the fill and drain hoses.
4. Pump rotation is clockwise. The supply tube connects on the left side of the pump; the discharge tubing connects on the right side of the pump.
5. Remove the 1/8" plug located in the final rinse manifold.
6. Install the rinse aid check valve. Apply teflon tape to the valve threads to ensure a seal.
7. Route the rinse aid tubing to the rinse manifold and connect to the check valve.
8. Connect the pump motor wires to the harness wires supplied in the kit with wire nuts.
9. Refer to Fig. 2.10.2 on page 22.
   Connect the wiring harness to the 10 pin terminal block located on the lower right side of the machine. Connect the #2 harness wire to the Common (#2) terminal on the block. Connect the #25 wire to the rinse aid #25 terminal on the block.
10. Refer to Section 2.9.2, page 19, for pump priming and adjustment procedures.
11. Check all connections for leaks.
12. Installation is complete.









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2.11 Initial Start-up (All Models)

Review Part 2, Installation, Sections 2.2 through 2.10, to ensure that all plumbing, electrical, and chemical connections have been properly made by qualified personnel.

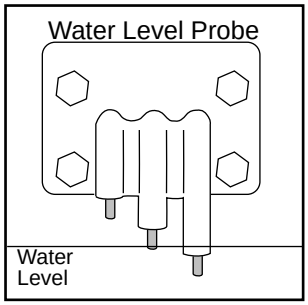
☐ Plumbing connections are the proper size and supply pressures are correct.
- Water supply is on.
- Drains are correct size and functional.

☐ Electrical power requirements and wiring connections are correct.
- Power is on at the main service panel.

☐ Chemical Dispensing systems are installed and chemical supplies replenished.
- Detergent and rinse aid for Models UH-200B, UH-200.

Review Part 3, Daily Operation, Sections 3.1 through 3.5, for instructions on the operation of your dishwasher, then perform the following checks for your model machine:

2.11.1 Models UH-200B, UH-200 (Initial Start-up)



☐ Push the POWER button.
- 888F, and LED's flash on display
- No error codes (E0, E1, E2, E3)
- Machine fills
- Detergent pump runs (if applicable)

☐ Open door and check water level in tank
- Water level at middle sensor of water level probe. Probe located on interior left side of dishwasher.
- Close door.
- Check for leaks around dishwasher.

☐ Run a cycle without dishes to bring the machine to operating temperature.
- 150°F/66°C

☐ Push START button.
- Check for leaks.
- Dishwasher completes normal cycle.
- Final rinse temperature reaches minimum of 180°F/82°C.

☐ Push POWER button.
- Displays flash 888F
- Dishwasher completes normal auto-shutdown cycle.
- Check for leaks in drain piping.

(See next page)

2.11.1 Models UH-200B, UH-200 (Initial Start-up) (Cont.)

☑ Push the POWER button.
- Machine fills again.

☑ Push START button.
- Machine begins cycle

☑ Push EXTENDED WASH button.
- Wash cycle holds in continuous wash mode
- Extended wash LED illuminates.

☑ Push EXTENDED WASH button.
- Wash cycle returns to normal wash mode
- Extended wash LED goes out.
- Normal cycle completed.

☑ Push POWER button.
- Displays flash 888F
- Dishwasher completes normal auto-shutdown cycle.
- Initial Start-up is complete.

PART 3: DAILY OPERATION

3.1 Introduction

In This Part—

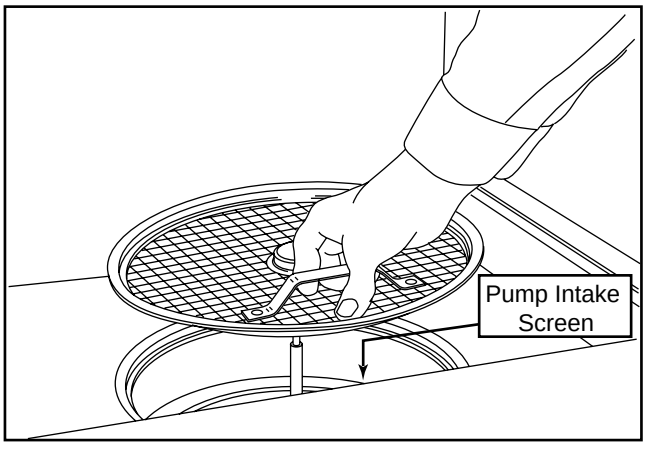
- Preparing your Dishwasher
- Dishwasher Loading
- Description of Operator Controls
- Basic Operation

3.2 Preparing your Dishwasher (All Models)

Review Part 2, Installation, and check your site to ensure that all plumbing and electrical connections have been properly made by qualified personnel.
Check the installation of chemical dispensing systems, if applicable.

Perform the following steps to prepare your machine for operation.

1. Check the exterior of the machine for any foreign material and remove.
2. Check the interior of the machine and remove any foreign material.
3. Remove the lower spray arm(s) and the round scrap screen.
4. Make sure the pump intake strainer located in the bottom of the sump is in place and clean.
5. Replace the round scrap screen and clean if required.
6. Make sure the upper and lower spray arms are in place and nozzles are clean.
   The arms are held in place by knurled retaining screws. The arms are interchangeable.
   - **Models UH-200B, and UH-200 have separate upper and lower wash and upper and lower rinse arms.**
7. Check the chemical supply containers, and fill as required.
8. Open the water supply valve. Check for leaks and take corrective action as required.
9. Check the drain and/or drain connections to ensure drains are functional.
10. Turn the main power on at the breaker panel or fused disconnect switch.

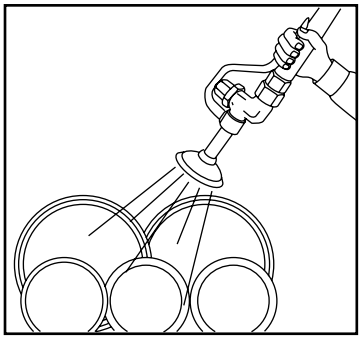


All Models

3.3 Loading your Dishwasher (All Models)

Perform the following steps to prepare and load your wares for washing.

1. Scrape and rinse wares to remove heavy food particles and other debris.



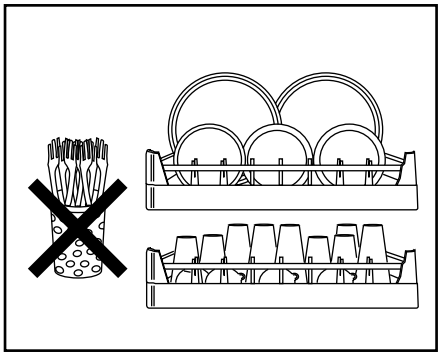
2. Place dishes edgewise in a peg rack.

   Place cups and bowls upside down in a flat rack.

   Spread silverware evenly in a single layer in a flat bottom rack.

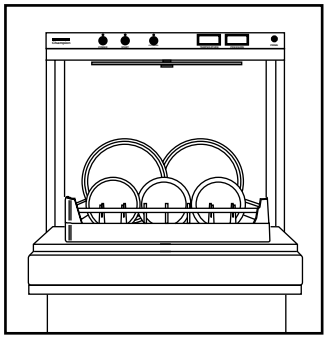
   Batching silverware upright in a utensil cup is not recommended.

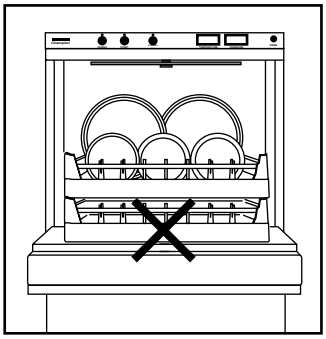
   DO NOT OVERLOAD DISHRACKS.



3. Place the loaded dishrack on the open door and slide into the dishwasher.

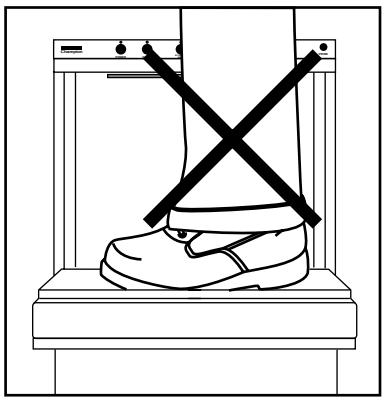
   DO NOT WASH MORE THAN ONE RACK AT A TIME.





CAUTION:

Never *stand or sit on the door, nor place heavy boxes or crates on the door.*



3.4 Description of Operator Controls and Displays

Note the location and function of the following components. These components directly affect the normal operation of all other operator controls.

Door Safety Switch Magnet:

The door safety switch magnet is located at the top left inside corner of the door.

The magnet operates the door safety switch located in the top mounted slide-out control cabinet.

The door must be fully closed whenever the dishwasher is in an automatic cycle.

NOTE:
The dishwasher will not operate when the POWER button is pushed, if the door is open on initial power up.

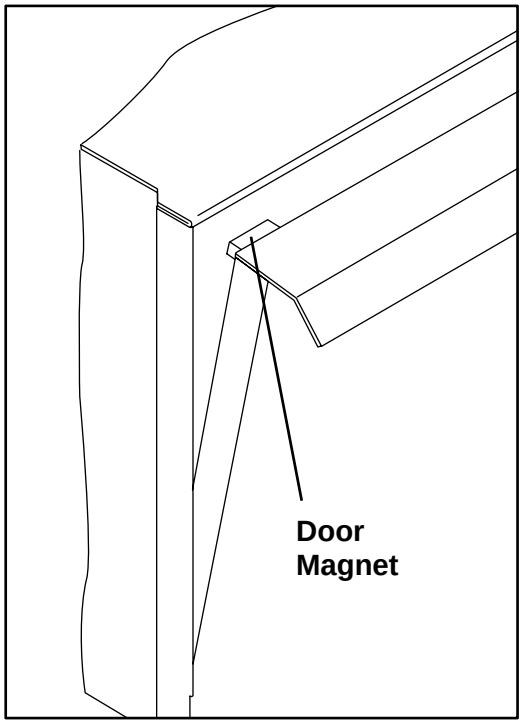


Figure 3.4.1
Door Safety Magnet Location

Control Circuit Breaker

The 8 AMP control circuit breaker is located on the left lower side of the dishwasher behind the lower front access panel.

The circuit breaker is designed to trip and break the 120VAC control voltage to the dishwasher in the event of an overload or other abnormal condition. This protects the dishwasher's solid state circuitry.

The circuit breaker must be reset manually.

The dishwasher will not operate if the circuit breaker has tripped.

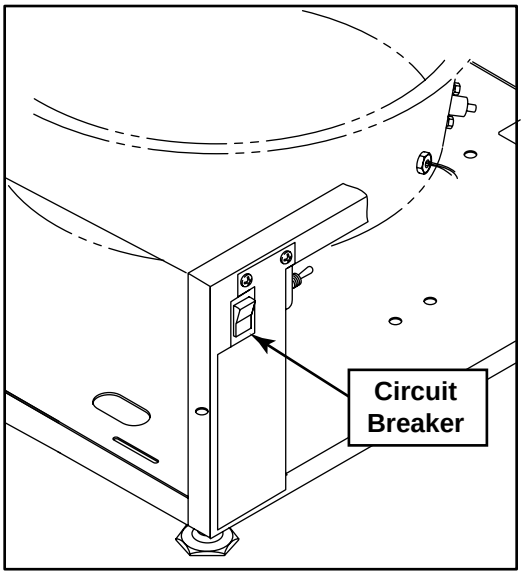
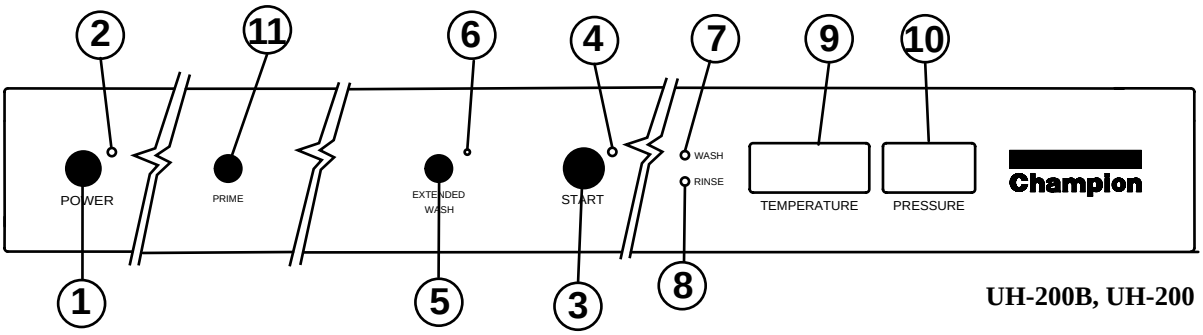


Figure 3.4.2
Circuit Breaker Location

3.4 Description of Operator Controls and Displays (Cont.)

Refer to the illustrations and table below for the location and function of the operator controls and displays.

Touchpad/Display



UH-200B, UH-200

CONTROL	TYPE	DESCRIPTION OF OPERATION
① Power ON/OFF Switch	Touchpad membrane switch	**All Models:** Power is OFF. Push Power Button— Activates the solid state controls and begins automatic fill operation. Power is ON. Push Power Button— Begins auto-shutdown cycle. Turns power OFF when auto-shutdown cycle is complete.
② Power ON LED	Touchpad light emitting diode	**All Models:** Indicates when power is ON.
③ Start Switch	Touchpad membrane switch	**All Models:** Starts the dishwasher automatic cycle.
④ Cycle ON LED	Touchpad light emitting diode	**All Models:** Indicates an automatic cycle has been selected.
⑤ Extended Wash Switch	Touchpad membrane switch	**All Models:** Pauses the wash cycle and holds machine in a continuous wash mode. Push again, machine finishes wash cycle followed by a final rinse.
⑥ Extended Wash LED	Touchpad light emitting diode	**All Models:** Indicates machine is in extended wash mode.
⑦ Wash Temperature LED	Touchpad light emitting diode	**Model UH-200B, UH-200 ONLY:** Indicates that temperature display (9) is showing the temperature of the water in the wash tank during the automatic cycle.
⑧ Rinse Temperature LED	Touchpad light emitting diode	**Model UH-200B, UH-200 ONLY:** Indicates that temperature display (9) is showing the temperature of the water in the final rinse manifold during a final rinse.
⑨ Temperature Display	LED display mounted on timer board	**All Models:** Indicates the temperature sensed by the wash or the final rinse temperature probe.
⑩ Final Rinse Water Pressure Display	LED display mounted on timer board	**Model UH-200B, UH-200 ONLY:** Indicates the flowing pressure of water in the final rinse manifold during the final rinse cycle. Min./Max. 20-22 PSI [138-151 kPa].
⑪ Chemical Pump Prime Switch(es)	Touchpad membrane switch(es)	**All Models:** Operates the chemical pumps whenever (9) is activated. UH-200B, UH-200 single switch operates both pumps at same time.

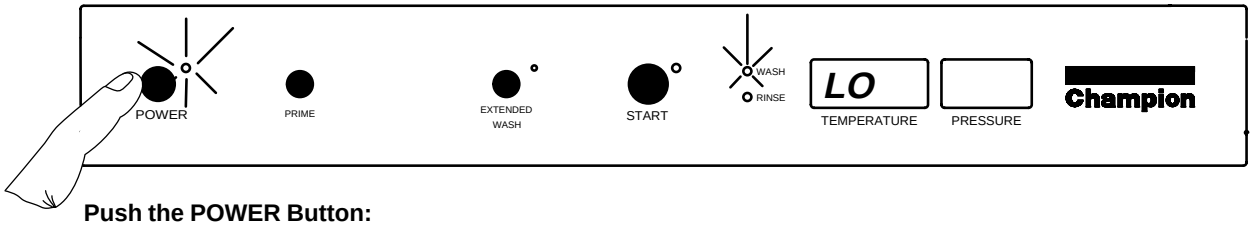
3.5 Basic Operation

The following illustrations and diagrams describe the basic operation of your dishwasher. Review Sections 3.2 and 3.3 before operating your machine.

NOTE:

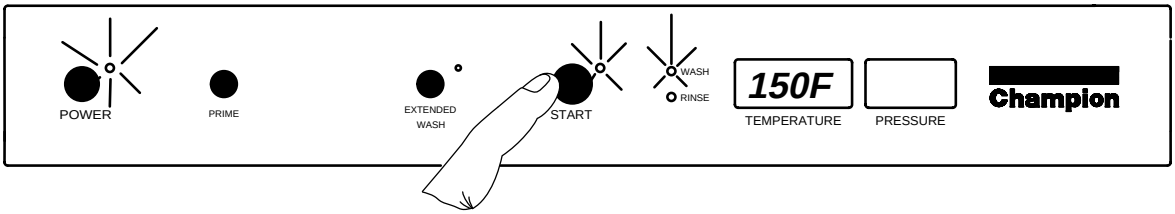
All temperature readings in the instructions below are given in degrees Fahrenheit (°F). Pressure readings are given in pounds per square inch (PSI).
All models provide a metric option to display temperature in degrees Celsius (°C) and pressure in kilopascals (kPa). Temperature readings and error codes are followed by the letter "C" when the metric option is enabled.

3.5.1 Operating the UH-200B and UH-200



Push the POWER Button:

All LEDs illuminate and 888F flash on displays.
Internal diagnostics displays Error Codes: E1, E2, E3 in temperature display if problem exists.
Power LED lit. LOF displayed if wash temp is below 115°F, actual wash temp displayed above 115°F/46°C.
PRIME button is active whenever the temperature is displayed.
Machine Fills. Optional detergent pump injects detergent.
Wash tank heat on (UH-200B, UH-200). Booster heat on (UH-200B only).
Wash LED illuminates indicating the temperature display is reading wash tank temperature.

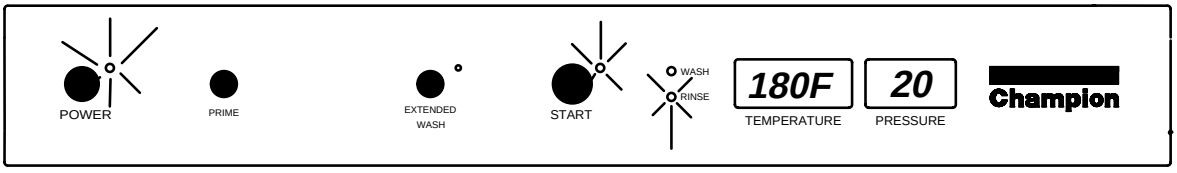


(If the START button is pushed during initial fill the Start LED will illuminate indicating that a cycle has been selected but the machine will complete the fill before the cycle begins.

Run one automatic cycle WITHOUT DISHES to bring the dishwasher to operating temperature.

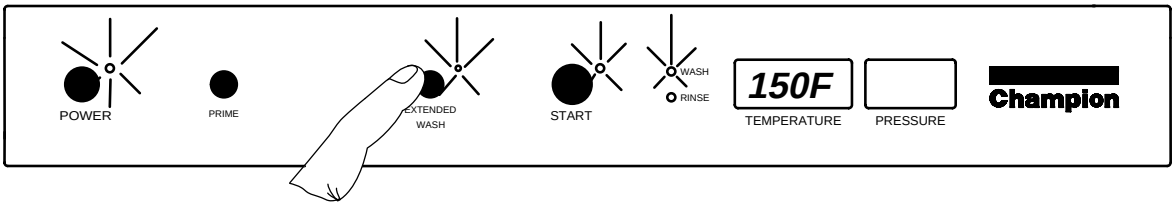
Push the START Button:

The Start LED illuminates and the automatic 90-second cycle begins. Detergent pump adds detergent.
Wash pump runs for 60 seconds.
Wash pump stops, machine drains a portion of the water out of the wash tank.



Rinse LED illuminates indicating the temperature display is reading final rinse temperature.
Final rinse operates for 11 seconds. Optional rinse aid pump injects rinse aid.
Final rinse temperature 180°F/82°C minimum. Final rinse flowing pressure 20 PSI/138 kPa minimum.
Pressure display indicates final rinse flowing pressure.
Rinse LED goes out. Start LED goes out. Automatic cycle is complete.
Open door, remove rack, insert another rack and repeat.
Opening the door anytime during the cycle pauses the cycle. Cycle resumes where it stopped when door is closed. Pushing the POWER button stops the cycle and initiates the AUTO-SHUTDOWN CYCLE.

3.5.1 Operating the UH-200B and UH-200 (Cont.)



EXTENDED WASH FEATURE

The EXTENDED WASH button pauses the normal wash cycle and holds the dishwasher in a continuous wash mode until the extended wash button is pushed again. ***To activate the extended wash feature:***

Push the START button to begin a cycle.

WAIT 16 seconds to allow the optional detergent pump time to inject detergent.

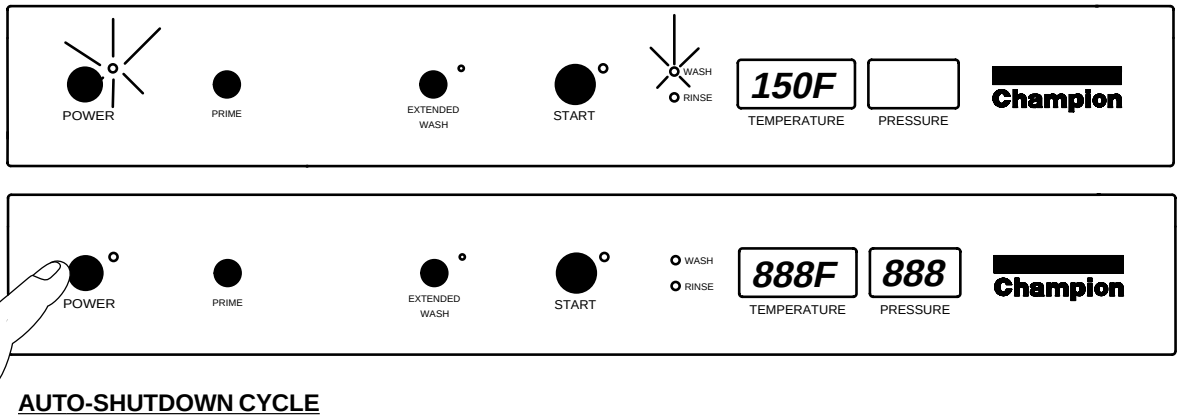
Push the EXTENDED WASH button.

The Extended Wash LED illuminates. The Power LED remains lit, the Start LED remains lit. *Dishwasher is held in continuous wash mode.*

Push the EXTENDED WASH button again.
The Extended Wash LED goes out. The Power LED remains lit, the Start LED remains lit.

If the extended wash is deactivated before the 60-second wash cycle is complete, the dishwasher will complete the normal wash cycle, drain and finish with a final rinse.

If the extended wash is deactivated after the 60-second wash cycle time has elapsed, then the dishwasher will immediately drain, and finish with a final rinse.



AUTO-SHUTDOWN CYCLE

At the end of the day, pushing the POWER button initiates the Auto-shutdown cycle which includes an automatic interior rinse down to aid in cleaning the machine. Pushing the POWER button when the dishwasher is in cycle also will start the auto shutdown cycle. ***To activate the auto shutdown cycle:***

Push the POWER button.

All LED's go out.

The Temperature display and the Pressure display flash 888F.

The machine drains.

The fill valve opens to rinse down the interior of the dishwasher.

The machine drains completely.

All displays go out.

Dishwasher is OFF.

Begin cleaning operation or push POWER button to refill dishwasher.

NOTE:

If the dishwasher is idle for more than 4 hours, it will automatically enter the auto-shutdown cycle.

This completes the basic operation for the UH-200B and UH-200.

ATTENTION!
— SERVICE ALARM —

Flashing LED's, (See Fig. 1), indicate Low detergent and/or dirty water level probe.

TO RESET SERVICE ALARM: 1) Push POWER button on touchpad control, machine will drain, and then shutdown completely. **CAUTION! Surfaces may be hot; allow dishwasher surfaces time to cool.** 2) Open door, remove dishrack. 3) Locate water leve probe (See Fig 2.) located at left rear corner of dishwasher interior. 4) Use a stainless steel or 3M Scotchbrite® scouring pad to clean the probe pins of any grease and scale build-up. **DO NOT USE SCOURING PADS MADE OF FERROUS METAL**. 5) Check the detergent chemical supply container (See Fig. 3) and make sure there is sufficient detergent. Replenish if necessary. 7) Close machine door fully. 8) Push Power button on touchpad control to refill machine. 9) Call service agent if alarm persists.

FIG. 1

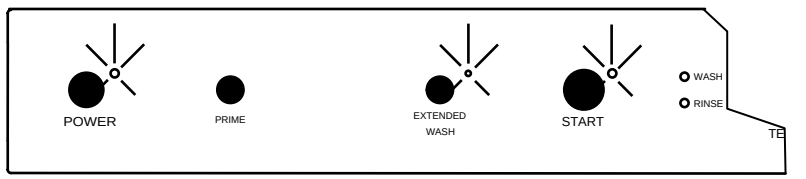


FIG. 2

Clean metal pins with stainless steel scouring pad to remove grease and scale build-up.

Probe is located at left rear corner inside the machine.

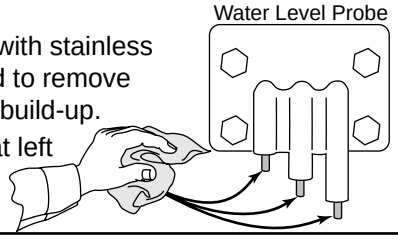
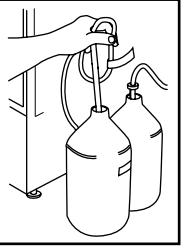


FIG. 3

Check detergent supply and replenish as needed.

Refer to Technical Manual, P/N 112653, Section 2.9.2, page 19, for detergent pump priming instructions.



PART 4: CLEANING AND MAINTENANCE

In This Part—

- Introduction
- Daily cleaning schedules
- Deliming procedure
- Preventive maintenance schedules
- Lubrication

4.1 Introduction

Cleaning your machine is the best maintenance that you can provide. Components that are not regularly flushed and cleaned do not perform well.

The following schedules are the minimum requirements necessary for the proper performance of your machine. Intervals should be shortened whenever your machine is faced with abnormal working conditions, hard water, or multiple shift operations.

4.2 Daily Cleaning Schedules

Every 2 hours of operation and after each meal period

1. Drain the dishwasher.
2. Clean the round scrap screen and pump intake screen.
3. Check and clean the spray arms.
4. Reassemble the dishwasher.

At the End of the Day

1. Drain the machine.
2. Clean the round scrap screen and pump intake screen.
3. Clean spray arms.
4. Wipe the interior of the machine with a soft damp cloth.

CAUTION:
Do not hose down the exterior of the machine with water.

5. Thoroughly clean the exterior of machine with mild soap solution.
6. Reassemble the machine.
7. Leave door open to aid in drying the interior of the dishwasher.

4.3 Deliming Schedules (All Models)

Your dishwasher should be delimed regularly depending on the mineral content of your water. Inspect the machine interior for mineral deposits (white residue) and use a deliming solution for the best cleaning results.

WARNING:

Deliming solutions or other acids must not come in contact with household bleach (sodium hypochlorite) or any chemicals containing chlorine, iodine, bromine, or fluorine.

Mixing will cause hazardous gases to form.

Skin contact with deliming solutions can cause severe irritation and possible chemical burns.

WARNING:

Consult your chemical supplier for an appropriate deliming solution, usage instructions, protective gear and specific safety procedures.

The following general instructions are provided to assist the operator in deliming the dishwasher. In no case do these instructions supersede the chemical supplier's instructions in the use of a specific deliming product.

4.3.1 Deliming Procedure (All Models)

1. Remove all racks and wares from the dishwasher.
2. Remove chemical pick-up tubes from the containers and place in a catch pan on the floor.
   • UH-200B, UH-200 may utilize detergent and rinse aid.
3. Push POWER button to enter auto-shutdown cycle if machine is already on.
4. Push POWER button again to fill machine.
5. Run four (4) automatic cycles to clear chemical from chemical supply tubing.
6. Push POWER button to enter auto-shutdown cycle and drain the machine completely.
7. Push POWER button to fill machine.
8. Open door and add deliming solution (per chemical supplier's instructions) directly in wash tank.
   • UH-200B, UH-200 hold 3.6 US gal. [13.6 liters] of water.
9. Close door.
10. Push START button and immediately push EXTENDED WASH button.
11. Run machine in extended wash mode (per chemical supplier's recommended time).
12. Push EXTENDED WASH button to exit extended wash mode.
    Machine will complete automatic cycle.
13. Open door and inspect interior for mineral deposits. Repeat steps 3-11 if required.
14. Run four (4) additional cycles to flush all deliming chemicals from machine.
15. Replace chemical pick-up tubes in containers and prime the chemical dispensing system.
16. Deliming is complete.

4.4 Preventive Maintenance Schedules

Daily Maintenance Requirements
Perform the following procedures every day.

1. Check the chemical supply containers and replenish as needed.
2. Inspect scrap screens for bent or damaged parts.
3. Check the spray arm bearings and make sure arms turn freely.

Weekly Maintenance Requirements
Perform the following procedures every week.

1. Inspect for leaks including all piping and supply connections. Tighten or repair as required.
2. Inspect the door and door gasket for proper fit and ease of operation.
3. Check the operation of the door safety switch.
4. Check the flexible water supply and drain hoses at the rear of machine to ensure they are not kinked.
5. Place chemical pick-up tubes in containers of hot water to flush crystallized chemical from the supply tubing.

Semi-Annual Maintenance Requirements
Perform the following procedures every six months.

1. Inspect all chemical connections and supply tubing for leaks.
2. Check the building drain system and clean as needed.

Yearly Maintenance Requirements
Perform the following procedures every year.

1. Inspect the installation site for cleanliness and any foreign material around the machine. Clean as required.
2. Check the overall condition of the machine. Replace any worn or damaged parts.

4.5 Lubrication

There are no lubrication points on the dishwasher.
Pump motor bearings are sealed and require no lubrication.

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PART 5: OPERATOR TROUBLESHOOTING

5.1 Introduction

In This Part—

- Troubleshooting basics
- Using the Touchpad/Display to evaluate problems.
- Reading error codes
- Troubleshooting guide

5.2 Troubleshooting Basics

STEP 1:

The first step in troubleshooting your dishwasher is knowing how it works under normal conditions. Review Part 3, Operation, pages 27-34 for a description of proper loading, operator controls and basic operating procedures.

STEP 2:

Check the general condition of your dishwasher.

☐ Does the dishwasher appear level?

☐ Are the spray arms, and screens clean and in place? Is the door fully closed?

STEP 3:

Some problems may be resolved by double-checking the supply connections to your dishwasher.
Perform the following steps to double-check your dishwasher service connections.

☐ Push the POWER button on your dishwasher OFF, then
Turn the main power OFF at the main service disconnect switch or fused circuit breaker.
If your dishwasher has a cord and plug, disconnect the plug and reconnect.
Turn the main power ON and recheck the dishwasher operation.

☐ Turn the dishwasher water supply valve OFF and back on again.

☐ Check the water temperature supplied to the dishwasher.
Are building water heaters operating correctly?

☐ Check the flow of the building drain system.
Are any drains clogged or running slow?

☐ Check the chemical dispensing supplies? Are the strainers clean?
Are the pick-up tubes in the correct containers?

Proceed to the next page if the above checks did not resolve the trouble condition.

PART 5: OPERATOR TROUBLESHOOTING (Cont.)

5.3 Using the Touchpad/Display to evaluate problems

All dishwashers perform a self-diagnostics when you push the POWER button to turn the machine on. Watching the display provides information that will help you and your service agent troubleshoot certain problems.

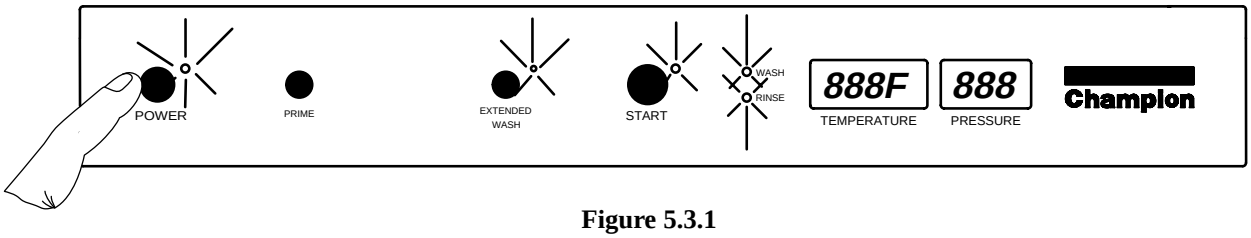
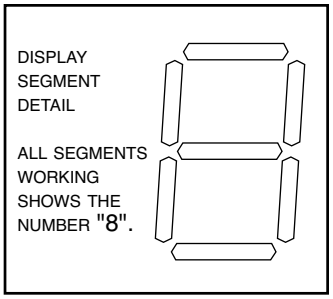


Figure 5.3.1
Self-diagnostics Display
(UH-200 Series Shown)



The dishwasher self-diagnostics provide the following information:

1. All LED's illuminate indicating proper operation of the LEDs.
2. Display window(s) flash 888F.
   Incorrect temperature readings can be checked by observing the display test to see if all segments are working.
3. Error codes are displayed during self-diagnostics and whenever the component is active during the automatic cycle:

   E0F, E1F, E2F and E3F for machines programmed for °F.
   E0C, E1C, E2C and E3C for machines programmed for °C.
   (See next page for description of codes).

4. **LOF or LOC** is observed in the temperature display window.
   All models may display "LO" because the temperature display indicates temperature from 115°F/46°C and above. This is a normal condition during initial fill.

   The **LOF** or **LOC** display at any other time may be an indication of a temperature problem in the dishwasher and should be investigated before proceeding with warewashing.

5.4 Reading Error Codes

The table below gives the meaning of the error codes and the dishwasher component that is disabled until the condition causing the error code is repaired.

E0F, E1F, E2F and E3F are displayed for machines programmed for °F.
E0C, E1C, E2C and E3C are displayed for machines programmed for °C.

ERROR CODE	MODEL	DESCRIPTION / *RESULT*
E0F E0C	UH-200B	**Displayed in temperature display window** • Indicates a defective booster temperature thermistor in the built-in booster. • *Booster heater is disabled.* • *Final rinse temperatures will be low.* • *Temperature display shows E0.*
	UH-200	**Displayed in temperature display window** • Indicates a booster thermistor was not detected. • These models do not have a built-in booster. • *No effect on machine operation.*
E1F E1C	UH-200B UH-200	**Displayed in temperature display window** • Indicates a bad wash temperature thermistor. • *Wash tank heater is disabled.* • *Wash temperatures will be low.* • *Temperature display shows E1.*
E2F E2C	All Models	**Displayed in temperature display window** • Indicates a bad rinse temperature thermistor. • *No component is disabled.* • *Temperature display shows E2.*
E3F E3C	UH-200B UH-200	**Displayed in pressure display window** • Indicates a bad pressure transducer. • *No component is disabled.* • *Water pressure display shows E3.*

PART 5: OPERATOR TROUBLESHOOTING (Cont.)

5.5 Troubleshooting Guide

Refer to the troubleshooting guide below to help diagnose and resolve a dishwasher problem.

CONDITION	CAUSE	SOLUTION
Machine will not start when POWER button is pushed. Power LED is off.	Door not closed	Make sure door is fully closed
	Main switch off	Check disconnect at main panel Check machine power switch
	Machine circuit breaker behind ..... lower front panel is tripped	Remove lower front panel and reset breaker at left lower corner of machine.
	Door safety switch not closed	Check magnet on left side of door
	Control cabinet pulled out	Make sure slide-out control cabinet is fully closed and secured.
	Push POWER button again	Machine starts, if NOT, contact service agent
Machine will not fill – LED's flashing	Low detergent ..... and/or dirty water level probe	See instructions on page 34.
Low or no water on initial fill or during automatic	Main water supply is turned off	Turn on main water supply
	Fill hose (rear of machine) kinked	Make sure hose has smooth bends
	Fill time not set correctly	Contact service agent
	Low water supply flow pressure	Increase flowing pressure *20-22 PSI [138-151kPa] for UH-200B, UH-200*
	Faulty fill/rinse valve	Contact service agent
	Clogged line strainer	Clean strainer screen/replace strainer
	Faulty water supply valve	Replace water supply valve
	Water supply line too small	Increase water supply line to 3/4" I.D.
Machine will not run when START button is pushed. Power LED is on.	Door not closed	Make sure door is fully closed
	Door safety switch not closed	Check magnet on left side of door
	Control cabinet pulled out	Make sure slide-out control cabinet is fully closed and secured.
	Push START button again	Machine starts, if NOT, contact service agent
Machine runs when START button is pushed but pump motor is not running	Motor thermal overload tripped	Remove round scrap screen and check sump and pump strainer, clear possible obstruction and wait 10 mins. for overload to reset
	Defective motor	Contact service agent

CONDITION	CAUSE	SOLUTION
Machine washes constantly	EXTENDED WASH button ..... was pushed. Extended wash LED on.	Push EXTENDED WASH button Extended wash LED goes out Machine completes cycle.
	Defective control circuit	Contact service agent
Wash water temperature is low	Incoming water temperature ..... at machine too low	Raise incoming temperature to: *140°F/60°C for UH-200B* *40°F/22°C rise boosters* *110°F/43°C for UH-200B* *70°F/39°C rise boosters* *180°F/82°C for UH-200*
	Defective wash temperature probe	Check error codes, Section 5.3 and 5.4 and contact service agent
	Defective or tripped wash tank ..... high limit	Contact service agent
	Wash tank heater has lime build-up	Clean and/or delime machine
	Defective wash tank heater	Contact service agent
Insufficient pumped spray pressure	Clogged pump intake screen	Clean pump intake screen
	Clogged spray arms	Clean spray arms
	Scrap screen full of debris	Must be kept clean and in place
	Low water level in tank	Check water level
	Defective pump seal	Contact service agent
	Worn spray arm bearings	Replace bearings
	Drain valve clogged or defective	Contact service agent
Insufficient final rinse or no final rinse (UH-200B, UH-200)	Faulty pressure reducing valve (PRV) ..	Replace PRV
	Improper setting on PRV	*Correct flowing pressure setting is 20-22 PSI [138-151 kPa]*
	Clogged rinse nozzle and/or arm	Clean nozzles and/or spray arm
	Clogged line strainer	Clean screen or replace line strainer
	Defective fill/rinse solenoid valve	Contact service agent
	Fill hose (rear of machine) is kinked	Make sure hose has smooth bends
	Water supply line too small	Increase water supply line to 3/4" I.D.

PART 5: OPERATOR TROUBLESHOOTING (Cont.)

5.5 Troubleshooting Guide (Cont.)

CONDITION	CAUSE	SOLUTION
Final rinse water temperature is low	Incoming water temperature at machine too low	Raise incoming temperature to: *140°F/60°C for UH-200B* *40°F/22°C rise boosters* *110°F/43°C for UH-200B* *70°F/39°C rise boosters* *180°F/82°C for UH-200*
	Defective rinse temperature thermistor (All Models)	Check error codes, Section 5.3 and 5.4 and contact service agent
	Defective booster temperature thermistor (UH-200B Only)	Check error codes, Section 5.3 and 5.4 and contact service agent
	Defective or tripped high limit on booster (UH-200B Only)	Contact service agent
	Defective booster tank heater (UH-200B Only)	Contact service agent
Poor washing results	Low water	See "Low or no water condition"
	Wash arm clogged	Clean
	Chemical dispensers not operating properly	Check and replenish supplies/ Contact service agent
	Insufficient detergents	Contact detergent supplier
	Crystal specs on dishes	Wrong type of detergent
	Wash water milky white color	Too much detergent injected
	Spots on glasses	May require rinse aid dispenser
	Wash water temperature too low	See condition “Wash water Temperature is low”
	Improperly scraped dishes	See Section 3.3, page 30
	Ware improperly placed in rack	Use proper racks. Do not overload racks
	Scrap screens full of debris	Clean screens
	Wash water not drained completely	Check drain hose (rear of machine) for kinks. Make sure hose has smooth bends
Machine won't drain and/or overflows	Drain hose (rear of machine) kinked	Make sure hose has smooth bends
	Drain pump/drain valve clogged	Contact service agent
	Water level control defective (UH-200B, UH-200 Only)	Contact service agent
	Fill Setting incorrect	Contact service agent
	POWER LOSS when machine ON, machine refilled when POWER button was pushed after power loss.	Turn off water supply. Push POWER button ON. Push POWER button OFF to begin auto-shutdown cycle. When machine shuts off, Turn water supply on. Push POWER button to refill.

PART 6: SERVICE TROUBLESHOOTING

6.1 Introduction

In This Part—

- Sequence of Operation
- Timing Charts
- Error Codes
- Troubleshooting Guidelines

The instructions contained in Parts 6, 7, 8, and 10 are intended for Champion authorized technicians and should not be used by untrained personnel. Persons not properly trained should not attempt to repair or make adjustments to the dishwasher.

If you require technical assistance, first contact your authorized Champion service agent in your area or :

Champion National Service Department	
Champion (USA) **1 (800) 858-4477**	**Champion (Canada)** **1 (800) 263-5798**

Please have the model, serial number, voltage and phase of your machine ready when you call.

The following warnings apply to the instructions and procedures contained in Parts 6, 7, 8, and 10.

WARNING:
Machine surfaces become hot during normal operation.

WARNING:
When working on the dishwasher, disconnect the electrical service and place a red tag at the disconnect switch to indicate work is being done on that circuit.

WARNING:
Observe all safety procedures when power is applied to the machine and during troubleshooting.

6.2 Operation Sequence and Timing Charts

Sections 6.2.1 through 6.2.3 explain the operation and timing of the dishwasher models.

6.2.1 Operation Sequence (Model UH-200B, UH-200)

Refer to the operation sequence below and the timing chart on the next page.

Upon application of **Input power** - all outputs are initially de-energized and the display is disabled. Momentary closure of the **Power Pushbutton** enables the solid state controls, program jumpers are read and the auto-fill sequence is initiated.

The **Fill/Rinse Valve** opens until the water level reaches the middle sensor of the **Water Level Probe**. The **Detergent Pump** is cycled three times during the initial fill.

The **Wash Tank Heater** (All Models), which was locked out during the initial fill, begins to heat. The **Booster,** which was locked out during the initial fill, begins to heat (UH-200B Only).

If the **Cycle Start Pushbutton** is pressed during the fill, the **Cycle LED** illuminates. The Wash Cycle starts after the fill is complete.

Pressing the **Cycle Start Pushbutton** activates the Cycle LED and initiates the Wash Cycle. The **Wash Pump Motor** is activated for 60 seconds. The **Detergent Pump** is activated for 1 to a maiximum of 30 seconds. The detergent pump is locked out after the fill valve closes.

The **Drain Valve and Drain Pump** are then activated until the water level reaches the bottom sensor on the **Water Level Probe**.

The **Rinse LED** illuminates and the **Fill/Rinse Valve** opens until the water level reaches the middle sensor of the Water Level Probe and 11 seconds has expired.

The **Rinse Aid Pump** is activated for 1 to 11 seconds during the last 11 seconds of the final rinse.

The **Cycle LED** is deactivated. The 90-second cycle is complete.

If the Cycle Pushbutton is not activated for (4) hours, the machine goes into the auto-shutdown cycle and turns off.

If the **Door Safety Switch** is opened, all Pumps and Valves are disabled and times are held. Closing the door re-enables Pumps and Valves and resumes timing from the point door was opened.

If the **Power Pushbutton** is closed while the machine is running, the **Auto-shutdown Cycle** is initiated. The **Touchpad/Display flashes** 888's. The **Drain Valve and Drain Pump** are activated for 20 seconds. The **Fill/Rinse Valve** is activated for 10 seconds. The **Drain Valve and Drain Pump** are then reactivated for 60 seconds. Then the machine turns off.

Closure of the **Extended Wash Pushbutton** during the Wash Cycle activates the **Extended Wash LED** and extends the wash beyond normal wash time until the Extended Wash Pushbutton is re-closed, de-activating the Extended Wash LED.

The **Chemical Pump Prime Switch** is enabled any time the Temperature Display is active.

The **Water Level Probe** is ignored during the wash cycle.

If the water level reaches the topmost sensor (overfill condition) of the **Water Level Probe**, then, the **Drain Valve/Drain Pump** are activated until the water level drops below the lower sensor of the water level probe.

6.2.1 Timing Chart (Model UH-200B, UH-200)

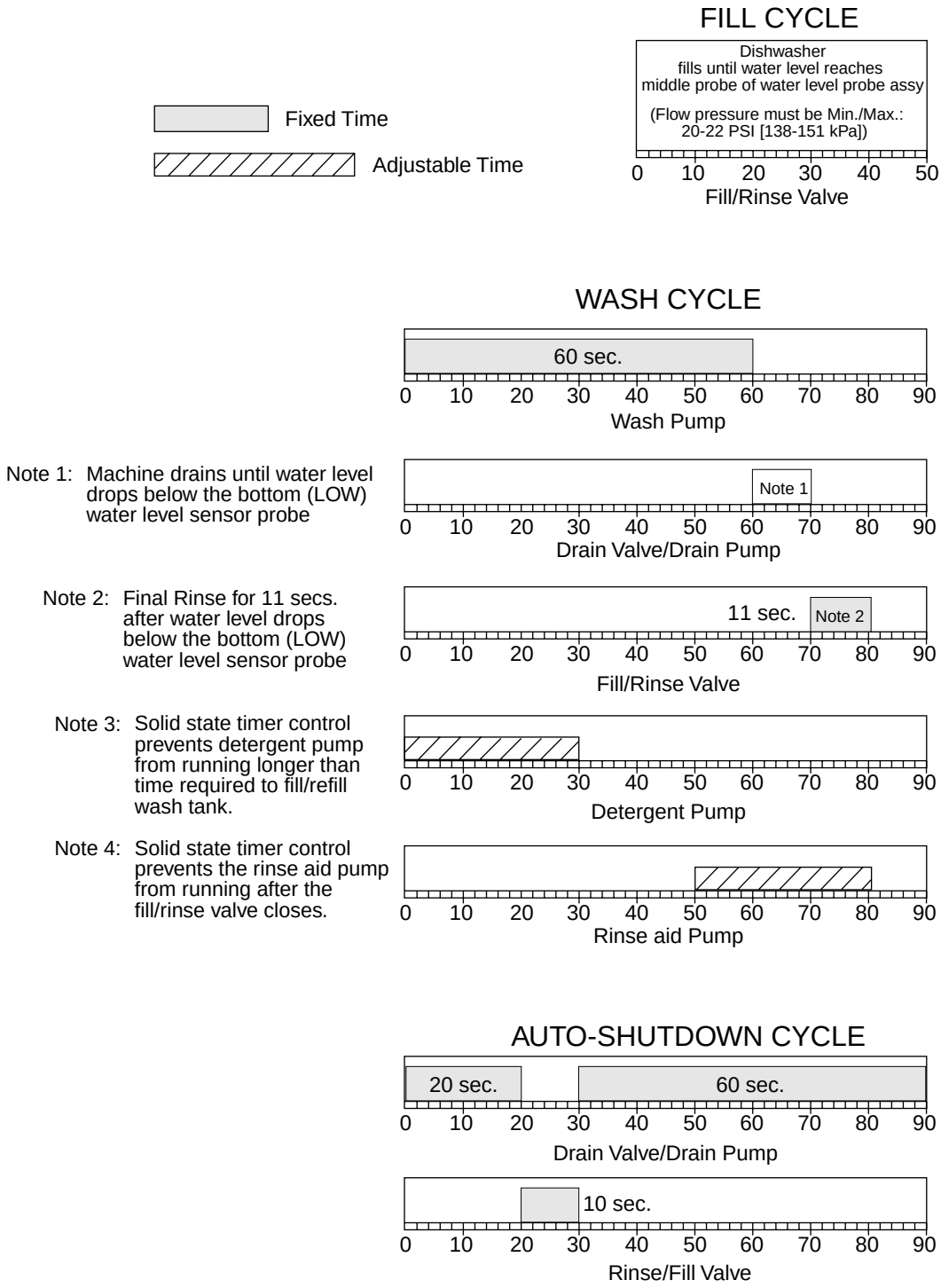


Figure 6.2.1
Timing Chart (UH-200B, UH-200)

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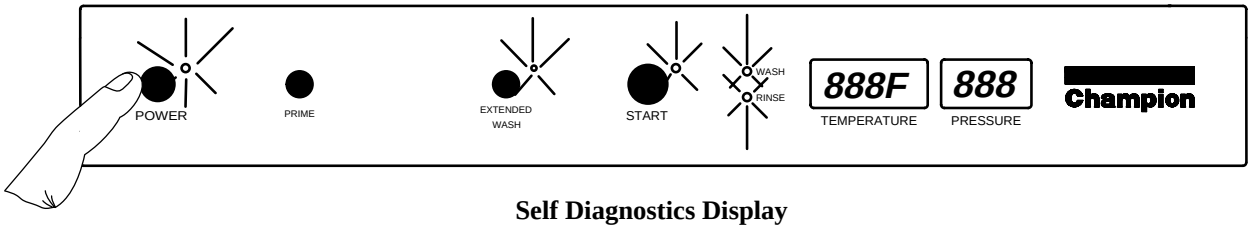
PART 6: SERVICE TROUBLESHOOTING (Cont.)

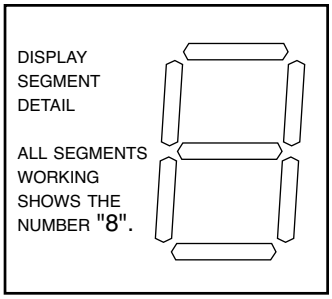
6.3 Error Codes

All dishwashers perform a self-diagnostics when you push the POWER button to turn the machine on. Watching the display provides information that will help you troubleshoot certain problems.



Self Diagnostics Display
(UH-200 series Shown)

Figure 6.3.1



The dishwasher self-diagnostics provide the following information:

1. All LED's illuminate indicating proper operation of the LEDs.
2. Display window(s) flash 888F.
   Incorrect temperature readings can be checked by observing the display test to see if all segments are working.
3. Error codes are displayed during self-diagnostics and whenever the component is active during the automatic cycle:

   E0F, E1F, E2F and E3F for machines programmed for °F.
   E0C, E1C, E2C and E3C for machines programmed for °C.
   (See next page for description of codes).

4. **LOF or LOC** is observed in the temperature display window.
   All models may display "LO" because the temperature display indicates temperature from 115°F/46°C and above. This is a normal condition during initial fill.

   The **LOF** or **LOC** display at any other time may be an indication of a temperature problem in the dishwasher and should be investigated before proceeding with warewashing.

6.3 Error Codes (Cont.)

The table below gives the meaning of the error codes and the dishwasher component that is disabled until the condition causing the error code is repaired.

E0F, E1F, E2F and E3F are displayed for machines programmed for °F.
E0C, E1C, E2C and E3C are displayed for machines programmed for °C.

ERROR CODE	MODEL	DESCRIPTION / *RESULT*
E0F E0C	UH-200B	**Displayed in temperature display window** • Indicates a defective booster temperature thermistor in the built-in booster. • *Booster heater is disabled.* • *Final rinse temperatures will be low.* • *Temperature display shows EO.*
	UH-200	**Displayed in temperature display window** • Indicates a booster thermistor was not detected. • These models do not have a built-in booster. • *No effect on machine operation.*
E1F	UH-200B UH-200	**Displayed in temperature display window** • Indicates a bad wash temperature thermistor. • *Wash tank heater is disabled.* • *Wash temperatures will be low.* • *Temperature display shows E1.*
E2F E2C	All Models	**Displayed in temperature display window** • Indicates a bad rinse temperature thermistor. • *No component is disabled.* • *Temperature display shows E2.*
E3F E3C	UH-200B UH-200	**Displayed in pressure display window** • Indicates a defective pressure transducer. • *No component is disabled.* • *Water pressure display shows E3.*

6.4 Troubleshooting Guide

The following checklist provides general guidelines for evaluating trouble conditions with the dishwasher. Detailed troubleshooting flow charts are provided in Part 11 at the end of this manual.

STEP 1:

The first step in troubleshooting the dishwasher is knowing how it works under normal conditions. Review Part 3, Operation, pages 27-34, for a description of proper loading, operator controls and basic operating procedures.

STEP 2:

Check the general condition of the dishwasher.

- Does the dishwasher appear level?
- Are the spray arms and screens clean and in place? Is the door fully closed?

STEP 3:

Some problems may be resolved by double-checking the supply connections to your dishwasher. **Perform the following steps to double-check the dishwasher service connections.**

- Push the POWER button on the dishwasher OFF, then
  Turn the main power OFF at the main service disconnect switch or fused circuit breaker.
  If your dishwasher has a cord and plug, disconnect the plug and reconnect.
  Turn the main power ON and recheck the dishwasher operation.
- Turn the dishwasher water supply valve OFF and back on again.
  Check the flexible water supply hose at the rear of the machine. Is it kinked?
- Check the water temperature supplied to the dishwasher.
  Are building water heaters operating correctly?
- Check the flow of the building drain system.
  Are any drains clogged or running slow?
  Check the flexible drain hose at the rear of the machine. Is it kinked?
- Check the chemical dispensing supplies? Are the strainers clean?
  Are the pick-up tubes in the correct containers?

STEP 4:

Refer to Section 6.3, Error Codes, page 49-50. Observe the self-diagnostics display when the dishwasher is first powered up. Many problems can be identified by evaluating the diagnostics.

STEP 5:

Refer to Part 7, Solid State Circuit Board Set-up and Repair, next page. Double-check the jumper settings on the circuit boards and observe if LED's on the boards indicate an error condition.

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PART 7: SOLID STATE CIRCUIT BOARDS

7.1 Introduction

In This Part—

- Control Cabinet Layout and Board Function
- Program Jumper Settings
- Circuit Board LED Description
- Circuit Board Removal and Replacement
- Circuit Board Connector Diagrams

7.2 Control Cabinet Layout and Board Function

Refer to Fig. 7.2.1 below which shows the location and function of the solid state circuit boards. The solid state circuit boards are located in the top mounted slide-out control cabinet on the dishwasher. Program jumpers located on the boards enable the functions for different models.

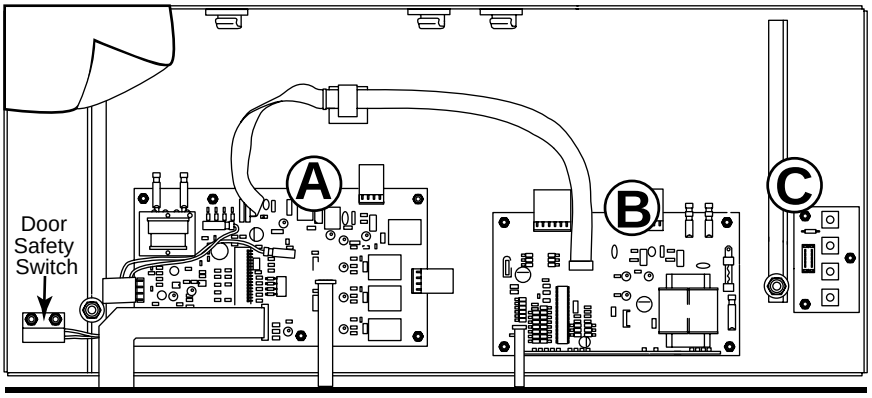


Figure 7.2.1
Circuit Board Layout
(All Models)

A Time Control Board—
- Jumpers to set model type, booster, and touchpad control.
- Controls door safety switch input.
- Controls outputs for wash pump, drain, fill/rinse valve.
- Controls outputs for chemical dispensing pumps.
- Controls water level control (UH-200B, UH-200)

B Temperature/Pressure Display Board—
- 120VAC power input point
- Jumpers to set wash tank and booster temperatures.
- Jumpers to set English or Metric display option.
- Controls wash heater and booster heater outputs.
- Controls thermistor inputs.
- Controls pressure sensor input (UH-200B, UH-200).
- LED's display temperature (All Models). Temperature and pressure (UH-200B, UH-200 only).

C Time Select (Fill/Chemical Dispenser Board)—
- Controls time settings for chemical dispensing pumps.

7.3 Replacement Circuit Board Set-up

Jumpers are provided on the Timing Control and the Temperature/Pressure Display boards to set the program for each machine model (See Fig.7.2.1, page 53, for board locations).

Jumpers are set at the factory for new machines and should not require adjustment.

Whenever a board is replaced in the field, the service technician must set the jumpers on the replacement circuit board to match the dishwasher model being repaired.

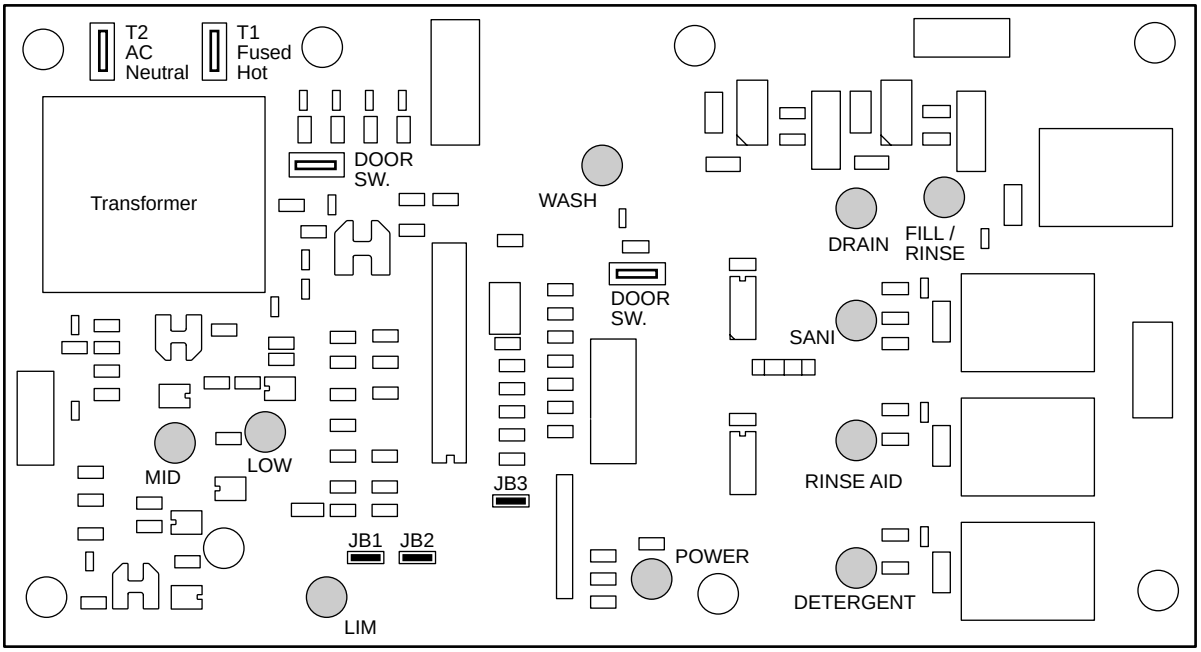
7.3.1 Timer Control Board Program Jumper Settings

The Timer Control Board has three program jumper settings.

JB1— Enables the basic cycle time for all models and water level control for UH-200 series. Marked "FWR: fresh water rinse," for UH-200B and UH-200.

JB2— Enables the booster function if the machine is equipped with a built-in booster.

JB3— Enables prime button inputs. Closed for UH-200B and UH-200.



Jumper No.	= Jumper Closed	= Jumper Open
JB1 = FWR = F & D		= UH-200B, UH-200
JB2 = No Booster = Booster	= UH-200B	= UH-200
JB3 = Three Prime Switches = One Prime Switch	= UH-200B, UH-200B,	

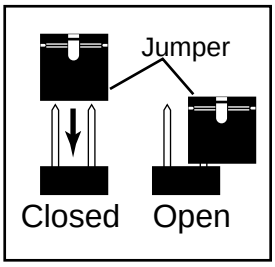
Figure 7.3.1
Timer Control Board Jumpers and LED Status Lights

7.3.1 Timer Control Board Program Jumper Settings (Cont.)

WARNING:
When working on the dishwasher, disconnect the electrical service and place a red tag at the disconnect switch to indicate work is being done on that circuit.

To set the jumpers JB1, JB2, and JB3:
Check and set the jumpers before you install a replacement board.

1. Turn power off at the dishwasher and the main power disconnect switch.
2. Open the front door.
3. Remove screws located in each corner of the hood.
4. Pull the slide-out control cabinet out fully.
5. Fold back the protective mylar drip shield.
6. Compare the jumper settings on the dishwasher circuit board with the settings shown in Fig.7.3.1, page 54.
7. Using fingers or needle nose pliers, set the jumper as required.
   • The jumper encloses both pins when the switch is closed.
   • The jumper encloses one pin when the switch is open. This method prevents losing the jumper.
8. Replace the drip shield, and close the slide-out control cabinet fully to position the door safety switch located in the left hand corner of the control cabinet.
9. Close the dishwasher door, turn power on and check the dishwasher for proper operation.



7.3.2 Timer Control Board LED Status Lights

Refer to Fig. 7.3.1, previous page

The Timer Control Board has 10 red LED status lights that provide operational information.

POWER— Indicates the Timer Control Board is powered on.

WASH— Indicates output voltage to wash pump contactor is enabled.

DRAIN— Indicates output voltage to drain valve and drain pump is enabled.

FILL/ RINSE— Indicates output voltage to fill/rinse valve is enabled.

LED's illuminate whether pump is installed or not.

UH-200B, UH-200 Only:

LIM— Indicates water level has reached the topmost sensor of water level probe.

MID— Indicates water level has reached the middle sensor of water level probe.

LOW— Indicates water level has reached the bottom sensor of water level probe.

7.3 Replacement Circuit Board Set-up (Cont.)

7.3.3 Temperature/Pressure Display Board Program Jumper Settings

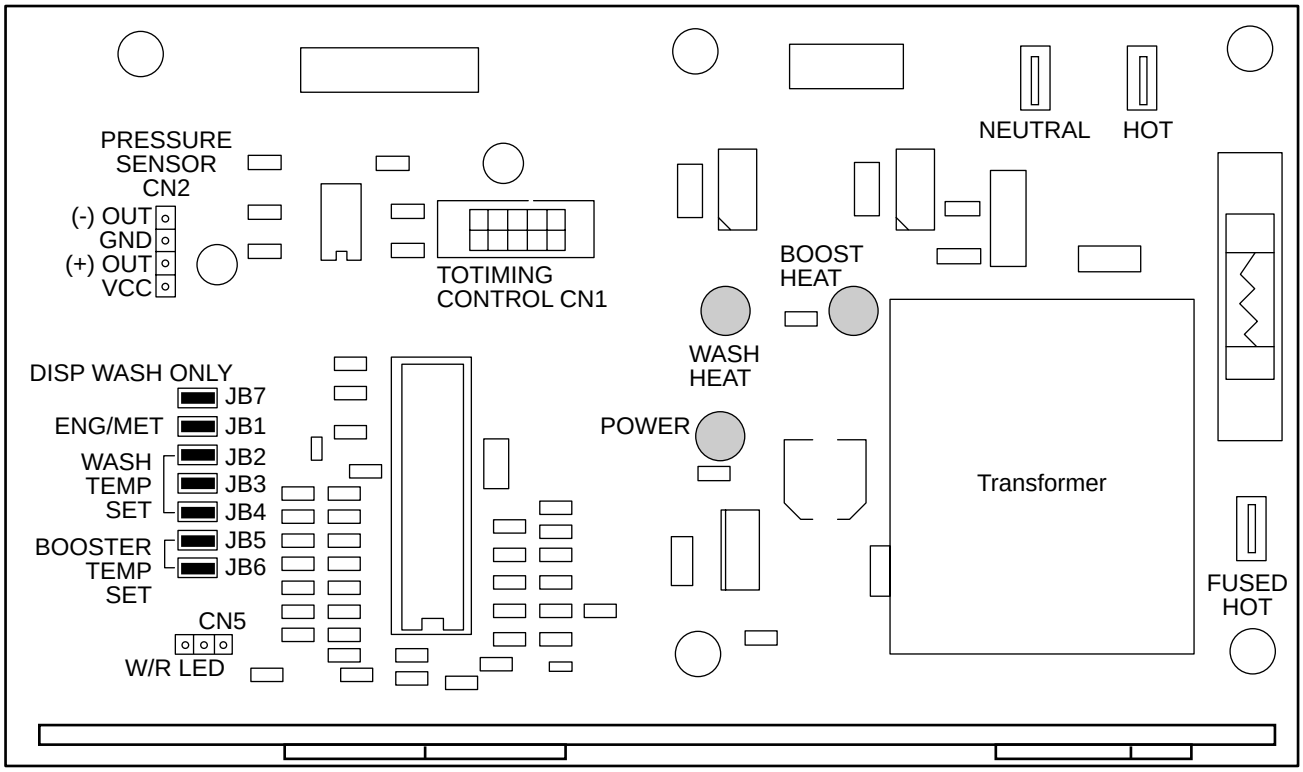
The Temperature/Pressure Display Board has seven program jumper settings.

JB7 —Always set OPEN for normal operation. Future models will not have the JB7 jumper.

JB1 —Selects English display (°F and PSI) or Metric (°C and kPa)

JB2 —These jumpers select the minimum wash tank temperature with a differential of +4°F/2°C.
JB3 —
JB4 —

JB5 —These jumpers select the minimum booster tank temperature with a differential of +4°F/2°C.
JB6 —



Jumper No.	= Jumper Closed	= Jumper Open
JB7 (Factory use Only) = Normal = Wash Only	= All Models	Note: JB7 will be eliminated on future board versions
JB1: Display = English (°F and PSI) = Metric (°C and kPa)	Set by factory per end-user's order Default setting is English.	

Figure 7.3.2
Temperature/Pressure Display Board Jumpers and LED Status Lights

7.3.3 Temperature/Pressure Display Board Program Jumper Settings (Cont.)

To set the jumpers JB1-JB7:
Check and set the jumpers before you install a replacement board.

The procedure for setting jumpers are the same as the Timer Control Board.

Refer to Section 7.3.1, top of page 55, To set jumpers JB1, JB2, JB3.

Jumper No.			WashTemperature Select	
JB4	JB3	JB2	Temperature (+4°F/2°C)	
▪▪	▬	▪▪	170°F	77°C
▪▪	▬	▬	165°F	74°C
▬	▪▪	▪▪	160°F	71°C
▬	▪▪	▬	150°F	66°C
▬	▬	▪▪	145°F	63°C
▬	▬	▬	140°F	60°C

The Jumper Settings select the MINIMUM temperature.

The control board maintains the temperature between the minimum selected temperature and the minimum temperature + 4°F / 2°C.

Jumper No.		BoosterTemperature Select	
JB6	JB5	Temperature (+4°F/2°C)	
▬	▬	180°F	82°C
▬	▪▪	185°F	85°C
▪▪	▬	190°F	88°C
▪▪	▪▪	195°F	91°C

Figure 7.3.2
Temperature/Pressure Display Board Jumpers and LED Status Lights
(cont.)

7.3.4 Temperature/Pressure Display Board LED Status Lights

Refer to Fig. 7.3.2, pages 56-57.

The circuit board has 3 red LED status lights that provide operational information.

POWER— Indicates the Temperature/Pressure Display Board is powered on.

WASH—HEAT Indicates output voltage to wash tank heater contactor is enabled.

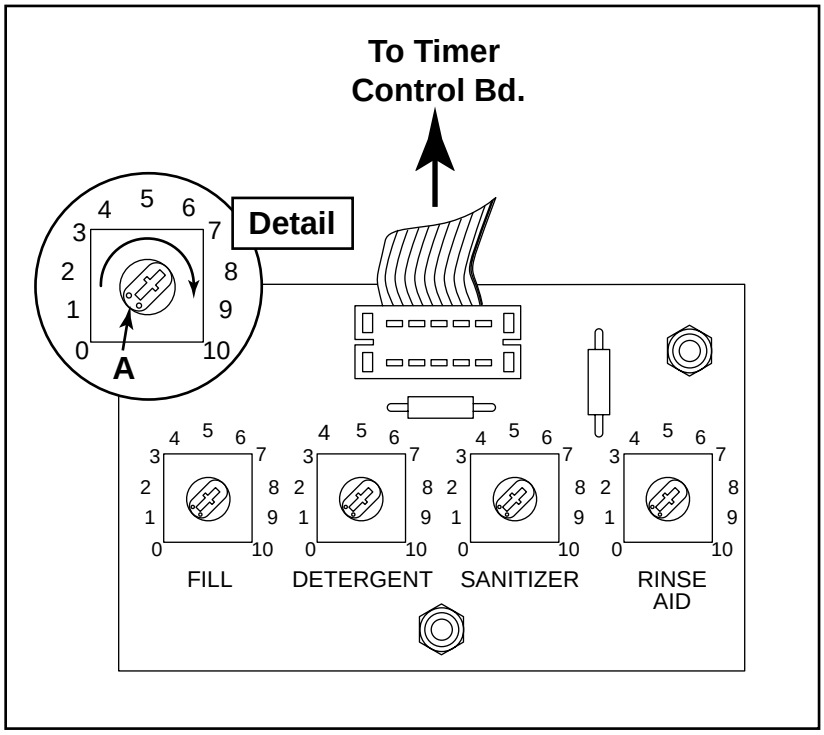
BOOSTER—HEAT Indicates output voltage to booster heater contactor is enabled. Applicable for model UH-200B only

7.3 Replacement Circuit Board Set-up (Cont.)

7.3.5 Time Select (Fill/Chemical Dispenser) Board

The Time Select (Fill/Chemical Dispenser) Board has 4 adjustable potentiometers.

Refer to Fig. 7.2.1, Circuit Board Layout, page 53, for the location of the Time Select Board.



Adjustment Range
FILL: 2 to 40 secs.
DETERGENT: 1 to 30 secs.
SANITIZER: 1 to 30 secs.
RINSE AID: 1 to 30 secs.
Numbers 0-10 around POTS DO NOT correspond to time settings. *Use numbers for reference only.*

Figure 7.3.3
Time Select (Fill/Chemical Dispenser) Board Potentiometers

WARNING:
When working on the dishwasher, disconnect the electrical service and place a red tag at the disconnect switch to indicate work is being done on that circuit.

POTENTIOMETER ADJUSTMENT:

1. Turn power off at the dishwasher and the main power disconnect switch.
2. Open the front door.
3. Remove screws located in each corner of the hood.
4. Pull the slide-out control cabinet out fully.
5. Fold back the protective mylar drip shield.
6. Locate the Fill/Chemical Dispenser Board (See Fig. 7.2.1, page 53).
7. Note the position of the potentiometer adjustment screws. Refer to the potentiometer detail in Fig. 7.3.3 above. Each pot has two small dots in one end of the adjustment dial which denotes the pointer on the dial.

(Continued on next page)

POTENTIOMETER ADJUSTMENT (continued):

8. After noting the position of the potentiometers, fully close the slide-out control cabinet. This positions the door safety switch to close when the dishwasher door is closed.

NOTE:
The dishwasher will not operate if the control cabinet is pulled out because the door safety switch will not be aligned with the door safety switch magnet located on the lefthand corner of the machine door.

FILL POTENTIOMETER ADJUSTMENT:

The UH-200B, and UH-200 model dishwashers do not utilize the fill adjustment.
Fill is controlled by the water level probe on UH-200B and UH-200 models.

9. Turn power on at the main disconnect switch.
10. Push the POWER pushbutton on the touchpad/display. Machine fills automatically.
11. Open door and check water level inside the dishwasher.
12. If water level requires adjustment, refer to Section 2.4, Water Connections, pages 8-10, and make sure supply connections meet specifications. Take any corrective action required before making potentiometer adjustment.
13. Push POWER pushbutton to drain machine.
14. Turn off power at main disconnect, pull out control cabinet and turn Fill POT CW in small incremental steps to increase fill time, CCW to decrease fill time.
15. Repeat steps 8-14, making small incremental changes to the setting until the proper water level inside the wash tank is achieved.

!! OH NO !!
THE DISHWASHER HAS OVERFILLED
WHAT DO I DO NOW?

Perform the following if too large an adjustment has been made to the Fill POT and the water level is higher than the top of the handle of the round scrap screen:

16. Turn the water supply off at the water shutoff valve for the dishwasher.
17. Push the POWER pushbutton OFF to drain the machine.
18. Push the POWER pushbutton ON, then immediately push POWER pushbutton OFF to drain the machine again.
19. Turn main power off at the service disconnect switch.
20. Adjust the Fill POT CCW to reduce fill time.
21. Turn water supply on and begin fill adjustment procedure (steps 8-14) again.

7.3 Replacement Circuit Board Set-up (Cont.)

7.3.5 Time Select (Fill/Chemical Dispenser) Board

POTENTIOMETER ADJUSTMENT (continued):

WARNING:
When working on the dishwasher, disconnect the electrical service and place a red tag at the disconnect switch to indicate work is being done on that circuit.

Refer to Section 2.9, Chemical Connections, pages 16-19, and to Potentiometer Adjustment, Steps 1-8, pages 58-59, before proceeding with the instructions below.

DETERGENT, RINSE AID, AND SANITIZER POTENTIOMETER ADJUSTMENT:
The UH-200B, UH-200 model dishwashers utilize optional detergent and/or rinse aid chemical dispensing pumps.

NOTE:
Chemical adjustments require testing equipment to accurately determine the proper type and concentration of commercial dishwashing chemicals. This is best performed by a qualified chemical supplier.

DETERGENT ADJUSTMENT:

Detergent is injected in the first 30 seconds of the automatic cycle. Turn the Detergent POT CW to increase the pump run time, CCW to decrease the pump run time. The minimum setting for the detergent pump is 1 second. The pump is locked out after the fill/rinse valve closes.

RINSE AID AND SANITIZER ADJUSTMENT:

Models UH-200B, UH-200 may have the optional rinse aid pump installed.

- If you want more rinse aid or sanitizer dispensed during the final rinse, turn the POT adjustment CW. This makes the pump activate earlier in the cycle from the moment the fill/rinse valve closes.
- Turn the POT CCW to make the pump activate less time from the moment the fill/rinse valve closes.

ADJUSTMENT EXPLANATION
Refer to Fig. 7.3.4, next page.
The illustration shows the fill/rinse valve and dispensing pump(s) portion of the automatic cycle for each model. The example given shows one possible setting; the actual setting may vary.

- **Notice that the zero reference point for the pump run time setting is the moment that the fill/rinse valve closes.**
- Rinse aid and sanitizer pumps **never** run **AFTER** the fill/rinse valve closes during the final rinse portion of the automatic cycle.

RINSE AID AND SANITIZER ADJUSTMENT:

ADJUSTMENT EXPLANATION (Cont.)

- Therefore, to increase dispenser pump run time, the time adjustment on the POT must activate the pump before the valve closes earlier in the cycle.
- If a POT is set to "0" on the adjustment dial, then the pump will start 1 second before fill/rinse valve closes.
- If a POT is set to "4" on the adjustment dial, then the pump will start 11 seconds before the fill/rinse valve closes.
- The time the fill/rinse valve is open varies!!
  Fig. 7.3.4 shows fill/rinse valve time set to the maximum of 40 secs. In reality, most machines will keep the factory setting of 25 seconds, but every installation can be different depending on supply pressure variations. Therefore, the timing chart is a guide. Fig. 7.3.4 shows the fill POT time set for 40 seconds. Consequently, the fill valve opens at 110 seconds and closes at 140 secs into the total cycle. In this example, with the Dispensing POT set at maximum, the pump would start at 129 seconds into the cycle and shutoff at 140 seconds. The cycle times would be different if the fill POT were set for 25 seconds. **Models UH-200B, UH-200** also may have variations in fill time because the water level probe controls initial fill time. But, the time that the fill/rinse valve is open during the final rinse portion of the automatic cycle is fixed at 11 seconds.

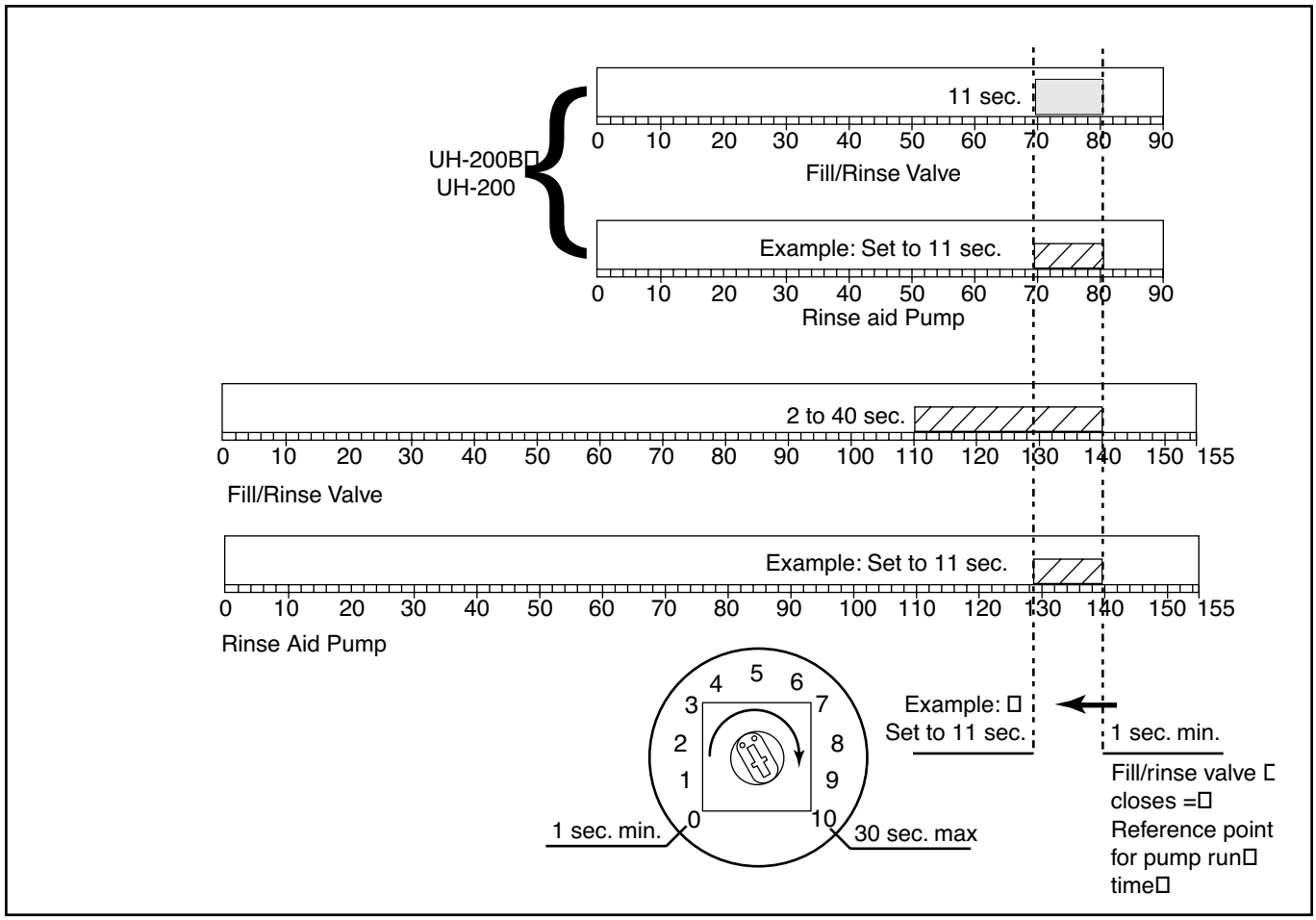


Figure 7.3.4
Rinse Aid Pump Adjustment

7.4 Circuit Board Test Points and Connectors

General Notes:

Sections 7.4.1 through 7.4.3 describe the location of harness connections to the solid state circuit boards. The inputs/outputs to peripheral components are noted on the diagrams where applicable.

WARNING:
Use extreme caution when testing energized electrical circuits.

CAUTION:
Do not attempt to test individual solid state components on the circuit boards.

NOTE:
There are no voltage tests required on the circuit board components.
Some components on the board may be damaged by an ohmmeter.
Technicians are only authorized to test the points described in the instructions below.

!! ATTENTION !!

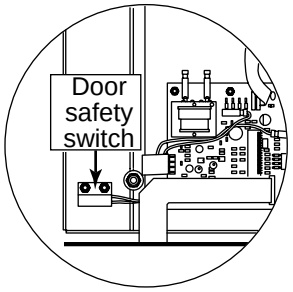
The dishwasher will not operate when the control cabinet is pulled out!!

The magnetic reed door safety switch is not aligned with the door magnet when the control cabinet is pulled out for service. In order to operate the dishwasher, the door safety switch will need to be bypassed temporarily to perform some service checks.

WARNING:
Make sure door is fully closed before bypassing the door safety switch. Remove bypass when service is complete.

Place a magnet on or adjacent to the door safety switch to operate the switch and perform service checks.

Remove magnet when service checks are complete.



Door safety switch
(Left side of control cabinet)

7.4 Circuit Board Test Points and Connectors

Tools:

The following tools are required to perform checks on the circuit boards:

- Standard set of hand tools
- Volt/Ohm meter (VOM) Sensitivity: 20,000 ohms/volt

Special Tools:

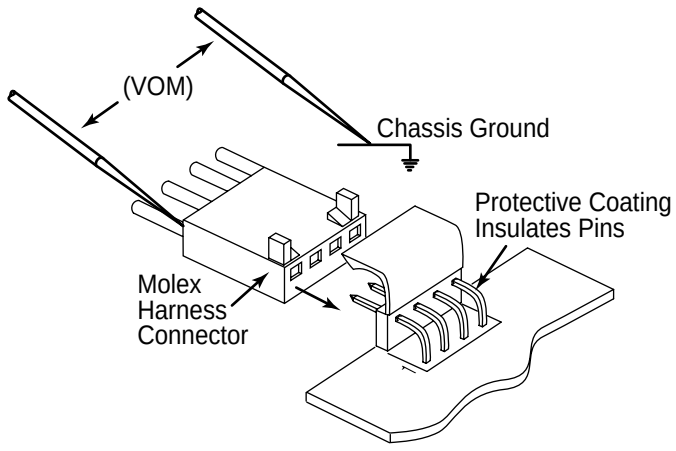
The following special tools are recommended:

- Magnet, P/N 111026, door magnet (Available from Champion), or comparable
- Touchpad/Display, P/N 112621 (Available from Champion)
- Jumper wire with miniature alligator clips to check water level probe (Supplied by others)

Connecting the VOM for Voltage Checks:

Refer to the illustration at right and follow the instructions below to make voltage tests on the circuit boards.

1. **Molex harness connectors must be plugged-in to the male connector on the board for voltage checks.**
2. Input and output AC voltages are approximately 120VAC.
3. Connect one VOM lead to chassis ground.
4. Carefully insert the other VOM lead into the wire end of the connector until it contacts the metal pin in the molex connector.
5. The exposed pins on the male portion of the connector are insulated with a protective coating. Do not attempt to scrape the coating off the pins.



Connecting the VOM for Voltage Checks

BEFORE YOU BEGIN TESTING A CIRCUIT:

DON'T FORGET !!

If the dishwasher POWER pushbutton is pressed when the machine is ON, the dishwasher will automatically enter the auto-shutdown mode.

If the main incoming power is interrupted while the dishwasher is powered ON from the POWER pushbutton, then, after the main incoming power is restored, the dishwasher will auto-fill when the POWER pushbutton is pressed.

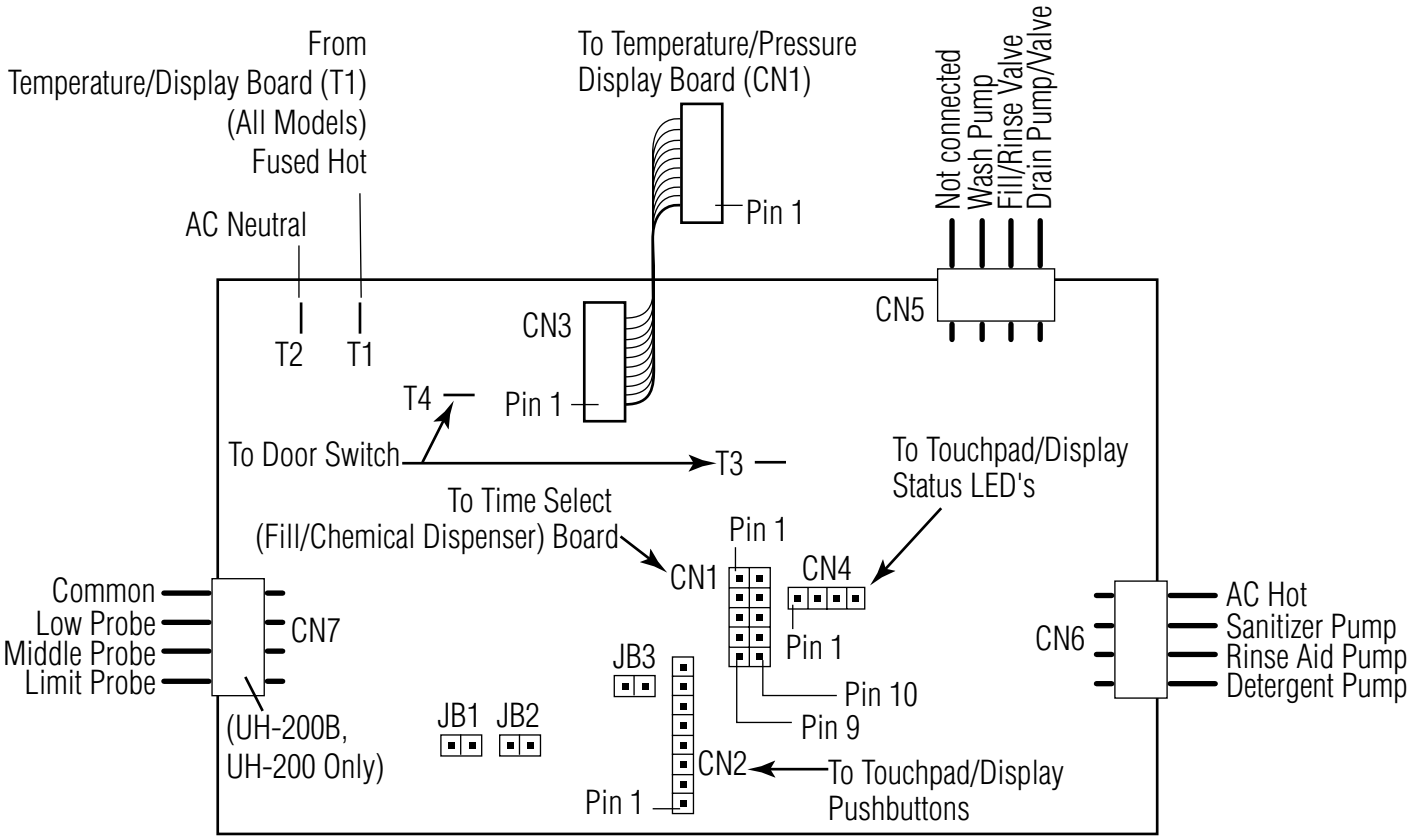
Refer to page 59, The Dishwasher Has Overfilled, if you encounter an overfilled condition during test procedures.

Refer to Section 7.3.2, pages 56-57 and Section 7.3.4, page 57, for the description of LED status lights on the solid state circuit boards.

7.4 Circuit Board Test Points and Connectors (Cont.)

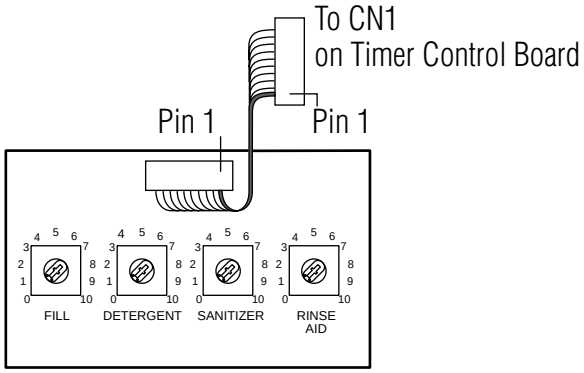
7.4.1 Timer Control and Time Select (Fill/Chemical Dispenser) Board

Refer to Fig. 7.4.1 and the instructions on page 65.



Timer Control Board Connector Diagram

NOTE:
Red stripe on cable indicates PIN 1 location.



Time Select (Fill/Chemical Dispenser) Board Connector Diagram

Figure 7.4.1
Timer Control and Time Select Connector Diagrams

7.4.1 Timer Control and Time Select (Fill/Chemical Dispenser) Board Connector Descriptions

Refer to Fig. 7.4.1 on page 64 and the test point descriptions below.

Timer Control Board Connectors:

CN1 — 10 pin connector accepts the cable from the Time Select Board.
There are no test points on CN1.

CN2 — 8 pin connector accepts the touchpad display cable.
Refer to Section 7.4.3, page 76, for test points.

CN3 — 10 pin connector hard-wired to the circuit board.
There are no test points on CN3.

CN4 — 4 pin connector accepts the status LED cable from the touchpad/display.
There are no test points on CN4.

CN5 — 4 pin connector accepts the wiring harness connector.
120VAC test points for:

- Wash pump output
- Fill/Rinse valve
- Drain pump and drain valve

CN6 — 4 pin connector accepts the wiring harness connector.
120VAC test points for:

- AC Power input to the Timer Control Board
- Sanitizer pump output
- Rinse aid pump output
- Detergent pump output

CN7 — 4 pin connector accepts the wiring harness connector. (UH-200B, UH-200 only)
Remove harness connector and connect jumper between Common and LOW, MIDDLE, or LIMIT pin on circuit board to to check water level LED's. Associated LED should illuminate on board when pins are jumped.

T1,T2— Spade terminals on board.
120VAC test points for power input

- T1 accepts AC Hot harness wire from Temperature/Pressure Display Board to power water level control transformer (UH-200B, UH-200 Only) and the wash pump, fill/rinse valve, and drain pump/drain valve (All Models).
- T2 accepts AC neutral harness wire (All models)

T3,T4— Spade terminals on board accept wires from door safety switch.

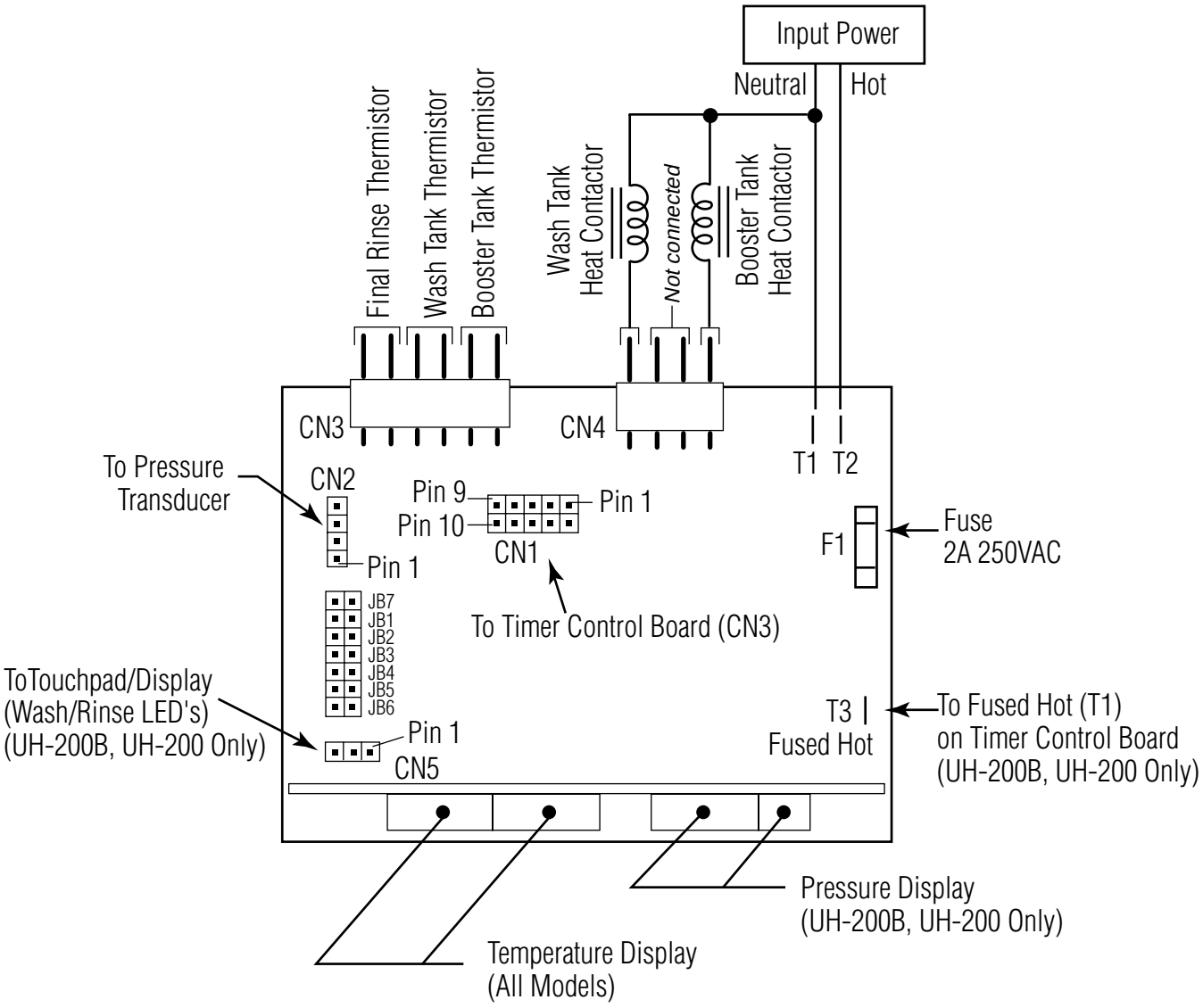
Time Select (Fill/Chemical Dispenser) Board Connectors:

CN1 — 10 pin cable to the Timer Control Board. Connector hard-wired to board.
There are no test points on CN1.

7.4 Circuit Board Test Points and Connectors (Cont.)

7.4.2 Temperature/Pressure Display Board

Refer to Fig. 7.4.2 and the instructions on page 67.



NOTE:
Red stripe on cable indicates PIN 1 location.

Figure 7.4.2
Temperature/Display Board Connector Diagram

7.4.2 Temperature/Pressure Display Board

Refer to Fig. 7.4.2 and the instructions on page 66 and the test point descriptions below.

Temperature/Pressure Display Board Connectors:

CN1 — 10 pin connector accepts the cable from the Timer Control Board.
There are no test points on CN1.

CN2 — 4 pin connector accepts the cable from the pressure transducer (UH-200B, UH-200 only).
There are no test points on CN2.

CN3 — 6 pin connector accepts the wiring harness connector.
Connector contains inputs from the thermistor probes.
Disconnect the connector from the board and check thermistor wires with VOM set to Ohms. Compare with actual temperature of water.

Thermistor Resistance Chart (Approx. Ohms)					
80°F/27°C	=	9,165	150°F/66°C	=	2,010
90°F/32°C	=	7,400	160°F/71°C	=	1,690
100°F/38°C	=	5,775	170°F/77°C	=	1,385
110°F/43°C	=	4,725	180°F/82°C	=	1,180
120°F/49°C	=	3,740	190°F/88°C	=	975
130°F/55°C	=	2,985	200°F/93°C	=	840
140°F/60°C	=	2,490	210°F/99°C	=	870

CN4 — 4 pin connector accepts the wiring harness connector.
120VAC test points for:
- Wash tank heat contactor output
- Booster tank heat contactor output

CN5 — 3 pin connector accepts the W/R LED cable from the touchpad/display on models UH-200B, UH-200 only.
All other models must have a jumper on CN5.
There are no test points on CN5.

T1,T2— Spade terminals on board.
120VAC test points for power input
- T1 accepts AC Neutral harness wire
- T2 accepts AC Hot harness wire (All models)

T3— Spade terminal on board accepts wire from Fused Hot T1 terminal on Timer Control (UH-200B, UH-200 only).
120VAC test point for fused hot.

FUSE— 2 amp fuse to protect 120VAC power output to T1 terminal on Timer Control Board. This power output is used for the water level control transformer located on the Timer Control Board on models UH-200B, UH-200 only.

7.4 Circuit Board Test Points and Connectors (Cont.)

7.4.3 Touchpad/Display

Refer to Fig. 7.4.2, page 66, and the instructions on page 69.

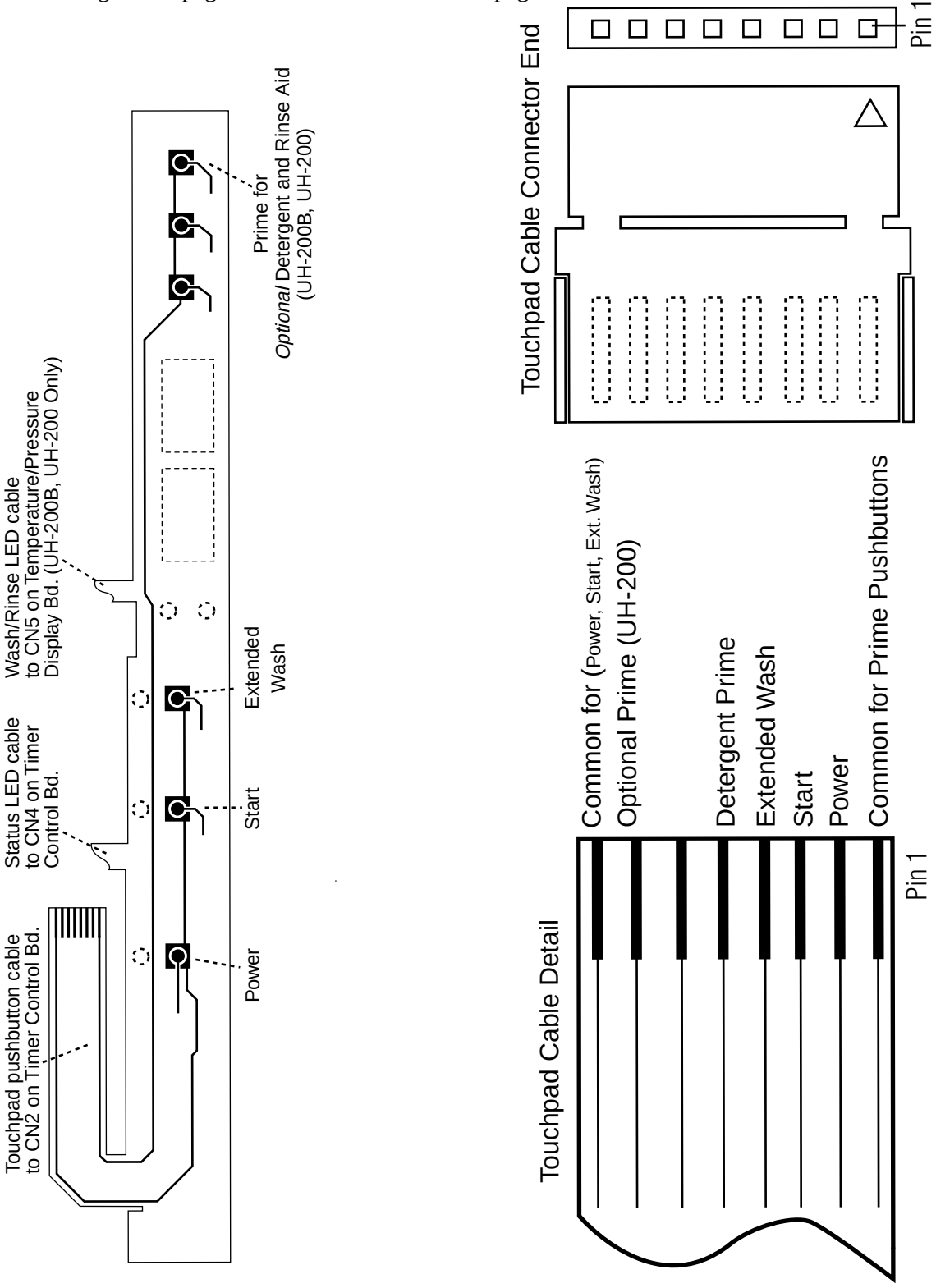


Figure 7.4.3
Touchpad/Display Connector Diagram

7.4.3 Touchpad/Display

Refer to Fig. 7.4.2, page 66, and the instructions on page 68, and the test point descriptions below.

Touchpad Display Connectors:

Status LED — Cable 4 pin cable connects to CN4 on the Timer Control Board.
LED's are: Power, Start, and Extended Wash
There are no test points on the cable

Wash/ Rinse LED — Cable 3 pin cable connects to CN5 on the Temperature/Pressure Display Board.
LED's are: Wash and Rinse (For Models UH-200B, UH-200 only)
There are no test points on the cable.

Touchpad Pushbutton Cable —
8 pin cable connects to CN2 on the Timer Control Board.

To test the pushbuttons:

1. Disconnect the cable from CN2 on the timer board.
2. Gently fold the cable connector back to reveal the contacts on the backside of the connector.
3. Make sure the cable is oriented to match the detail in Fig. 7.4.3.
4. Connect the VOM and press the pushbutton to check for continuity.

NOTE:
Fig. 7.4.3 shows the prime pushbuttons for all models.

***Models UH-200B, UH-200** are the only models with the Wash/Rinse LED cable. These models have one prime pushbutton which operates both optional detergent and rinse aid pumps simultaneously.*

NOTE:
*There are **NO hidden pushbuttons** on the touchpad/display.*

7.5 Circuit Board Removal and Replacement

General Notes:

The circuit boards should always be handled with care. Keep the board it its packaging until it is time for installation. Do not place the board on metal surfaces. The boards have a protective coating that resists electrostatic discharge (ESD) but it is good practice to touch a metal surface with your hand to discharge any static built up on your body before handling a board. Handle the circuit board by its edges whenever possible. Take care when using tools near the board.

WARNING:
When working on the dishwasher, disconnect the electrical service and place a red tag at the disconnect switch to indicate work is being done on that circuit.

CAUTION:
Discharge static build-up on your body by touching a metal surface before handling a circuit board to protect the board from electrostatic discharge (ESD).

NOTE:
Program jumpers should be checked and set to match the model and function of the dishwasher being repaired before the board is installed. Refer to Section 7.3, pages 54-62.

7.5.1 Timer Control Board Removal

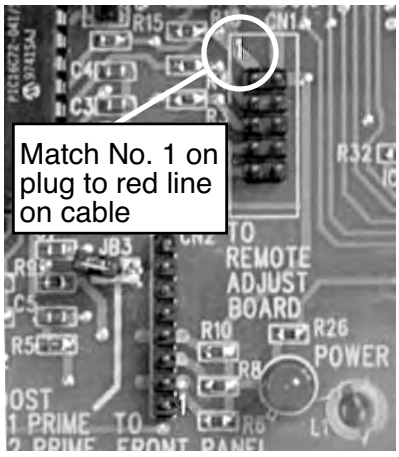
Refer to the pictures and instructions given below.

To remove the timer control board:
Check and set the program jumpers before you install a replacement board.

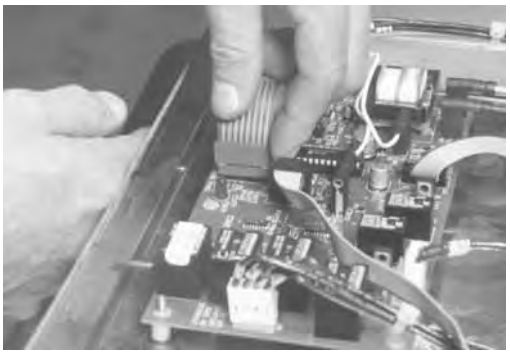
1. Turn power off at the dishwasher and the main power disconnect switch.
2. Open the front door.
3. Remove screws located in each corner of the hood.
4. Pull the slide-out control cabinet out fully.
5. Fold back the protective mylar drip shield.
6. Note location, then carefully disconnect display cables and connectors.
7. Remove 6-32 grip nuts retaining the board.
8. Lift the board up and off the mounting studs.
9. Replace the board in reverse order.

NOTE:
Plug-ins on circuit boards are marked with a number "1". This marking corresponds with a red line on the connector cable.

Make sure the "1" and the red line match when reconnecting a cable to the circuit board.

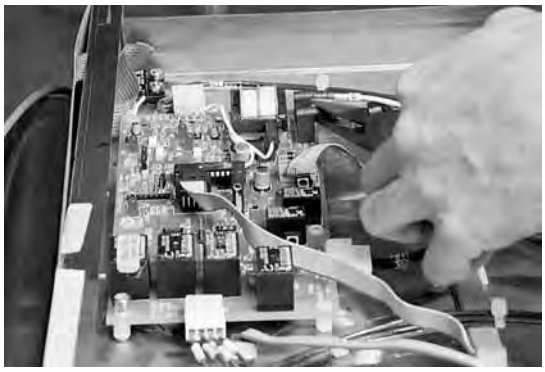


7.5.1 Timer Control Board Removal (Cont.)



Disconnect touchpad/display cables

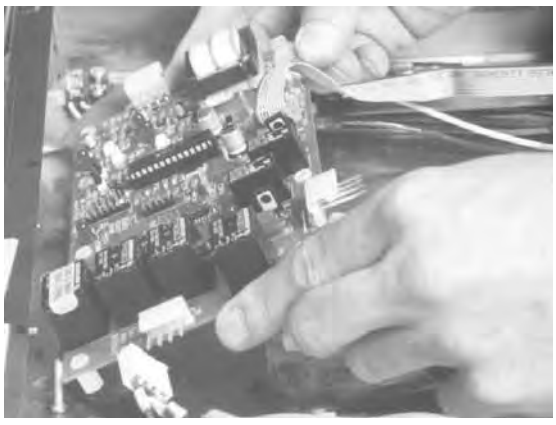
Disconnect interconnect cables



Observe caution when using tools near circuit board

Remove 6-32 retaining nuts

Handle the circuit board by its edges.



7.5 Circuit Board Removal and Replacement (Cont.)

Refer to the General Notes on page 70 before proceeding with the instructions below.

WARNING:
When working on the dishwasher, disconnect the electrical service and place a red tag at the disconnect switch to indicate work is being done on that circuit.

7.5.2 Temperature/Pressure Display Board Removal

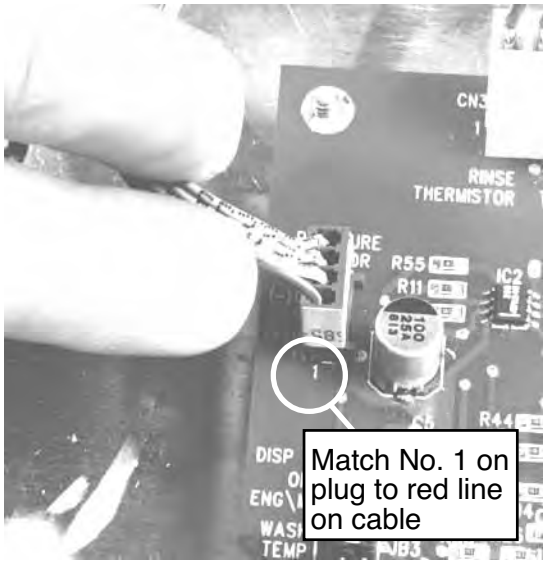
Refer to the pictures and instructions given below.

To remove the Temperature/Pressure Display Board:
Check and set the program jumpers before you install a replacement board.

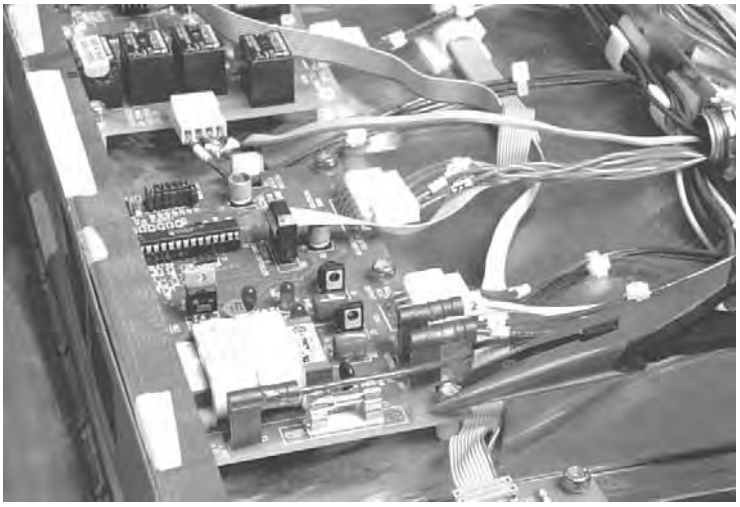
1. Turn power off at the dishwasher and the main power disconnect switch.
2. Open the front door.
3. Remove screws located in each corner of the hood.
4. Pull the slide-out control cabinet out fully.
5. Fold back the protective mylar drip shield.
6. Note location, then carefully disconnect display cables and connectors.
7. Remove 6-32 grip nuts retaining the board.
8. Lift the board up at the rear at a slight angle and off the rear mounting studs.
9. Carefully lift the front of the board off the studs and guide the board back and out until the LED's clear the control cabinet.
10. Replace the board in reverse order.
11. Make sure the display LED's are centered in the control cabinet windows.

NOTE:
Plug-ins on circuit boards are marked with a number "1". This marking corresponds with a red line on the connector cable.

Make sure the "1" and the red line match when reconnecting a cable to the circuit board.



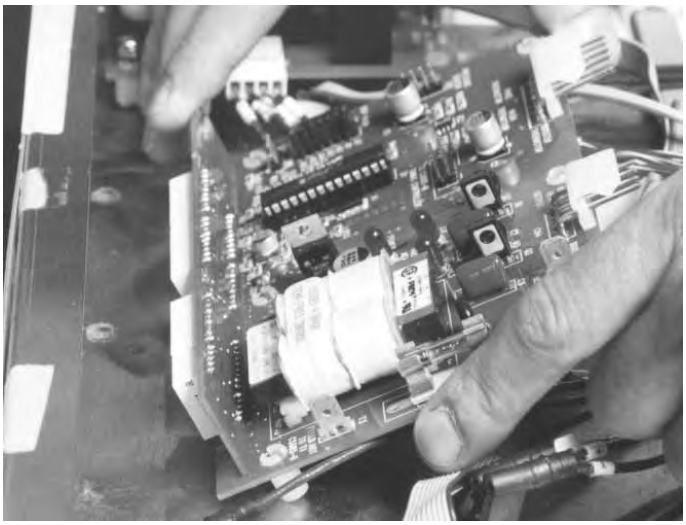
7.5.2 Temperature/Pressure Display Board Removal (Cont.)

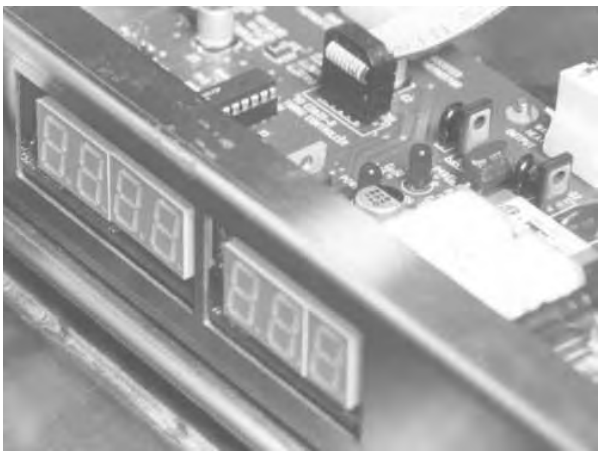


Remove 6-32 retaining nuts

Observe caution when using tools near circuit board

Handle the circuit board by its edges.





When reinstalling the board, make sure the LED's are centered in the control cabinet windows.

7.5 Circuit Board Removal and Replacement (Cont.)

Refer to the General Notes on page 62 before proceeding with the instructions below.

WARNING:
When working on the dishwasher, disconnect the electrical service and place a red tag at the disconnect switch to indicate work is being done on that circuit.

7.5.3 Touchpad/Display Removal and Replacement

Refer to the pictures and instructions given below.

Special Tools Required:

- **Sharp knife**
- **Acetone based cleaning fluid**
- **Scotch Brand® (or comparable) transparent tape**

To remove the Touchpad/Display:

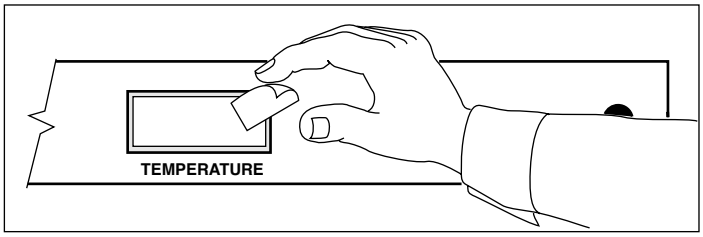
1. Turn power off at the dishwasher and the main power disconnect switch.
2. Open the front door.
3. Remove screws located in each corner of the hood.
4. Pull the slide-out control cabinet out fully.
5. Fold back the protective mylar drip shield.
6. Note location, then carefully disconnect display cables on the timer control board. The UH-200B, UH-200 has an additional cable connection on the temperature/pressure display board.
7. Use a sharp knife to separate the touchpad/display from the front of the control cabinet.
8. Scrape excess adhesive from the control cabinet face, then use a soft rag and an acetone based solvent to remove any remaining adhesive.

   AVOID GETTING ACETONE ON THE DISPLAY PLASTIC.

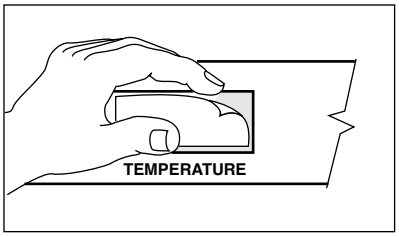
To replace the Touchpad/Display:

1. Remove the touchpad/display from its packaging.
2. Notice the protective film on the red display windows.
3. Apply a small piece of tape on one corner of the protective film. Lift the tape off quickly to pull the film off the red display window.
4. Peel the protective film off completely.
5. Carefully thread the display cables through the holes in the control cabinet.
6. Place the touchpad/display on top of the cabinet, adhesive backing facing up.
7. Remove the adhesive backing and carefully apply the display to the cabinet.
8. Go slowly, the adhesive is very strong and will adhere on contact.
9. Make sure the red windows are centered on the LED cutouts and apply even pressure on the touchpad/display to complete the installation.

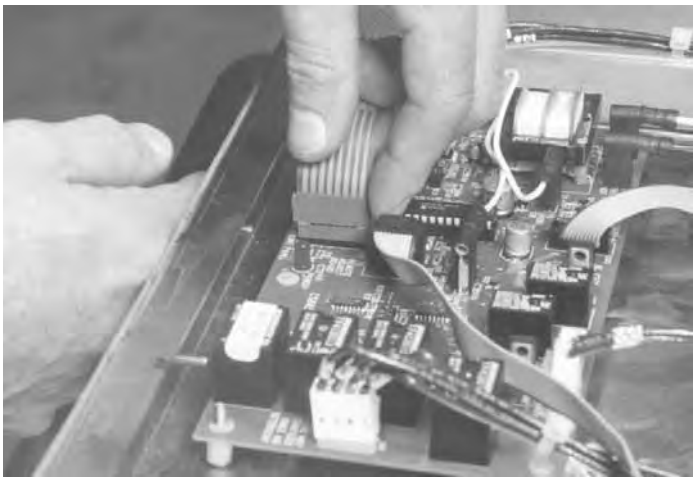
7.5.3 Touchpad/Display Removal and Replacement (Cont.)



Apply small piece of tape to corner of protective film and quickly remove tape



Pull protective film off display window



Disconnect display cables

Separate touchpad/display from control cabinet

(Continued next page)

7.5 Circuit Board Removal and Replacement (Cont.)

7.5.3 Touchpad/Display Removal and Replacement (Cont.)

Scrape off adhesive with knife and remove remaining adhesive with acetone based solvent

AVOID GETTING ACETONE ON THE DISPLAY!

Carefully thread display cables through holes in control cabinet front

Lay touchpad/display on top of control cabinet: adhesive side up.

Remove adhesive backing

Carefully align touchpad/display and apply to control cabinet front

7.5 Circuit Board Removal and Replacement (Cont.)

Refer to the General Notes on page 62 before proceeding with the instructions below.

WARNING:
When working on the dishwasher, disconnect the electrical service and place a red tag at the disconnect switch to indicate work is being done on that circuit.

7.5.4 Time Select (Fill/Chemical Dispenser) Board Removal and Replacement

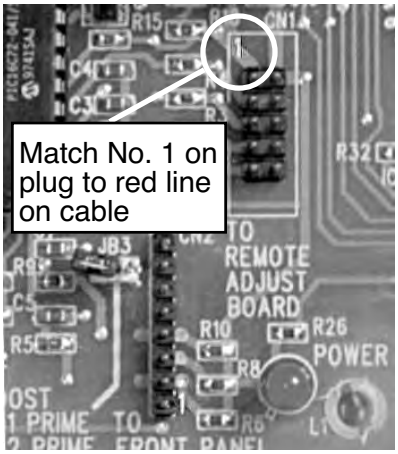
Refer to the pictures and instructions given below.

To remove the Fill/Chemical Dispenser board:
Check the POT settings on the defective board. Turn the POTS on the replacement board to match before installing the new board.

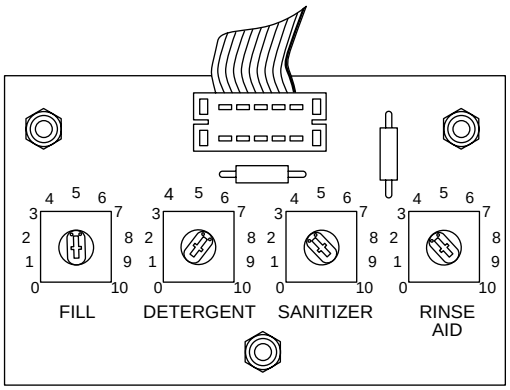
1. Turn power off at the dishwasher and the main power disconnect switch.
2. Open the front door.
3. Remove screws located in each corner of the hood.
4. Pull the slide-out control cabinet out fully.
5. Fold back the protective mylar drip shield.
6. Note location, then carefully disconnect the dispenser cable from the timer control board.
7. Remove the 6-32 retaining nuts.
8. Lift the board up and off the retaining studs.
9. Reinstall the replacement board in reverse order.

NOTE:
Plug-ins on circuit boards are marked with a number "1". This marking corresponds with a red line on the connector cable.

Make sure the "1" and the red line match when reconnecting a cable to the circuit board.



Set POTS on replacement board to match old board before installing the replacement.



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PART 8: COMPONENT REPAIR AND REPLACEMENT

8.1 Introduction

In This Part—

- Special Tools and Materials
- Electrical Component Locator Diagram
- Troubleshooting the 10-point Terminal Board
- Component Repair and Replacement Procedures

The instructions contained in Part 8 are intended for Champion authorized technicians and should not be used by untrained personnel. Persons not properly trained should not attempt to repair or make adjustments to the dishwasher. The instructions do not cover every possible trouble condition or repair procedure. The Champion authorized service technician should rely on experience, factory seminars and consultation with the Champion National Service Department for conditions not covered in this manual

The following warnings apply to the procedures contained in Part 8.

WARNING:
Machine surfaces are hot during and after normal operation.

WARNING:
When working on the dishwasher, disconnect the electrical service and place a red tag at the disconnect switch to indicate work is being done on that circuit.

WARNING:
Use extreme caution when testing circuits while power is applied to the machine.

8.1.1 Special Tools and Materials

Tools:

Metric fasteners are used in the wash pump assembly and the wash arm supports.

- Standard set of metric tools

Materials:

The following solvents, sealants, and pipe compounds are required for repairs.

- Pipe sealant (Loctite® 565 or comparable) Champion P/N 106437
- Silicon sealant (732 RTV or comparable) Champion P/N 104827
- Thread sealing teflon tape, Champion P/N 106436
- Plumber's putty (Compound 440 or comparable) Champion P/N 104889
- Heat Sink Compound (used on high limit thermostat) Champion P/N 110563

8.1 Introduction (Cont.)

8.1.2 Electrical Component Locator Diagram

The combined illustration below shows the major electrical components (except chemical pumps) for models UH-200B and UH-200 dishwashers.

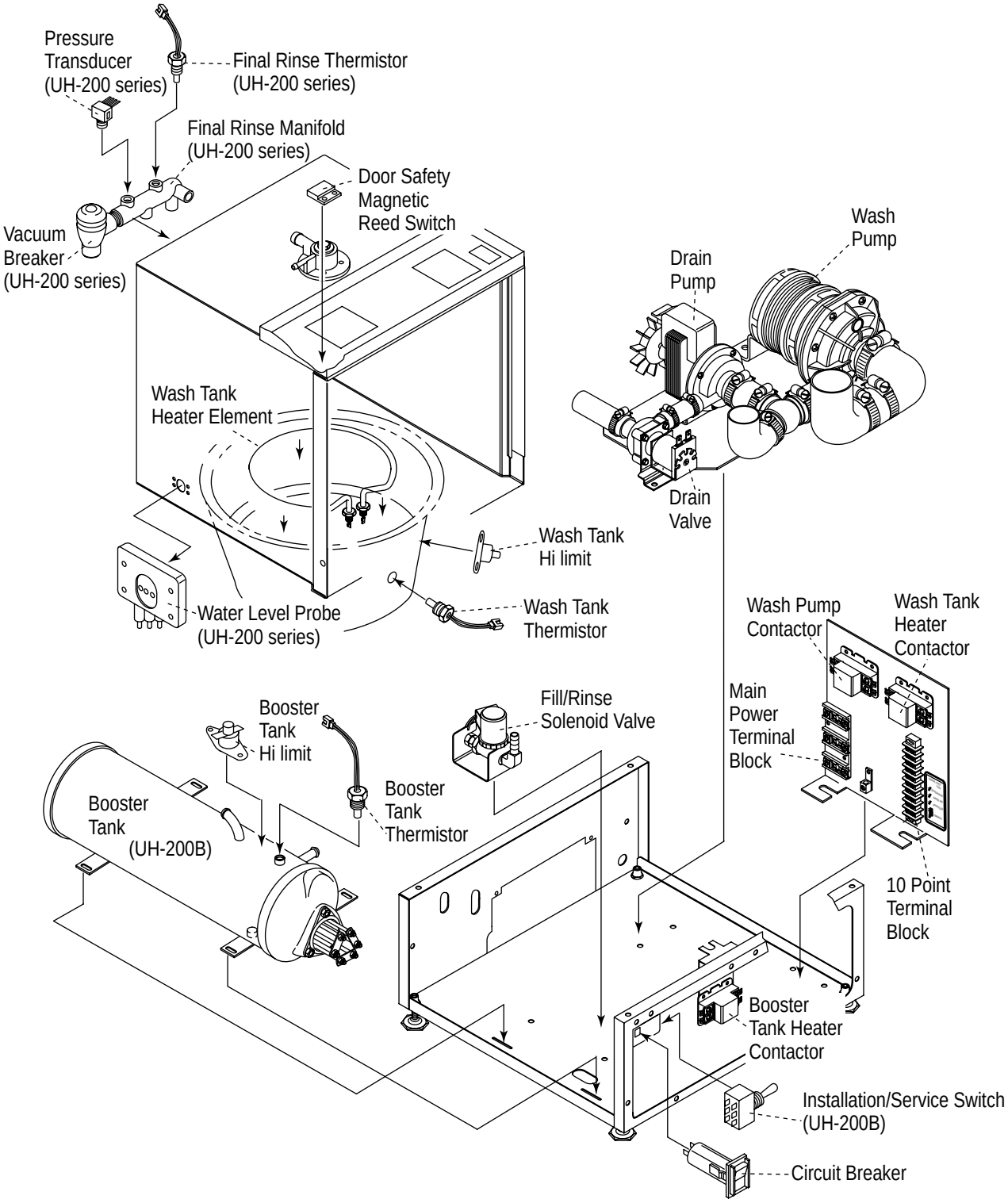


Figure 8.1.1
Electrical Component Locator Diagram

8.1.2 Electrical Component Locator Diagram Component Descriptions

Wash pump: Mounted right side of base.

Drain pump/ Drain valve: Mounted rear of base.
Drain pump works simultaneously with drain valve to pump water out of the dishwasher

Wash pump contactor: Mounted on bracket right front of base.
120VAC from timer control board energizes contactor coil.

Wash tank heat contactor: Mounted on bracket right front of base.
120VAC from temperature/display board energizes contactor coil.

Main power terminal block: Mounted on bracket right front of base.
Main incoming power connection point.

10 point terminal block: Mounted on bracket right front of base.
Connection point between control cabinet to lower components.

Booster tank heat contactor: Mounted on bracket upper front of base.
120VAC from temperature/display board energizes contactor coil.

Installation/ service switch: Mounted on bracket upper left side of base.
Fills booster on initial start-up. (UH-200B only)

Circuit breaker: Mounted on bracket upper left side of base.
8 amp manual reset breaker protects 120VAC control circuit.

Booster tank: Mounted left side of base.
Heats final rinse water. (UH-200B only)

High limit thermostat: One mounted on top of booster. One mounted on side of wash tank.
Manual reset. Trips if temperature exceeds 210°F/99°C.

Thermistor: Senses temperature and provides an input to temperature/display bd.

- **Wash tank thermistor** provides a thermometer input to the temperature display and provides thermostatic input for wash tank heat control.
- **Booster tank thermistor** provides thermostatic input for booster tank heat control on the temperature/display bd.
- **Final rinse thermistor** provides a thermometer input to the temperature display. Thermistor is located in the final rinse manifold for UH-200B, UH-200 and the fill chute for all other models.

Water level probe: Mounted left side of tank assembly.
Senses water level for timer control bd. input (UH-200B, UH-200 only).

Pressure transducer: Mounted left rear top corner of tank assembly in final rinse manifold.
Senses water pressure during final rinse and provides display input to temperature/display bd. (UH-200B, UH-200 only).

Wash tank heater: Mounted in bottom of wash tank sump.
Maintains wash tank water temperature at a minimum of 150°F/60°C.

Door safety switch: Mounted left front corner of slide-out control cabinet.
Prevents machine operation if door open or control cabinet pulled out.

8.1 Introduction (Cont.)

8.1.3 Troubleshooting the 10-point Terminal Board

The 10-point terminal board is mounted on a bracket located in the right front corner of the machine base. The terminal board provides easy access for making voltage checks to most of the electrical components mounted on the base of the machine.

Voltages are measured between a numbered wire and common (#2).

All voltages are control voltage and should read approximately 120VAC.

120VAC should be present at the terminal if the associated LED on the board is illuminated.

For example:
If the Drain LED is illuminated on the Timer Control Board, then 120VAC should be present between Wire #54 and Wire #2.

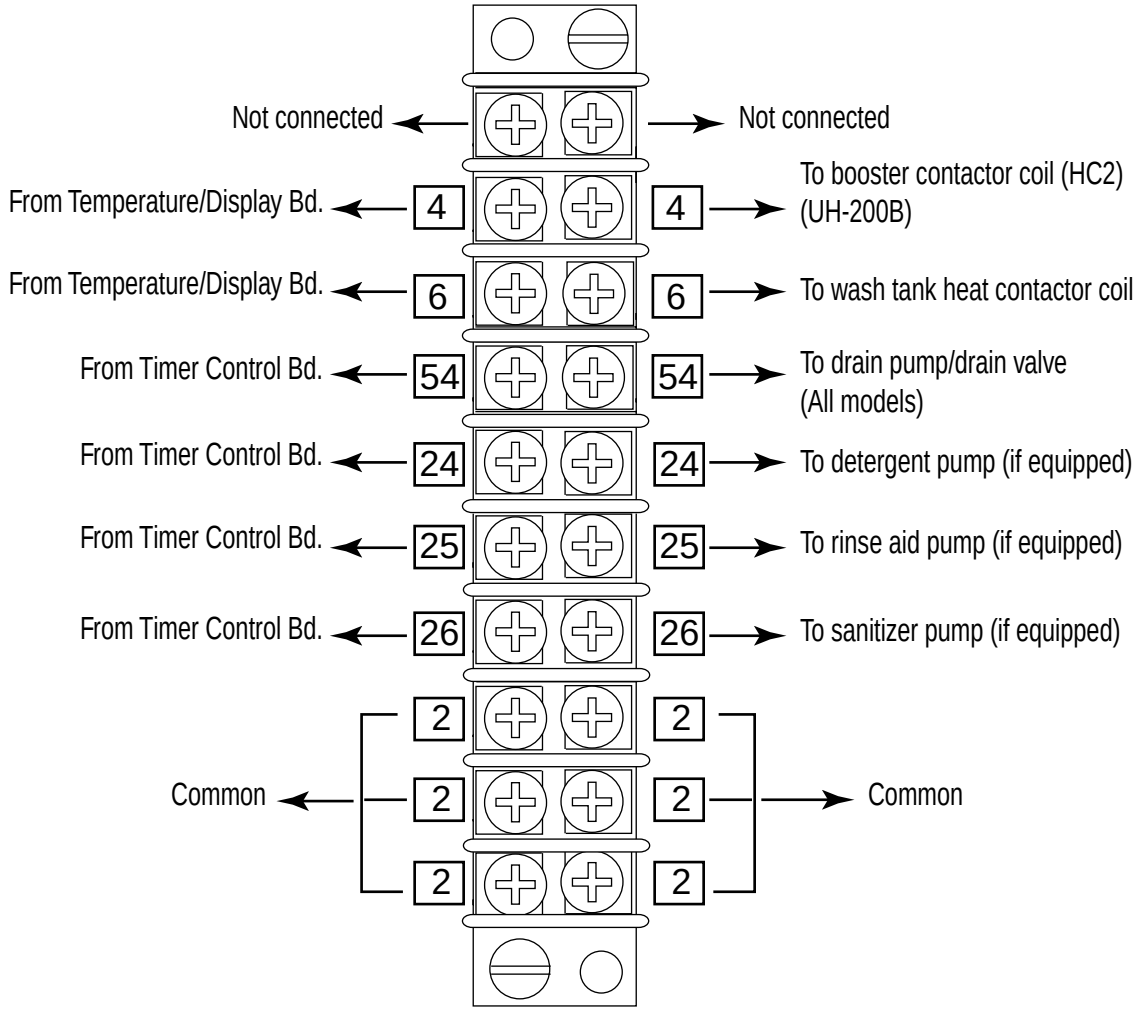


Figure 8.1.2
10-Point Terminal Board

8.1.3 Troubleshooting the 10-point Terminal Board (Cont.)

Troubleshooting Procedure:

The following procedure is suggested as a method for troubleshooting a trouble condition.

1. Identify the problem condition by observing machine operation.
   (Refer to Section 6.4, page 51, and the Troubleshooting Flow Charts in back of manual.)
2. Turn POWER pushbutton off and back on to enter self diagnostics.
3. Check for error codes. (Refer to Section 6.3, page 49.)
4. Open the slide-out control cabinet.
5. Make sure door is fully closed, then place a magnet on the door safety switch.
6. Observe LED's on the boards. (Refer to Part 7, page 54.)
7. Check for proper voltages on the components or the 10-point terminal board.
8. Check for defective high limits, contactors etc.
9. Check for proper voltage outputs at the circuit board connectors.
   (Refer to Section 7.4, pages 63-69.)
10. Replace the defective component and check machine operation.
    (Refer to Section 7.5, page 70; Part 8, page 79; and Section 6.2, pages 46-48.)

Components not connected via the 10-point terminal board:

The following components are wired directly from the Timer Control Board in the control cabinet to the base via the wiring harness:

- Wash pump contactor: Wire #20
- Fill/Rinse valve Wire #23

The thermistors also are wired directly from the temperature/display board in the control cabinet to their respective locations:

- Wash tank thermistor: Wires #9 and #10
- Booster tank thermistor Wires #11 and #12
- Final rinse thermistor Wires #7 and #8

PART 8: COMPONENT REPAIR AND REPLACEMENT (Cont.)

8.2 Components

This section provides photos, illustrations and basic instruction for the removal and replacement of the main components of the dishwasher. It does not cover all components such as the wash arm supports, hoses or panels. These repairs require simple observation and basic mechanical skill and therefore are not included in this manual.

Chemical dispensing pump installation is covered in Section 2.10, *Installing Optional Chemical Pumps*, pages 21-23.

WARNING:
Machine surfaces are hot during and after normal operation.

WARNING:
When working on the dishwasher, disconnect the electrical service and place a red tag at the disconnect switch to indicate work is being done on that circuit.

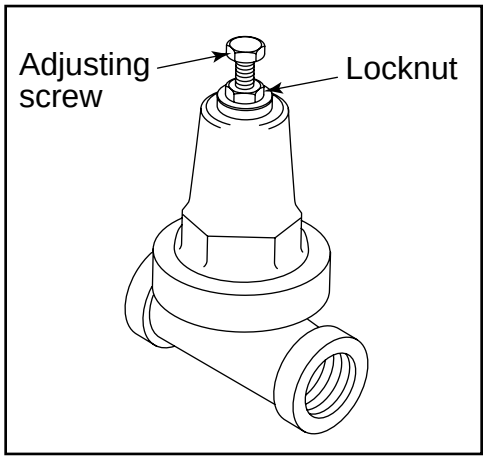
WARNING:
Use extreme caution when testing circuits while power is applied to the machine.

8.2.1 Pressure Reducing Valve (PRV) Adjustment UH-200B, UH-200 Only

A 3/4" PRV is required if the incoming water supply exceeds 20-22 PSI/138-151 kPa flowing pressure. The PRV should be installed in the incoming water supply line before the machine connection.

To adjust the PRV:

1. Loosen the locknut on the adjusting screw in the top of the PRV.
2. Turn the adjusting screw CW to increase the flowing pressure to the machine.
3. Turn the adjusting screw CCW to reduce the flowing pressure to the machine.
4. Observe the pressure reading on the control panel to confirm the proper setting of 20-22 PSI/138-151 kPa during the final rinse.
5. Tighten the locknut on the adjusting screw.
6. If the proper pressure cannot be achieved then check the water pressure before the PRV, it may be too low, or replace the PRV.



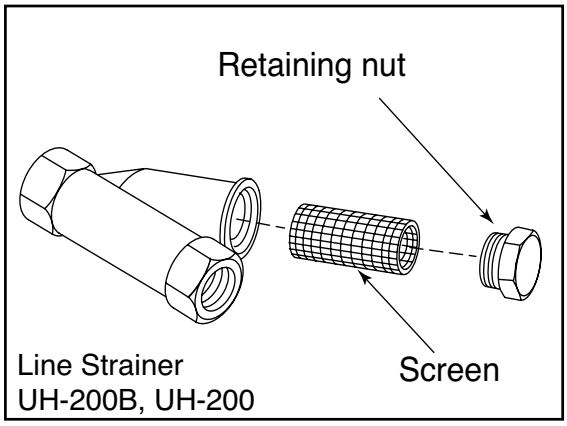
8.2.2 Water Line Strainer

A 3/4" line strainer was shipped unmounted with the UH-200B, UH-200 dishwasher. The line strainer should be installed in the incoming water supply line before the machine. The line strainer has a removable screen that should be cleaned at least once a year.

UH-200B, UH-200

To clean the line strainer:

1. Turn the main water supply to the machine off.
2. Push the POWER pushbutton off, if machine is ON, to enter auto-shutdown. Otherwise, turn machine on then off. This will bleed pressure off water line.
3. Remove the retaining nut from the line strainer and extract the screen.
4. Flush the screen with water. If screen is damaged, replace the line strainer.
5. Reassemble in reverse order.



Line Strainer
UH-200B, UH-200

8.2.3 Fill/Rinse Water Solenoid Valve

UH-200B, UH-200

The 1/2" water solenoid valve is both a fill valve when the machine is turned on and a final rinse valve during the final rinse. The valve coil is 120VAC. A repair kit is available to rebuild the internal parts of the assembly.

To remove the valve assembly:

1. Turn the main water supply to the machine off.
2. Push the POWER pushbutton off, if machine is ON, to enter auto-shutdown. Otherwise, turn machine on then off. This will bleed pressure off water line.
3. Remove the lower front panel from the dishwasher. The valve assembly is located on the left front side.
4. Disconnect valve discharge hose.
5. Remove (2) valve bracket retaining bolts.
6. Pull valve assembly forward and out of the dishwasher.


Remove bracket retaining bolts


Pull assembly forward and out

(continued next page)

8.2.3 Fill/Rinse Water Solenoid Valve (Cont.)

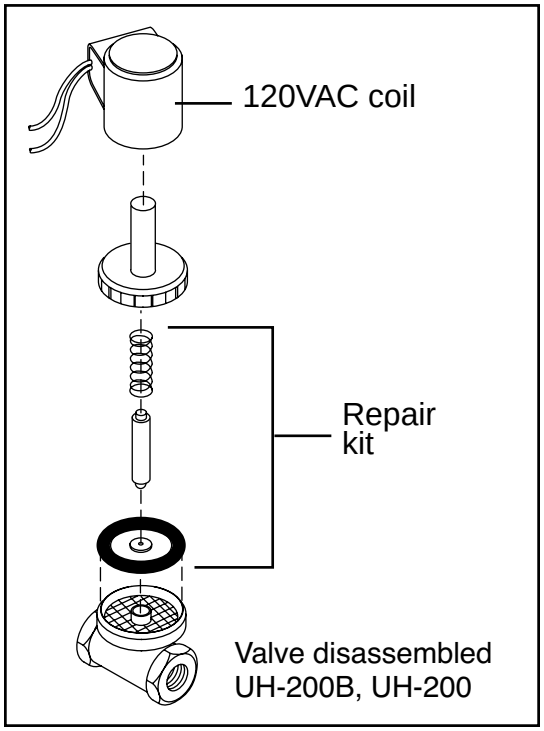
UH-200B, UH-200

To remove the valve assembly (Cont.):

7. Remove the coil assembly.
8. Remove the valve bonnet using strap wrench or pipe wrench.
9. Inspect valve body. If pitted, replace entire valve assembly. Otherwise, install repair kit.
10. Reassemble in reverse order.
11. Restore water and power and check for leaks.

Remove coil

Remove bonnet



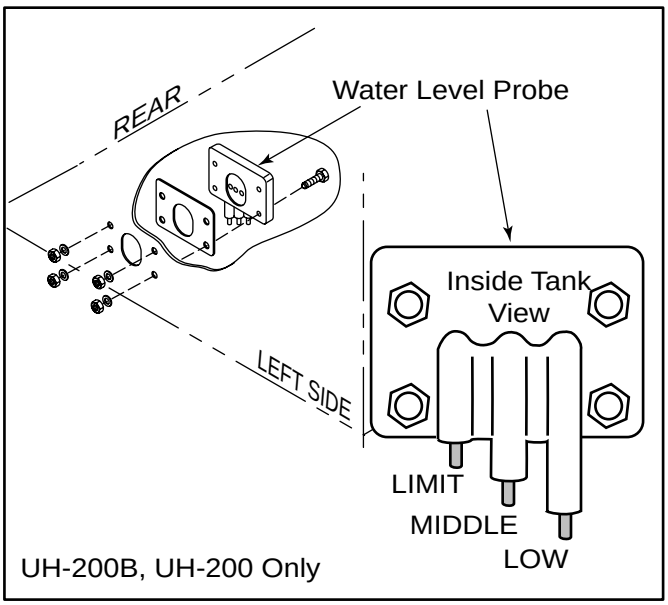
Valve disassembled
UH-200B, UH-200

8.2.4 Water Level Probe UH-200B, UH-200

The water level probe mounts to the left rear corner of the dishwasher. It is nearly indestructible but may require periodic inspection and cleaning to ensure the metal probes are free of lime build-up.

To clean the probe:

1. Push the POWER pushbutton off. Turn off main incoming power to the dishwasher.
2. Gently clean the probes with a non-ferrous scrub pad such as a scotch-brite pad.
3. Restore power to the machine and check for proper operation.



8.2.5 Vacuum Breaker

UH-200B, UH-200

The 1/2" vacuum breaker is located at the top left rear corner of the dishwasher. It prevents siphoning of water from the dishwasher back into the potable water supply. The vacuum breaker contains a replaceable float assembly.

CAUTION:
The vacuum breaker is connected to the plastic final rinse manifold. Use extreme caution when servicing the breaker to prevent damage to final rinse manifold.

To service the vacuum breaker:

1. Turn the main water supply to the machine off.
2. Push the POWER pushbutton off, if machine is ON, to enter auto-shutdown.
3. Turn off main incoming power.
4. Pull machine out if necessary.
5. Remove top and side panels.
6. Remove retaining screw in vacuum breaker cap. Remove cap.
7. SUPPORT THE BREAKER TO PREVENT DAMAGE TO THE PLASTIC MANIFOLD.
8. Remove the vacuum breaker top with a wrench turning CCW.
9. Remove the float assembly with a pair of needle nose pliers.
10. Inspect the bore of the vacuum breaker. If pitted, replace the entire vacuum breaker. Otherwise, install a repair kit.
11. Reassemble in reverse order.
12. Restore power and water, and check for proper operation.
13. Reinstall top and side panels.
14. Return machine to permanent location ensuring machine is level.
15. Check supply hoses at rear of machine to ensure they are not kinked.

8.2.6 Pressure Transducer

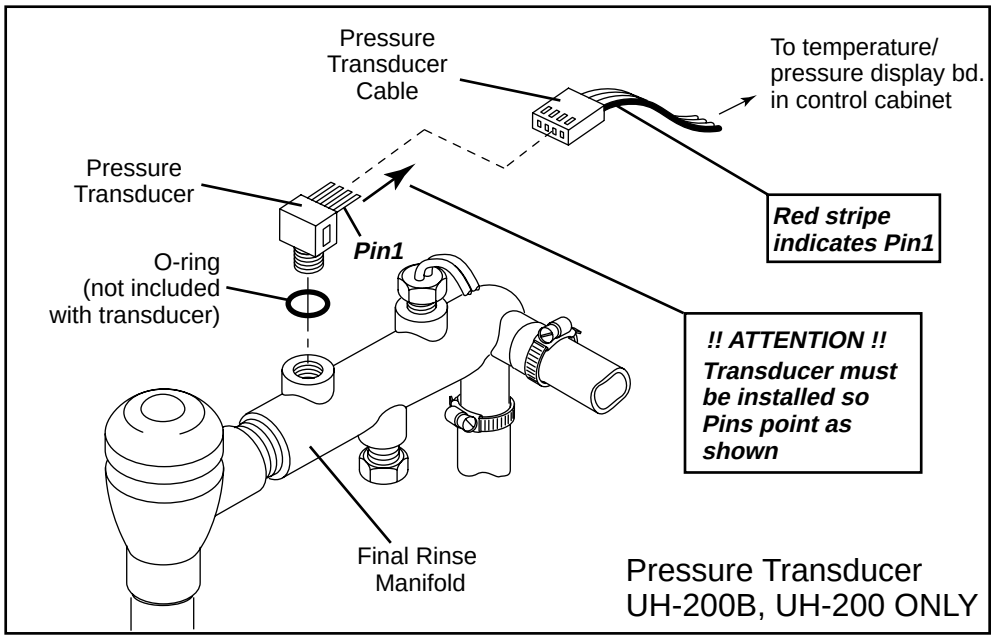
UH-200B, UH-200

The pressure transducer is located at the top left rear corner of the dishwasher. It is mounted in final rinse manifold and connected by a cable to the Temperature/Pressure Display Board located in the slide-out control cabinet (See Fig. 7.4.2, page 66).

The pressure transducer senses water pressure in the final rinse manifold during the final rinse cycle. It sends a signal to the Temperature/Pressure Display Board. The pressure is displayed in pressure window on the touchpad/display.

NOTE:
There are no test points on the transducer, nor the circuit board. If the pressure reading displayed is incorrect, then check that the incoming water supply flowing pressure is (20-22 PSI /138-151 kPa). If flowing pressure checks OK, then replace the pressure transducer.

CAUTION:
The pressure transducer pins are delicate. Use caution when handling to avoid bending or breaking the pins.



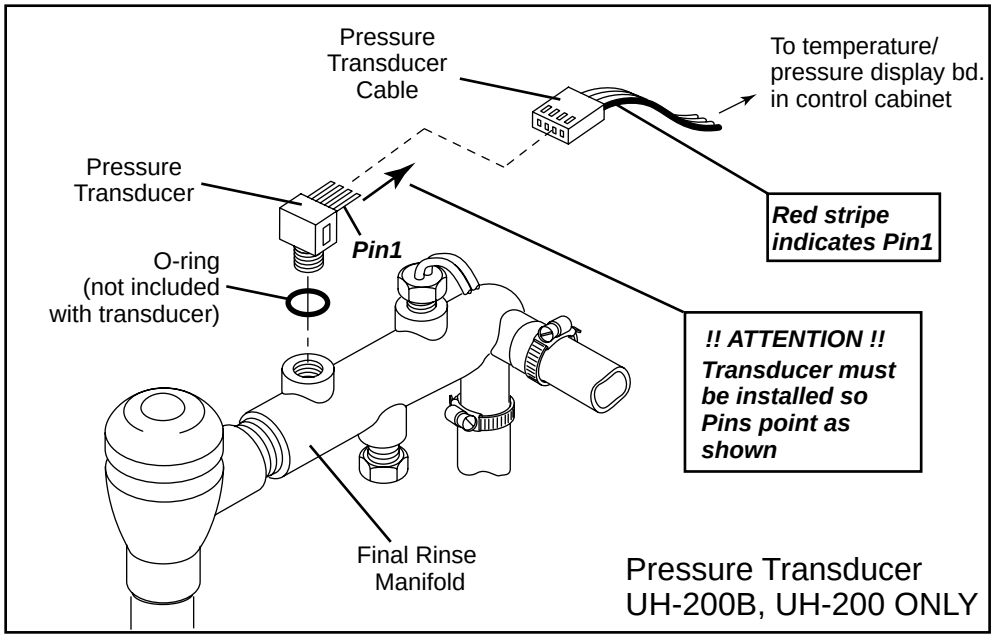
To replace the pressure transducer:

1. Turn the main water supply to the machine off.
2. Push the POWER pushbutton off, if machine is ON, to enter auto-shutdown.
3. Turn off main incoming power.
4. Pull machine out if necessary.
5. Remove top and side panels.
6. Note the red line on the transducer cable and disconnect.

(continued next page)

8.2.6 Pressure Transducer UH-200B, UH-200 (Cont.)

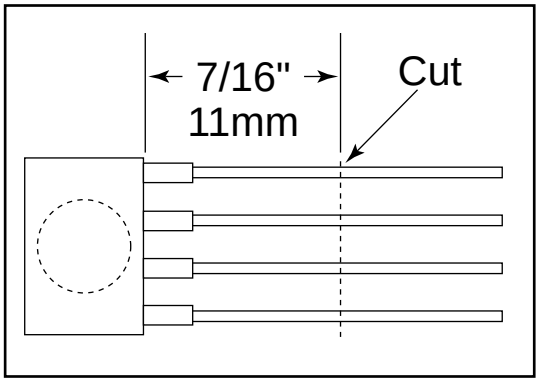
(continued from previous page)



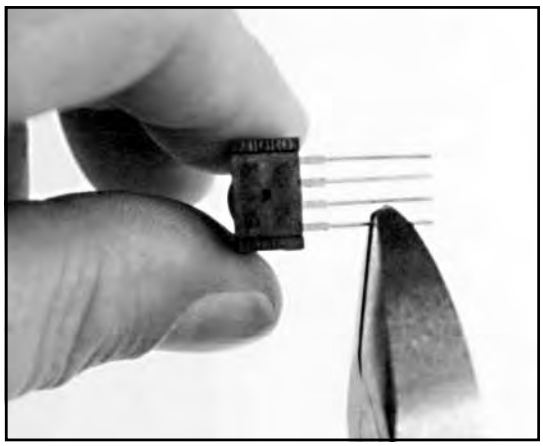
7. Remove the transducer turning CCW out of the manifold.

CAUTION:

The transducer requires an O-ring.
Save the O-ring from the old part if you do not have a replacement O-ring.
O-ring P/N 112731.



8. **INSPECT THE REPLACEMENT TRANSDUCER.**
   The transducer pins should measure approximately 7/16" [11mm] from base to tip.
9. If required, carefully cut one pin at a time using the sharpest side cutters available to 7/16" [11mm].
10. Install an O-ring on the transducer and screw the transducer into the manifold.
11. Make sure the transducer pins are parallel with the manifold and point away from the vacuum breaker. Connect the cable.
12. Restore power and water, and check for leaks and proper operation.
13. Reinstall top and side panels.
14. Return machine to permanent location ensuring machine is level.
15. Check supply hoses at rear of machine to ensure they are not kinked.



8.2.7 Thermistors

ALL THERMISTORS ARE IDENTICAL.

Refer to Section 8.1.2, page 81, for a description of the thermistor functions.

To check the thermistor:

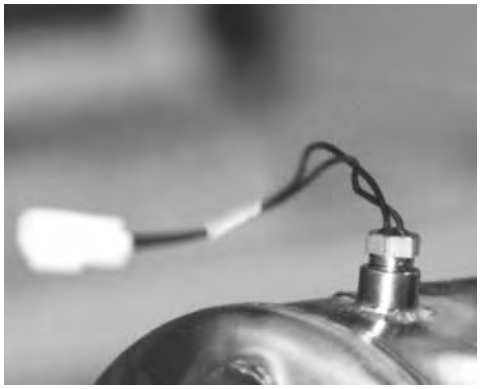
1. Verify the temperature of the water with a calibrated test instrument.
2. Refer to Section 7.4.2, page 66-67, Connector CN3 on the Temperature/ Pressure Display Board provides the test points for checking the thermistor temperature output.

Final rinse manifold
UH-200B, UH-200

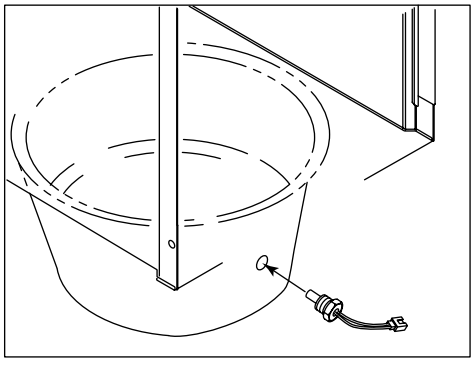
Thermistor Resistance Chart (Approx. Ohms)					
80°F/27°C	=	9,165	150°F/66°C	=	2,010
90°F/32°C	=	7,400	160°F/71°C	=	1,690
100°F/38°C	=	5,775	170°F/77°C	=	1,385
110°F/43°C	=	4,725	180°F/82°C	=	1,180
120°F/49°C	=	3,740	190°F/88°C	=	975
130°F/55°C	=	2,985	200°F/93°C	=	840
140°F/60°C	=	2,490	210°F/99°C	=	870

To replace the thermistor:

1. Turn the main water supply to the machine off.
2. Push the POWER pushbutton off, if machine is ON, to enter auto-shutdown. Otherwise, turn machine on then off. This will bleed pressure off water line.
3. Turn off main incoming power.
4. Pull machine out if necessary.
5. Remove panels as required.
6. Disconnect the molex connector on the thermistor leads.
7. Remove the thermistor.
8. Apply Loctite 565 pipe sealant, or comparable, to the threads of the replacement part.
9. Install in reverse order.
10. Restore power and water, and check for leaks and proper operation.
11. Reinstall panels.
12. Return machine to permanent location ensuring machine is level.
13. Check supply hoses at rear of machine to ensure they are not kinked.



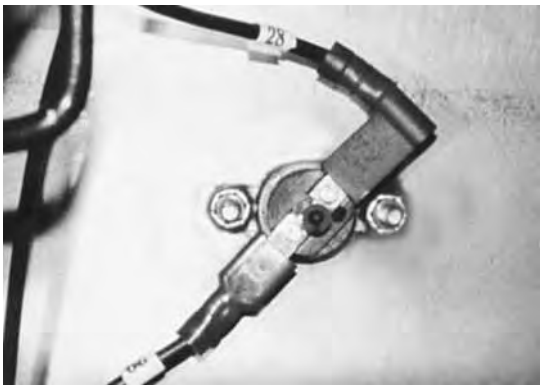
Booster tank
UH-200B



Wash tank
All models

8.2.8 Wash Tank Heater and High Limit Thermostat

The wash tank heater is mounted in the bottom of the wash tank sump. It maintains the wash tank water temperature at a minimum of 150°F/60°C. The heater is protected from a low water condition by a surface mounted high limit thermostat.



Check high limit thermostat

Check the high limit thermostat before replacing a suspected heater:

1. Push the POWER pushbutton off, if machine is ON, to enter auto-shutdown.
2. Turn off main incoming power.
3. Remove lower front panel.
4. Push manual reset on high limit.
5. Pull one lead from high limit and check for continuity. Replace if open.
6. Apply a coating of heat sink compound, P/N 110563, to the high limit base before mounting to tank.

Remove heater leads and retaining nuts

To replace the wash tank heater:

1. Perform steps 1-5 above.
2. Open machine front door and remove lower spray arm(s).
3. Remove round scrap screen and pump intake strainer.
4. Disconnect heater wires and remove retaining nuts.
5. Apply bead of sealing putty (Compound 440, P/N 104889 or comparable) to heater flanges.
6. Install washers and insert replacement heater in tank.
7. Install retaining nuts. Wipe off excess sealing putty from inside tank.
8. Reconnect heater wires.
9. Restore power.
10. Check for leaks and proper operation.
11. Reinstall lower front panel.

Remove heater from sump

8.2.9 Booster Tank Heater and High Limit Thermostat UH-200B

The booster tank assembly is mounted on the left side of the machine base.
It raises the incoming water temperature to a minimum of 180°F/82°C for the final rinse cycle.
The heater is protected from a low water condition by a surface mounted high limit thermostat.

Check the high limit thermostat before replacing a suspected heater:

1. Push the POWER pushbutton off, if machine is ON, to enter auto-shutdown.
2. Turn off main incoming power.
3. Remove lower front panel.
4. Push manual reset on high limit.
5. Pull one lead from high limit and check for continuity. Replace if open.
6. Apply a coating of heat sink compound, P/N 110563, to the high limit base before mounting to tank.

Remove heater wires

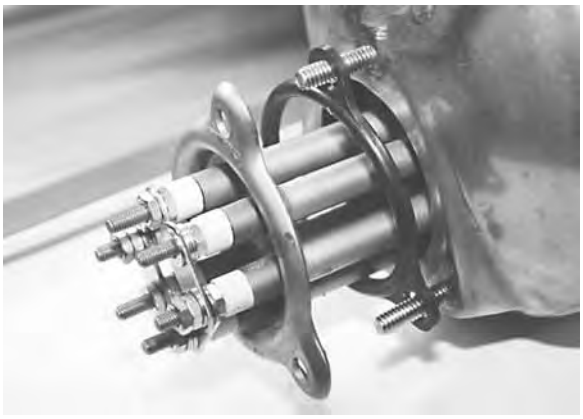
To replace the booster tank heater:

1. Perform steps 1-5 above.
2. Turn off incoming water suppy.
3. Remove drain plug in bottom of booster and drain water from tank.
4. Disconnect heater wires.
5. Remove (3) retaining element retaining nuts and washers.
6. Remove element.
7. Replace booster element gasket.
   DO NOT REUSE OLD GASKET

   DO NOT APPLY RTV SEALANT TO HEATER FLANGE.
8. Install the new element and tighten the retaining nuts in a cross pattern until element and gasket are snug.

   DO NOT OVER TORQUE THE RETAINING NUTS. DOING SO WILL DAMAGE THE TANK STUDS.
9. Reconnect heater wires.
10. Restore power and water.
11. Check the element and the drain plug for leaks.
12. Check for proper operation.
13. Reinstall lower front panel.

Remove retaining nuts



Install new gasket
DO NOT REUSE THE OLD GASKET

8.2.10 Wash Pump/Motor (All Models)

The wash pump/motor, drain pump/motor and drain valve are mounted on a removable plate. The plate can be pulled out the front of the dishwasher to gain access to the components.

Removing the Pump Mounting Plate:

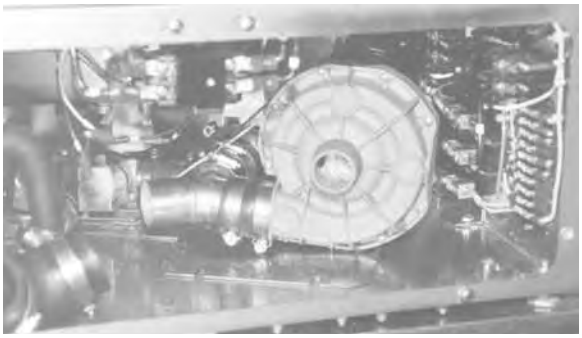
1. Push the POWER pushbutton off, if machine is ON, to enter auto-shutdown.
2. Turn off main incoming power.
3. Remove lower front panel.
4. Remove dispensing pump(s) if equipped.
5. Disconnect drain valve wires.
6. Remove the wash pump suction and discharge hoses.
7. Remove (2) retaining bolts holding front of mounting plate
8. Pull the pump mounting plate forward about 2" [50mm] then turn the assembly CW so the drain valve will clear the sump suction.
9. Pull the assembly forward and turn the assembly CCW slightly as you pull.
10. Feed additional fill and drain hose from the rear of the machine.
11. Turn CCW, pull the assembly forward and out.

Remove dispensing pumps (if equipped)

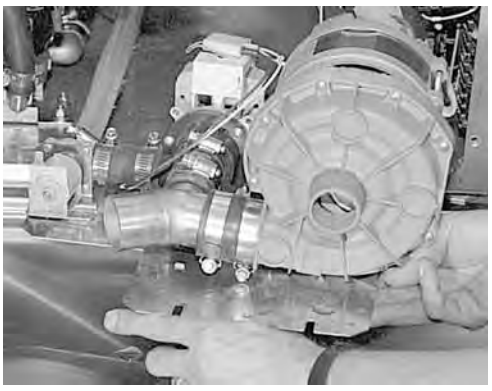
Remove hoses
Remove (2) retaining bolts

Alternate Pump Removal Method Through Rear Access door:

1. Perform steps 1-6 above.
2. Pull machine out to gain access to rear.
3. Remove rear access door.
4. Remove mounting nuts from drain valve and drain pump.
5. Disconnect wash pump, drain pump, and drain valve wires.
6. Pull drain valve and drain pump out rear of machine.
7. Pull wash pump/motor out the rear of machine.
8. Reassemble in reverse order.

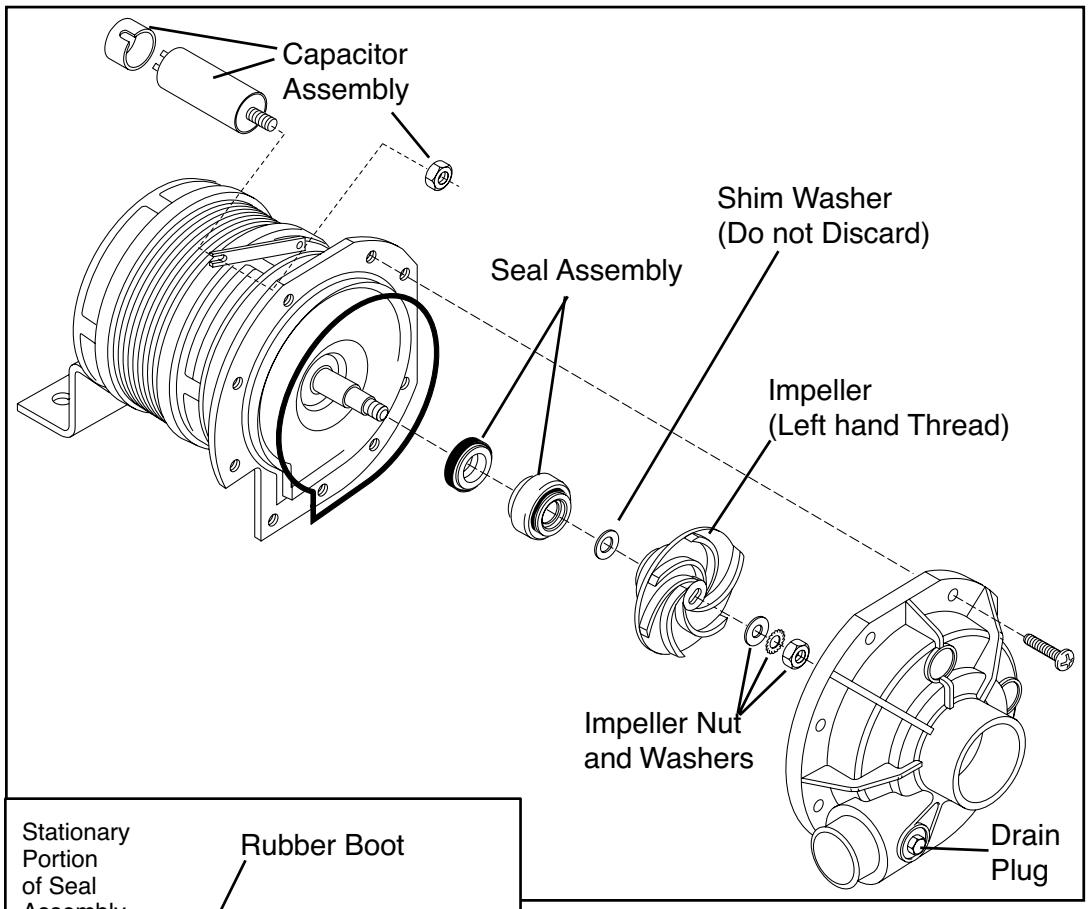


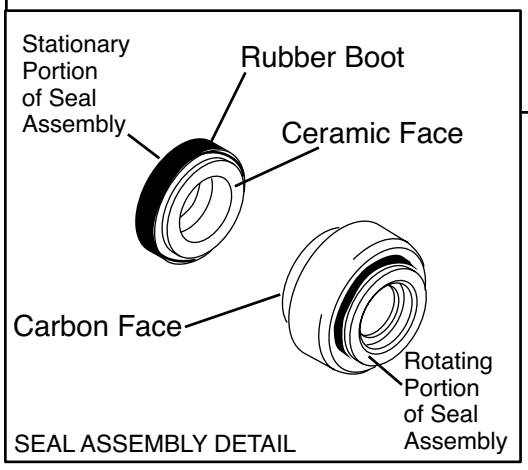
Pull forward and turn CW
Make sure drain valve is clear



Turn CCW, pull forward and out

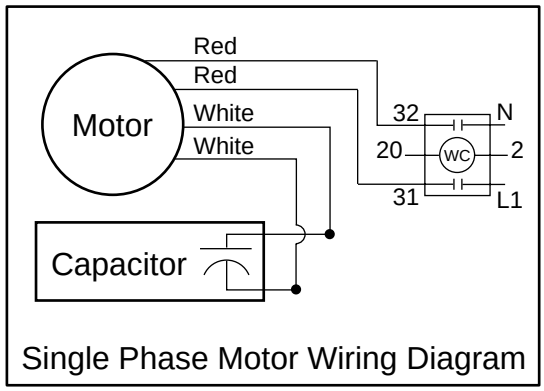
8.2.10 Wash Pump/Motor (All Models)





Replacing the Wash Pump Seal:

1. Remove the 8 mm drain plug in the pump volute and drain the pump.
2. Remove (9) pump housing screws.
3. Remove the impeller retaining hardware. MOTOR SHAFT HAS LEFT-HAND THREADS. TURN IMPELLER CW TO REMOVE.
4. Remove the defective seal. Save the shim washer
5. Install the replacement seal. Stationary portion goes in the pump housing. Rotating portion mounts on the shaft.
6. Reassemble in reverse order.



Single Phase Motor Wiring Diagram

8.2.11 Drain Pump/Motor and Drain Valve (All Models)

There are no service replacement parts for the drain pump/motor, nor the drain valve.
The components can be disassembled and cleaned if necessary.
Exploded views of the drain pump/motor and drain valve are provided below.

The drain components are mounted on the pump mounting plate.

Refer to Section 8.2.10*, Removing the Pump Mounting Plate*, page 94.

To service the Drain Pump/motor or drain valve:

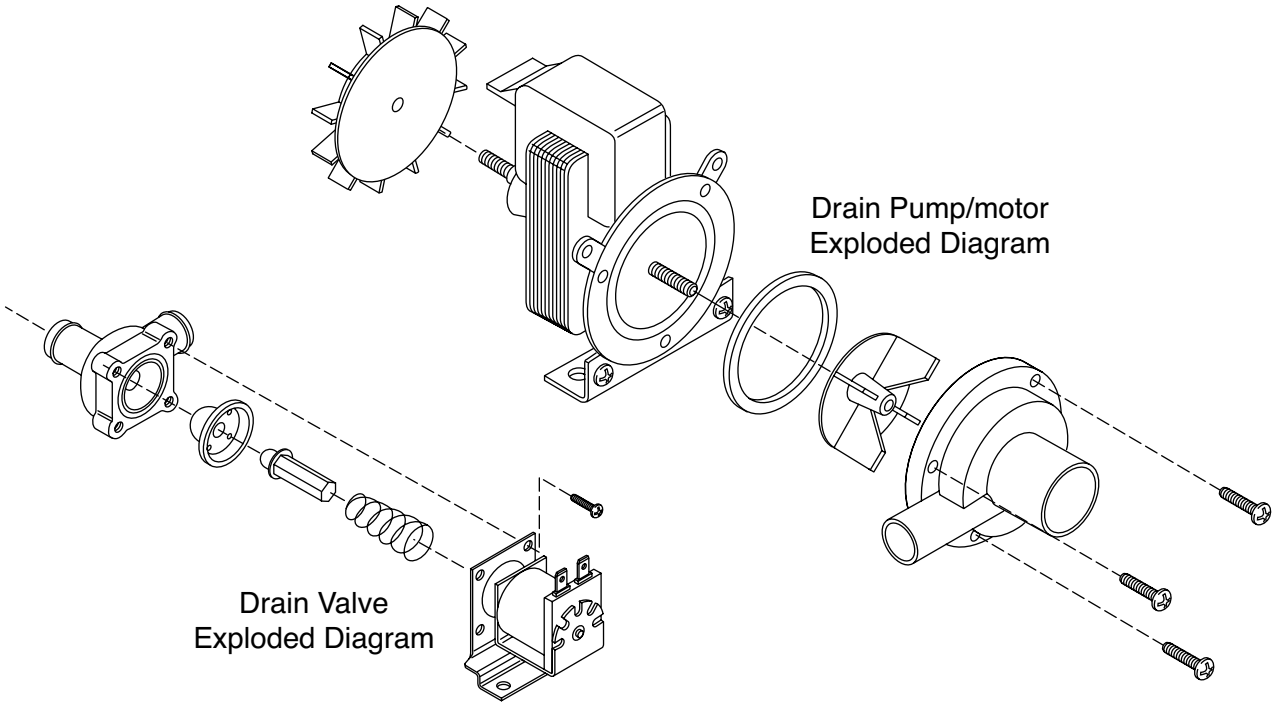
Method 1:

1. Turn off the incoming water supply.
2. Push the POWER pushbutton off, if machine is ON, to enter auto-shutdown.
3. If power is off, turn machine on, then immediately off.
   This will force the machine to enter the auto-shutdown cycle and drain.
4. If the machine fails to drain, check the drain hose for kinks which might restrict drain water flow.
5. Check the building plumbing for obstructions.
6. Turn off main incoming power.
7. Remove pump mounting plate per Section 8.2.10, page 95.
8. Replace the defective component and reassemble in reverse order.

To service the Drain Pump/Valve from the rear of the machine.

Method 2:

1. Perform steps 1-6 in Method 1.
2. Pull the machine out to gain access to the rear.
3. Remove the rear service door.
4. Inspect the drain components and hoses. Disconnect hoses.
5. Disconnect the wires.
6. Remove the grip nuts on the mounting brackets.
7. Pull the drain components out the back of the machine.
8. Inspect, clean or replace.
9. Reassemble in reverse order.



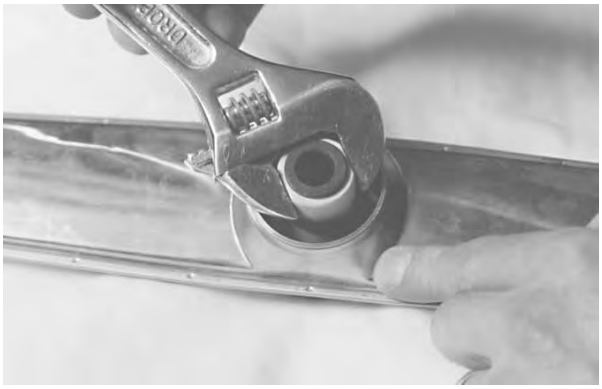
8.2.12 Wash Arm Bearings (All Models)

All dishwasher models use two interchangeable wash arm assemblies, one upper and one lower. Each wash arm contains two replaceable bearings. Models UH-200B, UH-200 also have a separate upper and lower rinse arm assembly.

To replace the wash arm bearings:

1. Remove knurled retaining screw from the wash arm.
   (For UH-200B, UH-200 first remove rinse arm assembly)
2. Place the wash arm face down on a clean working surface.
3. Remove the wash arm hub with an adjustable wrench.
   The wash arm nut on the other side is keyed so it will not turn.
4. Separate the hub and nut from the stainless steel arm.
5. Carefully press out the old bearing in each piece.
6. Press a new bearing in the hub and nut.
   DO NOT HAMMER THE BEARING IN PLACE.
7. Reassemble in reverse order.
8. Reinstall the arm in the machine and spin to check for smooth operation.

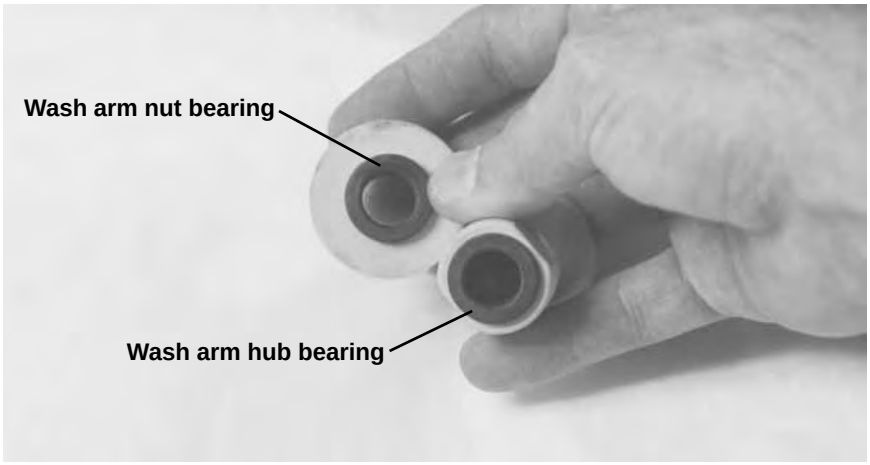
Remove wash arm hub



Separate hub and nut from wash arm

PRESS new bearings in

DO NOT HAMMER



8.2.13 Rinse Arm Bearings (UH-200B, UH-200 Only)

The UH-200B, UH-200 dishwasher models use two interchangeable wash arm assemblies, and two interchangeable rinse arm assemblies. Refer to Section 8.2.12 for wash arm bearing repair. Each rinse arm contains two replaceable bearings.

To replace the rinse arm bearings:

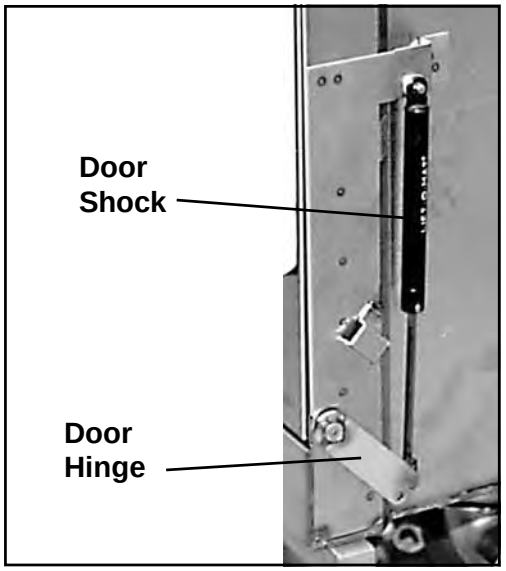
1. Unscrew the knurled spindle in the rinse arm assembly and remove the rinse arm assembly.
2. Place the rinse arm on a clean working surface.
3. Hold the knurled retaining nut on the underside of the rinse arm and unscrew the knurled spindle.
4. Carefully press out the old bearings in the stainless steel rinse arm.
5. Press new bearings into the arm.
   DO NOT HAMMER THE BEARINGS IN PLACE.
6. Reassemble in reverse order.
7. Reinstall the arm in the machine and spin to check for smooth operation.

Unscrew knurled spindle and retaining nut

PRESS
new bearings in

DO NOT HAMMER

8.2.14 Door Shock and Hinge (All Models)



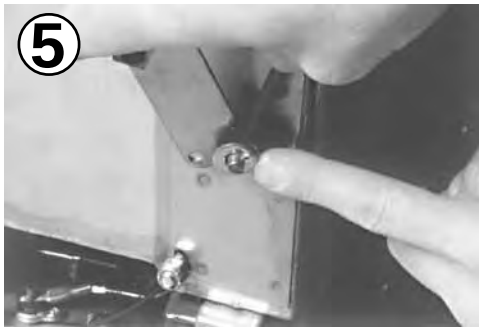
All dishwasher models utilize (2) twin seal gas-operated shocks for the door. The shocks serve the same purpose as a conventional door spring on other machines. The advantage of the shock is smoother door operation and a softer, more controlled door closure than door spring designs.

Preparation for Repair:

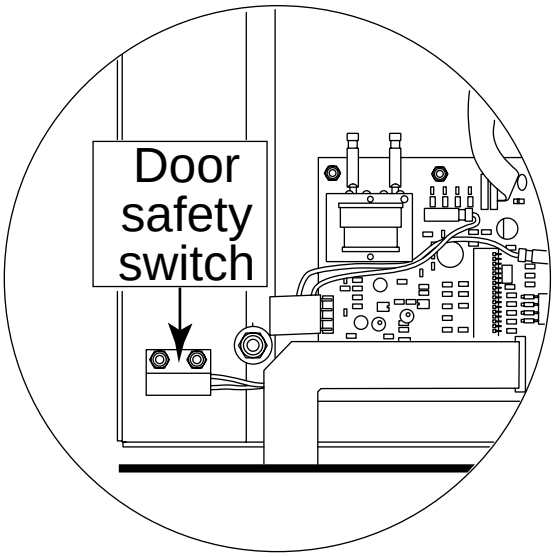
1. Push the POWER pushbutton off, if machine is ON, to enter auto-shutdown.
2. Turn off main incoming power.
3. Pull the machine out if required to gain access to side.
4. Remove front and side panels.
5. Close door fully.

To replace a door shock:

1. Remove the upper cotter pin and washer.
2. Remove shock from upper pin and let shock hang from hinge assembly.
3. Use a 5/32" allen wrench to remove the hinge retaining screw.
4. Gently pry the hinge out of the door assembly.
5. Remove the lower cotter pin and washer.
6. Reassemble in reverse order.
7. Check door operation and return machine to service.



8.2.15 Door Safety Switch and Magnet (All Models)



All dishwasher models utilize a magnetic reed door safety switch mounted in the left front corner of the slide out control cabinet.

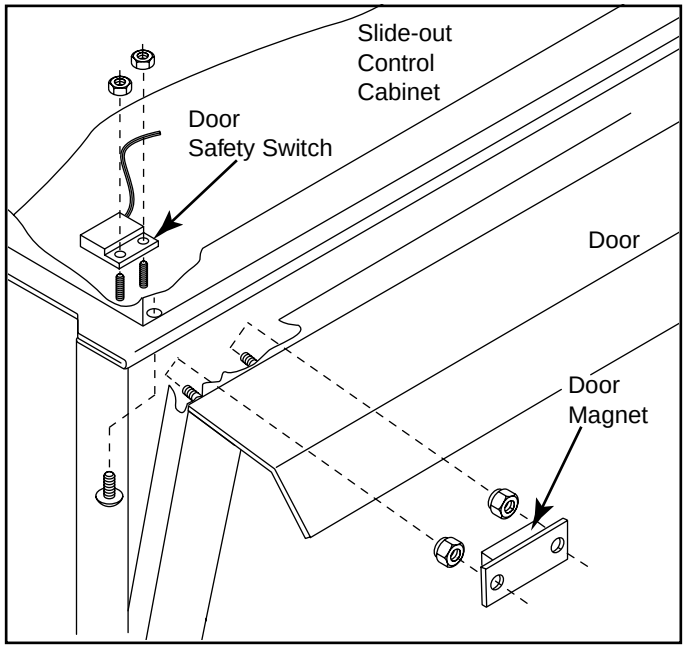
A door magnet operates the safety switch when the door is fully closed.

The dishwasher will not operate if the door is open when the POWER pushbutton is pushed ON to fill the machine.

If the dishwasher is in an automatic cyle, opening the door will pause the cycle. When the door is closed, the cycle will resume where it left off.

To replace door safety switch:

1. Push the POWER pushbutton off, if machine is ON, to enter auto-shutdown.
2. Turn off main incoming power.
3. Open the door and remove (2) screws, one in each corner of the top hood.
4. Pull the slide-out control cabinet forward.
5. Pull the mylar drip shield back.
6. Disconnect the switch wires from T3 and T4 on the Timer Control Bd.
7. Remove (2) 6-32 grip nuts holding the safety switch.
8. Reassemble in reverse order.



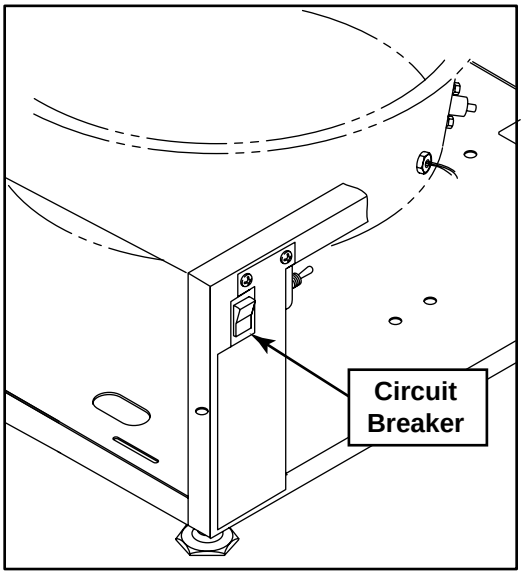
CAUTION:
Do not overtighten the safety switch retaining nuts. Overtightening can damage the switch.

8.2.16 Circuit Breaker (All Models)

All dishwasher models are equipped with an 8 AMP circuit breaker mounted on the lower left corner of the machine. The breaker is located behind the lower front access panel.

The circuit breaker protects the 120VAC control circuit in the event of an overload.

The circuit breaker is a manual reset device and should be checked if the dishwasher fails to operate.



To replace circuit breaker:

1. Turn off main incoming power.
2. Remove the lower front panel.
3. Pull the mylar drip shield back.
4. Push the button on the circuit breaker to check reset.
5. Disconnect wires.
6. Push retaining clips on back side of breaker and push out.
7. Reassemble in reverse order.

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PART 9:

REPLACEMENT PARTS

In This Part—

- Parts illustrations and replacement parts lists

Special Materials

The following solvents, sealants, and pipe compounds are required for repairs but are not called out in the replacement parts list. The materials listed below are recommended as standard issue for service technicians:

- Pipe sealant (Loctite® 565 or comparable) Champion P/N 106437
- Silicon sealant (732 RTV or comparable) Champion P/N 104827
- Thread sealing teflon tape, Champion P/N 106436
- Plumber's putty (Compound 440 or comparable) Champion P/N 104889
- Heat Sink Compound (used on high limit thermostat) Champion P/N 110563

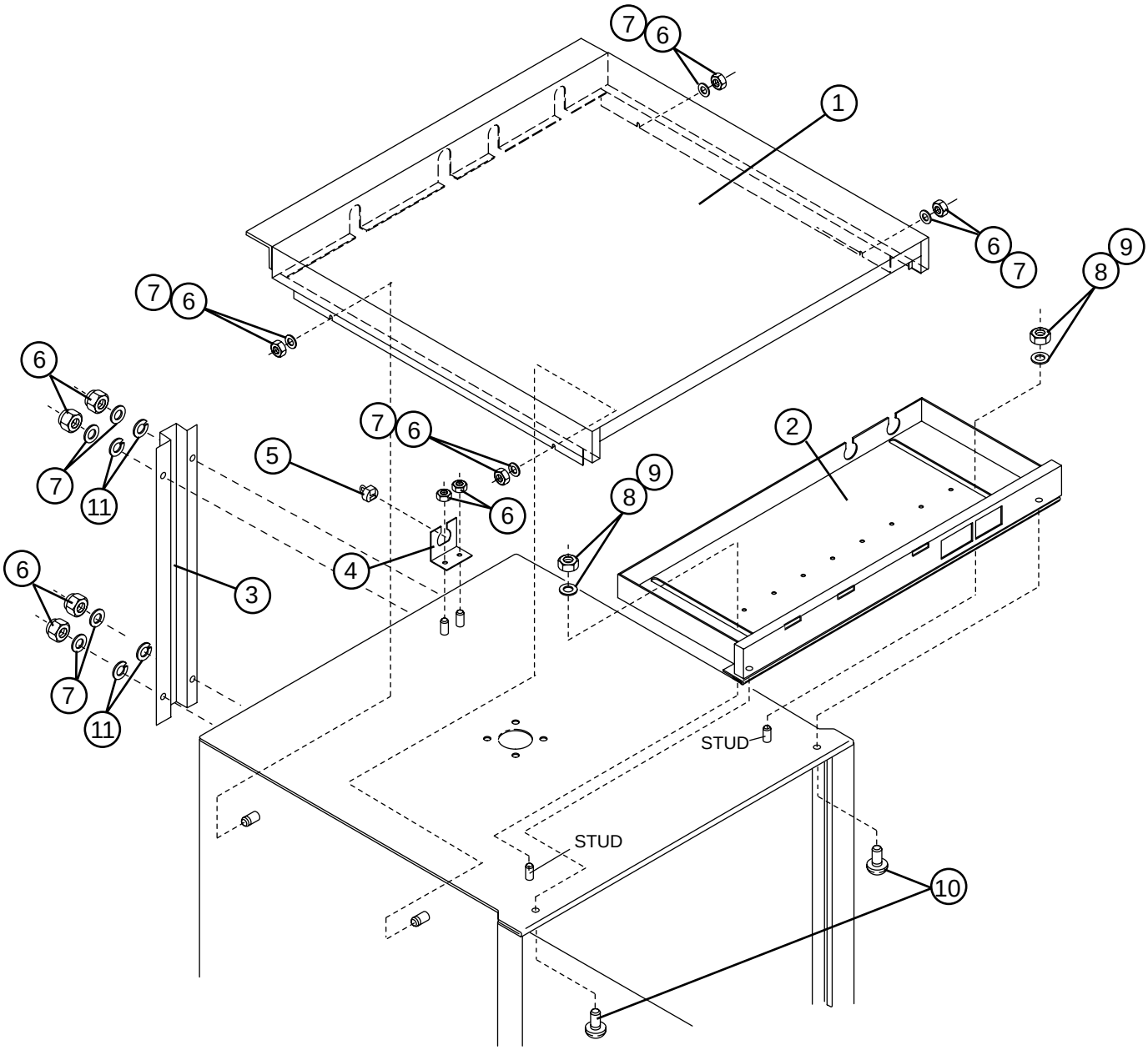

Figure 9.1-
Upper Hood Assembly and Control Cabinet
(All Models)

UPPER HOOD ASSEMBLY AND CONTROL CABINET (ALL MODELS)

Fig. 9.1 Item No.	Part No.	Part Description	Qty.
1	322688	PANEL, TOP	1
2	322660	PANEL, CONTROL	1
3	322684	CHANNEL, HARNESS	1
4	323413	BRACKET, HARNESS SUPPORT	1
5	0503647	BUSHING, STRAIN RELIEF	1
6	107966	NUT, GRIP 10-32 W/NYLON INSERT	8
7	107033	WASHER	8
8	107967	NUT, GRIP W/NYLON INSERT	2
9	106026	WASHER, FLAT 1/4"	2
10	100007	SCREW, 10-32 X 3/8" TRUSS HD	2
11	106486	WASHER, LOCK #10 SPLIT	4

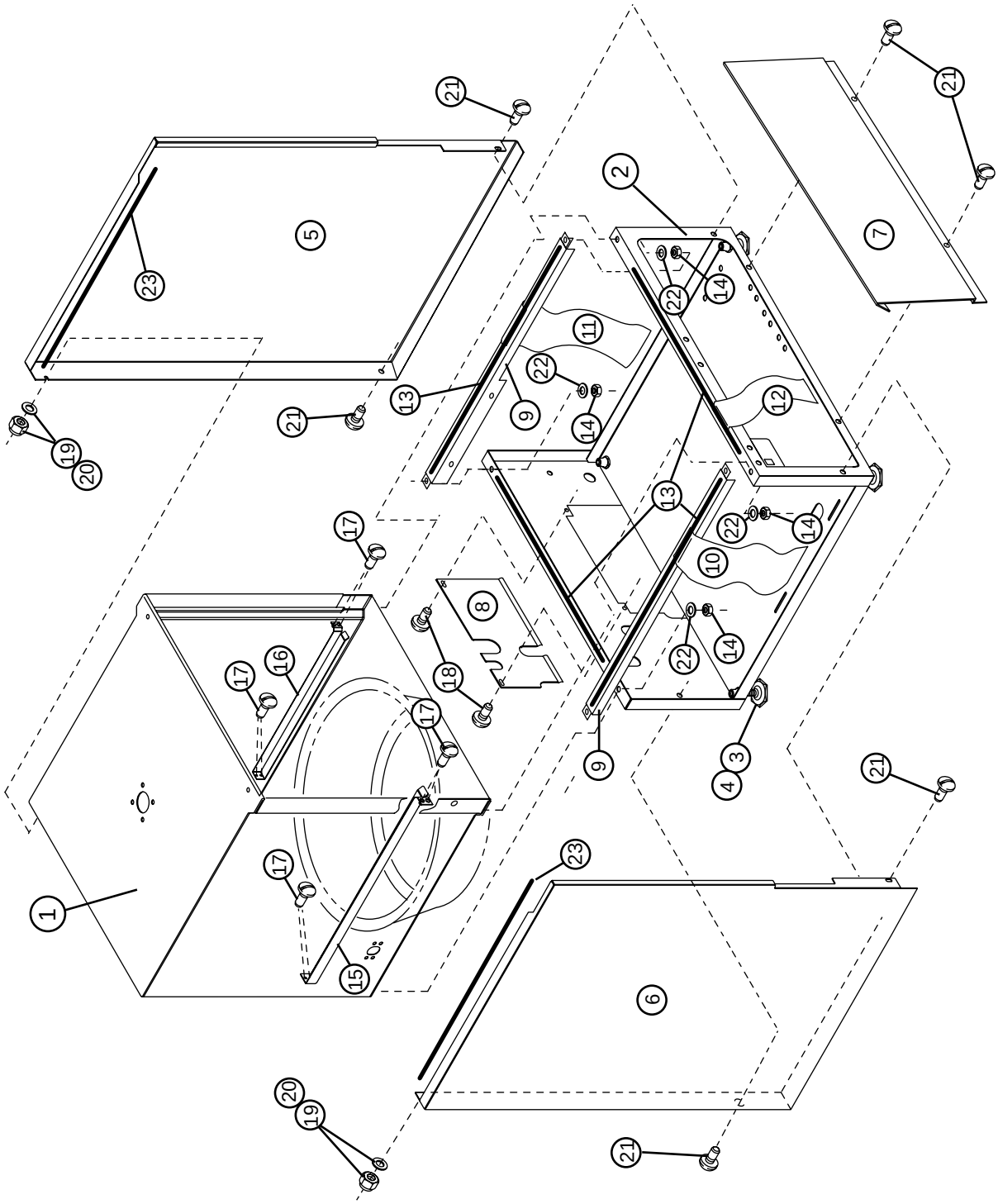

Figure 9.2-
Tank, Base, Guide Rails, and Panels
(UH-200B, UH-200)

TANK, BASE, GUIDE RAILS, AND PANELS (UH-200B, UH-200)

Fig. 9.2 Item No.	Part No.	Part Description	Qty.
1	322639	TANK ASSEMBLY	1
2	322648	BASE ASSEMBLY	1
3	108035	FOOT, LEVELING	4
4	108036	CAP, LEVELING FOOT	4
5	322650	PANEL, RH FULL	1
6	322651	PANEL, LH FULL	1
7	322649	PANEL, FRONT	1
8	322682	DOOR, REAR ACCESS	1
9	322685	CHANNEL, FILLER	2
10	112892	SHIELD, BASE, SIDE	1
11	112892	SHIELD, BASE, SIDE	1
12	112867	SHIELD, BASE, FRONT	1
13	112919	GASKET, BASE STRIP	4
14	107967	NUT, GRIP 1/4" W/NYLON INSERT	4
15	322662	GUIDE, LH RAIL	1
16	322663	GUIDE, RH RAIL	1
17	0501418	SCREW, 1/4-20 X 1/2" ROUND HD	8
18	100778	SCREW, 1/4-20 X 3/8" TRUSS HD	2
19	107966	NUT, GRIP 10-32 W/NYLON INSERT	2
20	107033	WASHER	2
21	100778	SCREW, 1/4-20 X 3/8" TRUSS HD	6
22	106482	WASHER, LOCK 1/4"	4
23	112920	GASKET, DOOR STRIP	2

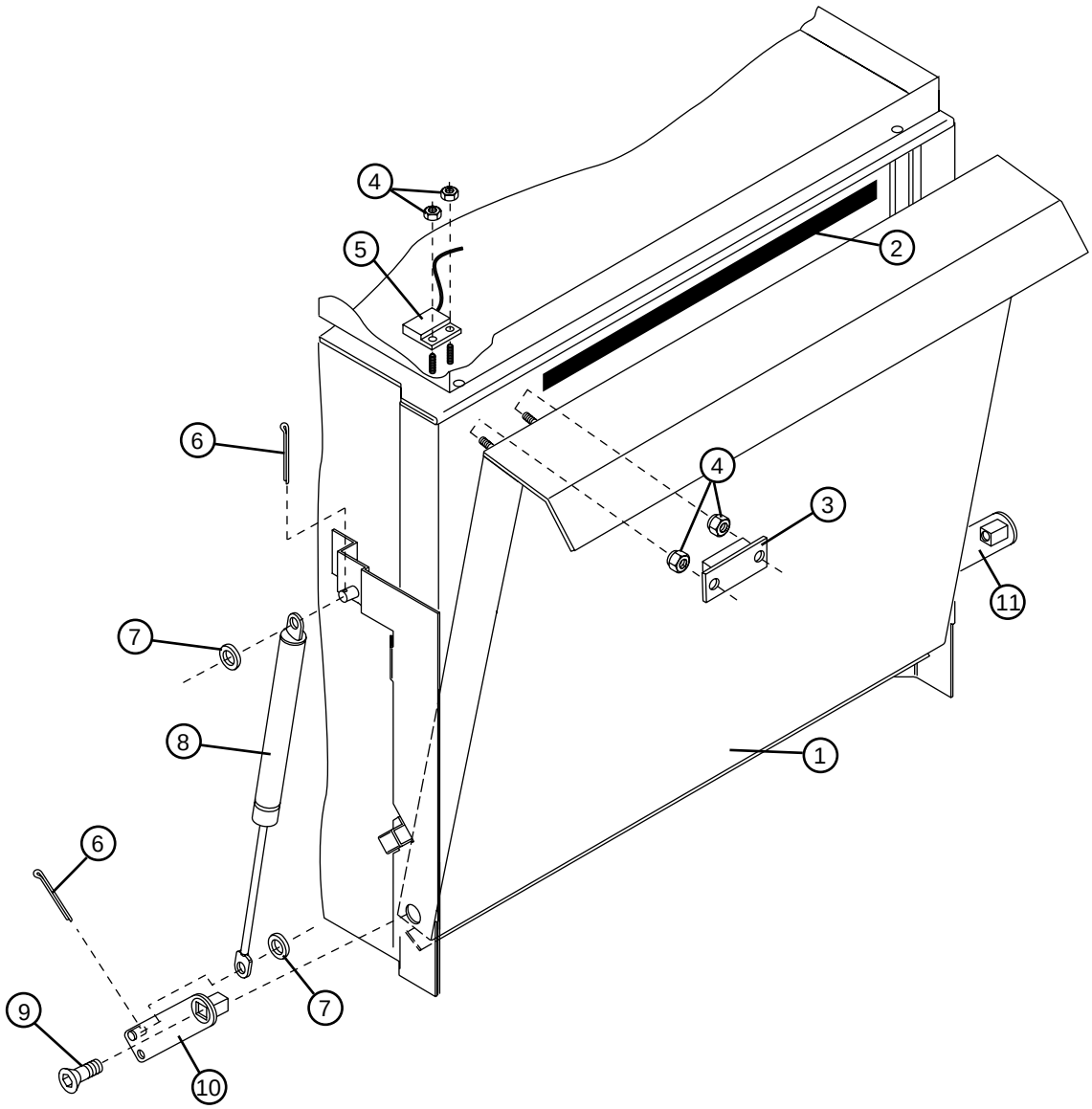

Figure 9.4-
Door and Door Safety Switch Assembly
(All Models)

DOOR AND DOOR SAFETY SWITCH ASSEMBLY (ALL MODELS)

Fig. 9.4 Item No.	Part No.	Part Description	Qty.
1	322690	DOOR	1
2	112727	GASKET, DOOR	1
3	111026	MAGNET, DOOR SAFETY	1
4	108954	NUT, GRIP 6-32 W/NYLON INSERT	4
5	112659	SWITCH, MAGNETIC REED DOOR SAFETY	1
6	106551	PIN, COTTER	4
7	106026	WASHER	4
8	112543	SHOCK, DOOR	2
9	112779	SCREW, 1/4-20 X 1-1/2" FLAT HD HEX SOCKET	2
10	322672	OUTER DOOR HINGE, LH	1
11	322635	OUTER DOOR HINGE, RH	1

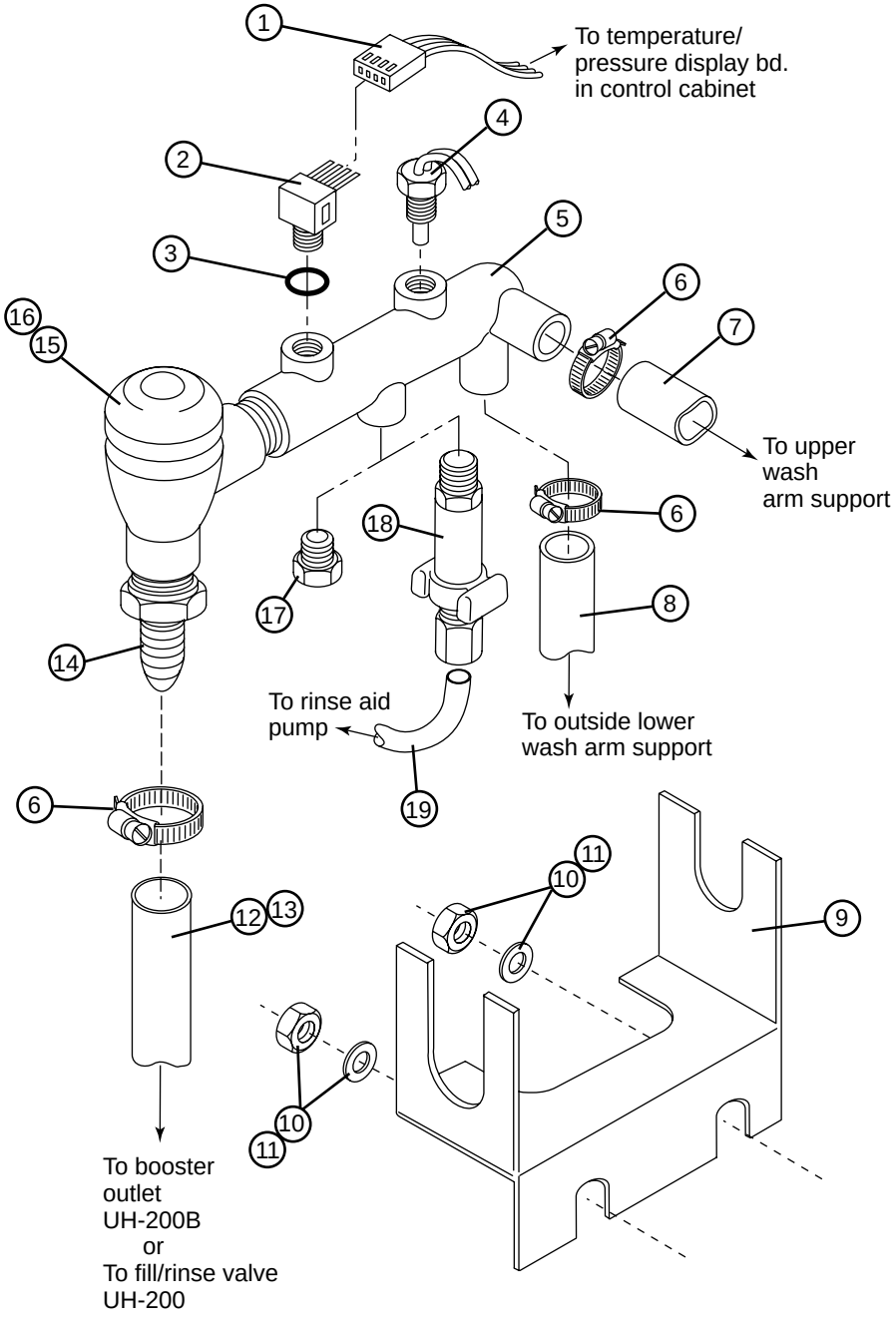

Figure 9.5-
Final Rinse Manifold Assembly
(UH-200B, UH-200)

FINAL RINSE MANIFOLD ASSEMBLY (UH-200B, UH-200)

Fig. 9.5 Item No.	Part No.	Part Description	Qty.
1	112741	HARNESS, PRESSURE TRANSDUCER	1
2	112668	TRANSDUCER, PRESSURE	1
3	112731	O-RING, PRESSURE TRANSDUCER	1
4	112612	THERMISTOR, TEMPERATURE PROBE	1
5	112646	MANIFOLD, RINSE	1
6	105994	CLAMP, HOSE	3
7	112538	HOSE, UPPER RINSE	1
8	112537	HOSE, LOWER RINSE	1
9	322668	BRACKET, RINSE MANIFOLD	1
10	107967	NUT, GRIP 1/4" W/NYLON INSERT	2
11	106026	WASHER, 1/4"	2
12	112536	HOSE, MOLDED (UH-200B)	1
13	112734	HOSE (UH-200)	1
14	112798	BARB, HOSE 1/2" NPT X 5/8" BRASS	1
15	100500	BREAKER, VACUUM 1/2"	1
16	108349	KIT, REPAIR 1/2" VACUUM BREAKER	1
17	107424	PLUG, 1/8"	1
18	112763	FITTING, INJECTOR	1
19	112883	TUBING (PUMP TO INJECTOR) (1/8 OD X 1/16 ID)	1

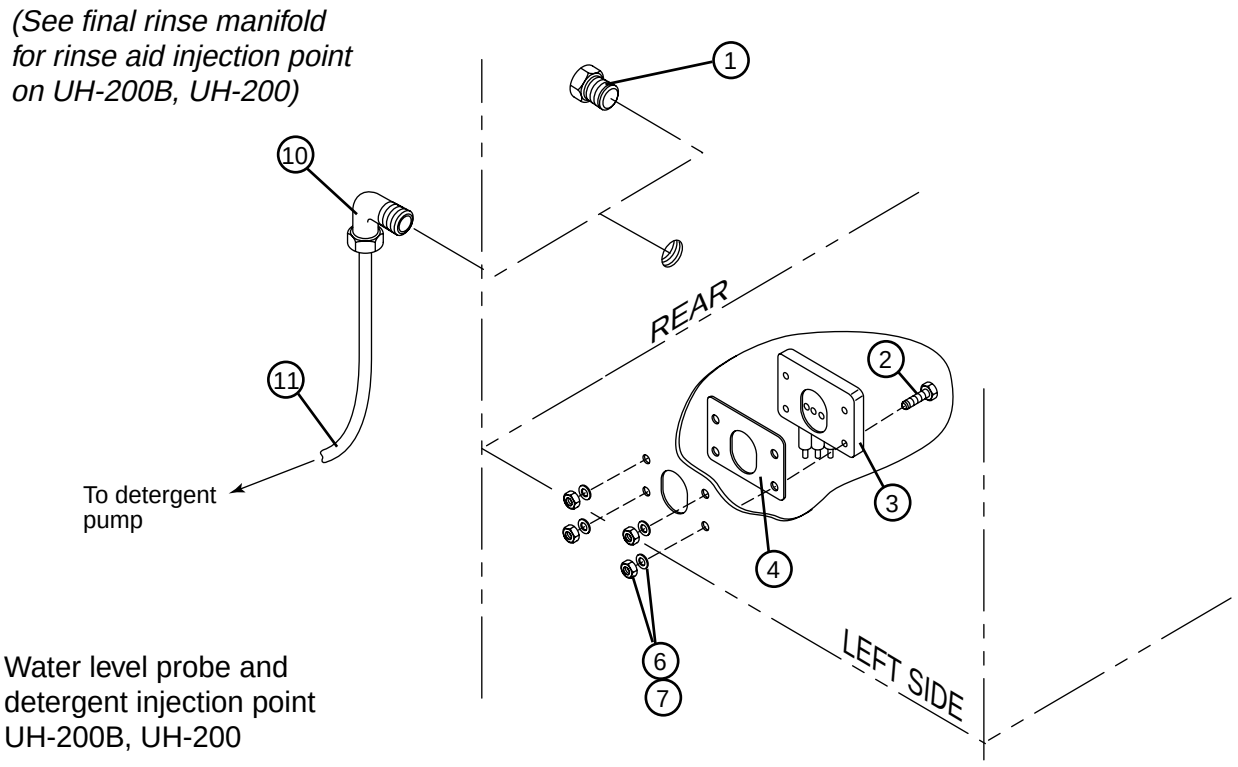

Figure 9.6-
Chemical Injections Points, Water Level Probe Assembly (UH-200B, UH-200)

CHEMICAL INJECTION POINTS
WATER LEVEL PROBE ASSEMBLY (UH-200B, UH-200)

Fig. 9.6 Item No.	Part No.	Part Description	Qty.
1	107424	PLUG 1/8"	1
2	100736	BOLT, 1/4" X 3/4" HEX HD	4
3	112632	PROBE, WATER LEVEL (UH-200B, UH-200)	1
4	0509048	GASKET (ALL MODELS)	1
5	106026	WASHER FLAT 1/4"	11
6	100141	NUT, GRIP 1/4" W/NYLON INSERT	4
7	106482	WASHER	4
10	112728	FITTING, COMPRESSION 1/8" NPT X 1/4" OD	1
11	112879	TUBING (UH-200B, UH-200)	1
13	112906	CLAMP	1
16	107966	NUT, GRIP 10-32 W/NYLON INSERT	1
17	107033	WASHER	1

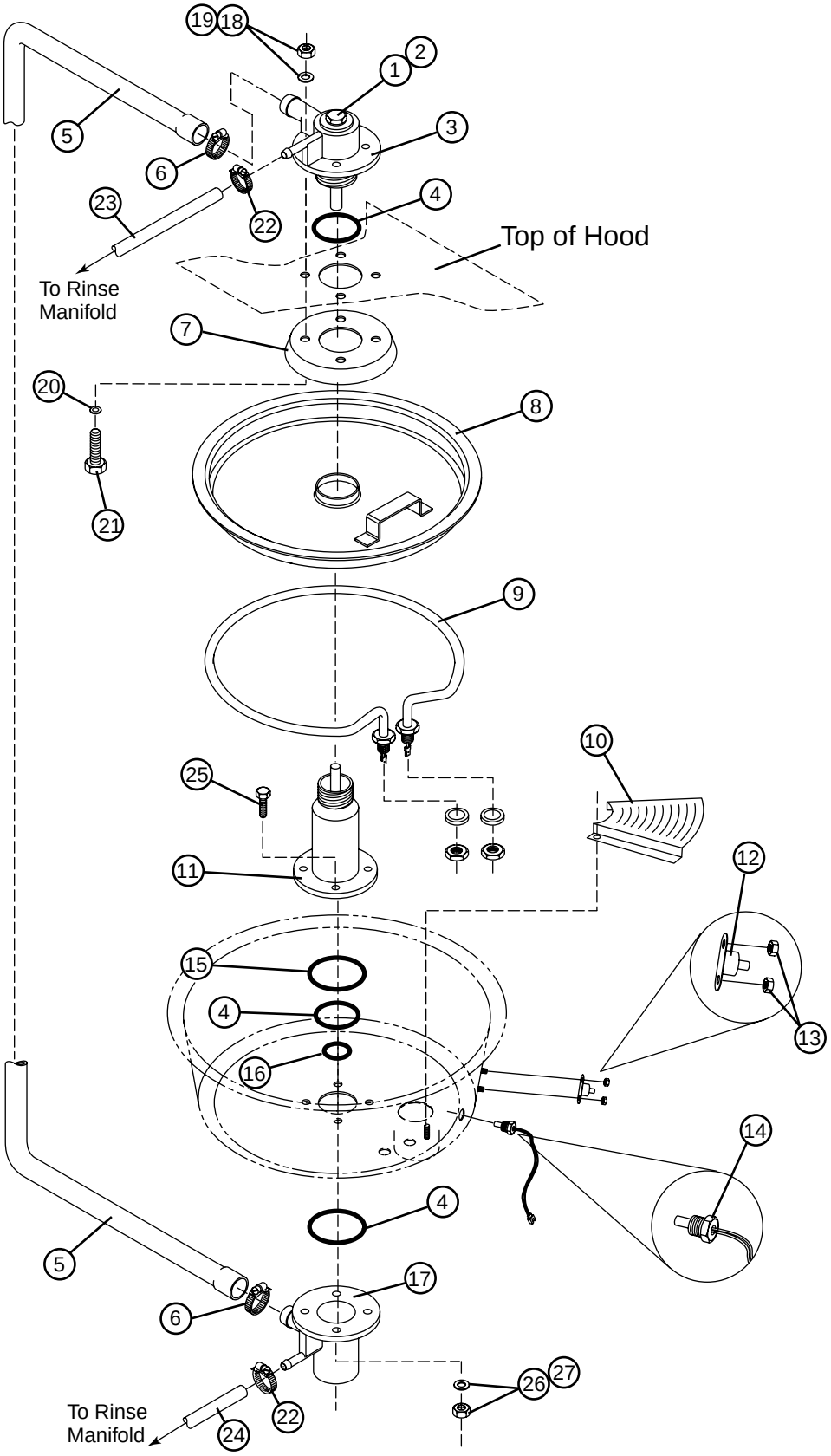

Figure 9.7-
Sump and Spray Piping Assembly
(UH-200B, UH-200)

SUMP AND SPRAY PIPING ASSEMBLY (UH-200B, UH-200)

Fig. 9.7 Item No.	Part No.	Part Description	Qty.
1	110215	SCREW, SPECIAL	1
2	107873	WASHER, PACKING	1
3	112641	SUPPORT, UPPER WASH ARM	1
4	109466	O-RING	3
5	112535	HOSE, UPPER WASH	1
6	105993	CLAMP, HOSE	2
7	112642	DEFLECTOR	1
8	112771	SCREEN, ROUND SCRAP	1
9	112544	ELEMENT, WASH HTR, 1.2 KW, 208-240V (UH-200B)	1
—	112545	ELEMENT, WASH HTR, 1.2 KW, 115V (UH-200)	1
10	323265	COVER, PUMP INTAKE	1
11	112640	SUPPORT (INSIDE), LOWER WASH ARM	1
12	110562	THERMOSTAT, FIXED HIGH LIMIT	1
13	108954	NUT, GRIP 6-32 W/NYLON INSERT	2
14	112612	THERMISTOR, TEMPERATURE PROBE	1
15	109467	O-RING	1
16	109460	O-RING	1
17	109463	SUPPORT (OUTSIDE), LOWER WASH ARM	1
18	100141-T	NUT, TOPLOCK 1/4 -20	4
19	106026	WASHER, FLAT 1/4"	4
20	110881	WASHER, SEALING	4
21	100736	BOLT, 1/4-20 X 3/4" HEX HD	4
22	105994	CLAMP, HOSE	2
23	112538	HOSE, UPPER RINSE	1
24	112537	HOSE, LOWER RINSE	1
25	110440	BOLT, 6MM X 25MM HEX HD	4
26	110214	NUT, DULL 6MM	4
27	106482	WASHER, LOCK 1/4"	4

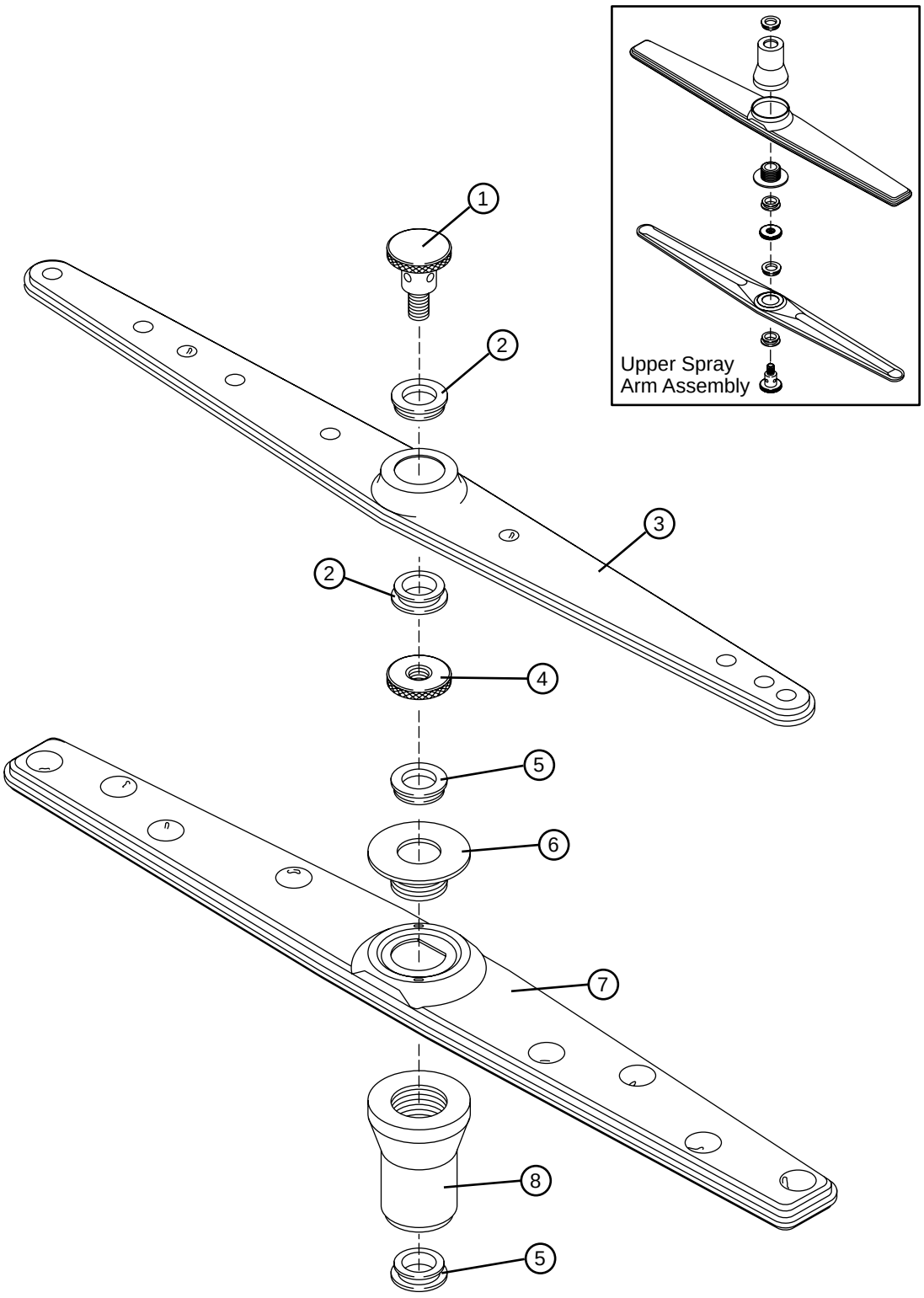

Figure 9.8-
Spray Arm Assembly
(UH-200B, UH-200)

SPRAY ARM ASSEMBLY
(UH-200B, UH-200)

Fig. 9.8 Item No.	Part No.	Part Description	Qty.
1	112619	SPINDLE, RINSE ARM	1
2	112618	BEARING, RINSE ARM	2
3	112616	RINSE ARM ASSEMBLY (INCLUDES ITEMS 1-4)	1
4	112620	NUT, RETAINING	1
5	112551	BEARING, WASH ARM	2
6	112550	NUT, WASH ARM	1
7	112547	WASH ARM ASSEMBLY (INCLUDES ITEMS 5-8)	1
8	112549	HUB, WASH ARM	1
—	112617	ARM, RINSE (STAINLESS STEEL ONLY)	1
—	112548	ARM, WASH (STAINLESS STEEL ONLY)	1

Quantities shown are for one rinse arm assembly and one wash arm assembly.
Machine contains two of each assembly.

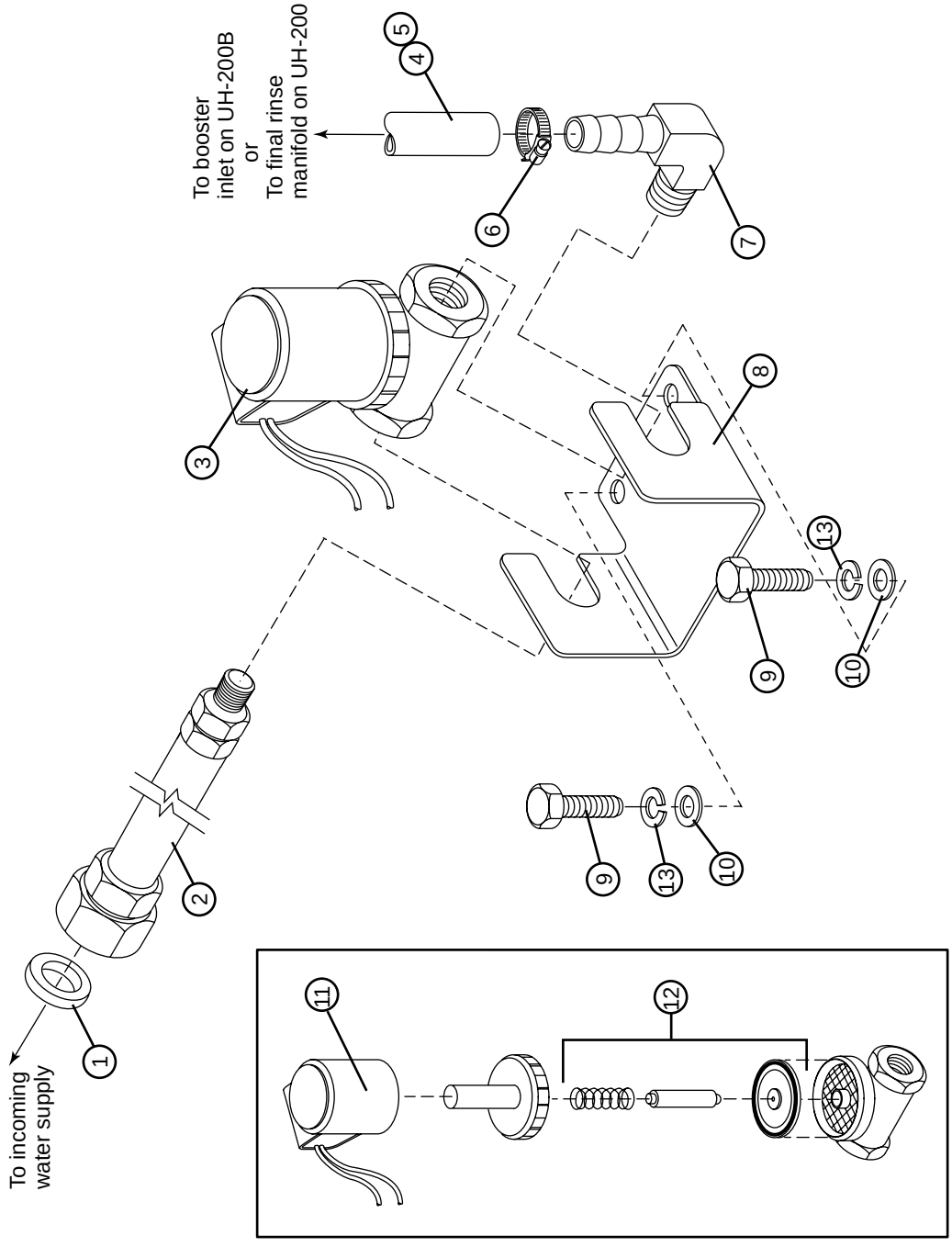

Figure 9.9-
Fill/Rinse Valve Assembly
(UH-200B, UH-200)

FILL/RINSE VALVE ASSEMBLY
(UH-200B, UH-200)

Fig. 9.9 Item No.	Part No.	Part Description	Qty.
1	0505320	WASHER, HOSE	1
2	112584	HOSE, REINFORCED FILL 1/2" ID (Prior to S/N U-1991)	1
—	113122	HOSE, REINFORCED FILL 3/4" ID (Beginning with S/N U-1991 and above)	1
3	109886	VALVE, SOLENOID, 1/2" NPT (120V) (Prior to S/N U-1991)	1
—	111437	VALVE, SOLENOID, 3/4" NPT (120V) (Beginning with S/N U-1991 and above)	1
4	112851	HOSE (UH-200B) (Prior to S/N U-1991)	1
5	112734	HOSE (UH-200) (Prior to S/N U-1991)	1
—	113124	HOSE, REINFORCED 3/4" I.D. (UH-200) (Beginning with S/N U-1991 and above)	1
6	105994	CLAMP, HOSE	1
7	112831	BARB, HOSE ELBOW 1/2" NPT X 5/8" BRASS (Prior to S/N U-1991)	1
8	322667	BRACKET, FILL VALVE SUPPORT (Prior to S/N U-1991)	1
—	324935	BRACKET, FILL VALVE SUPPORT (Beginning with S/N U-1991 and above)	1 1
9	100734	BOLT, 1/4-20 X 1/2" HEX HD	2
10	106026	WASHER, FLAT 1/4"	2
11	111471	COIL, SOLENOID VALVE 120V (Prior to S/N U-1991)	1
—	111472	COIL, SOLENOID VALVE 12OV (Beginning with S/N U-1991 and above)	1
12	109902	KIT, REPAIR, 1/2" SOLENOID VALVE	1
—	109903	KIT, REPAIR, 3/4" SOLENOID VALVE (Beginning with S/N U-1991 and above)	1 1
13	106482	WASHER, LOCK 1/4"	2

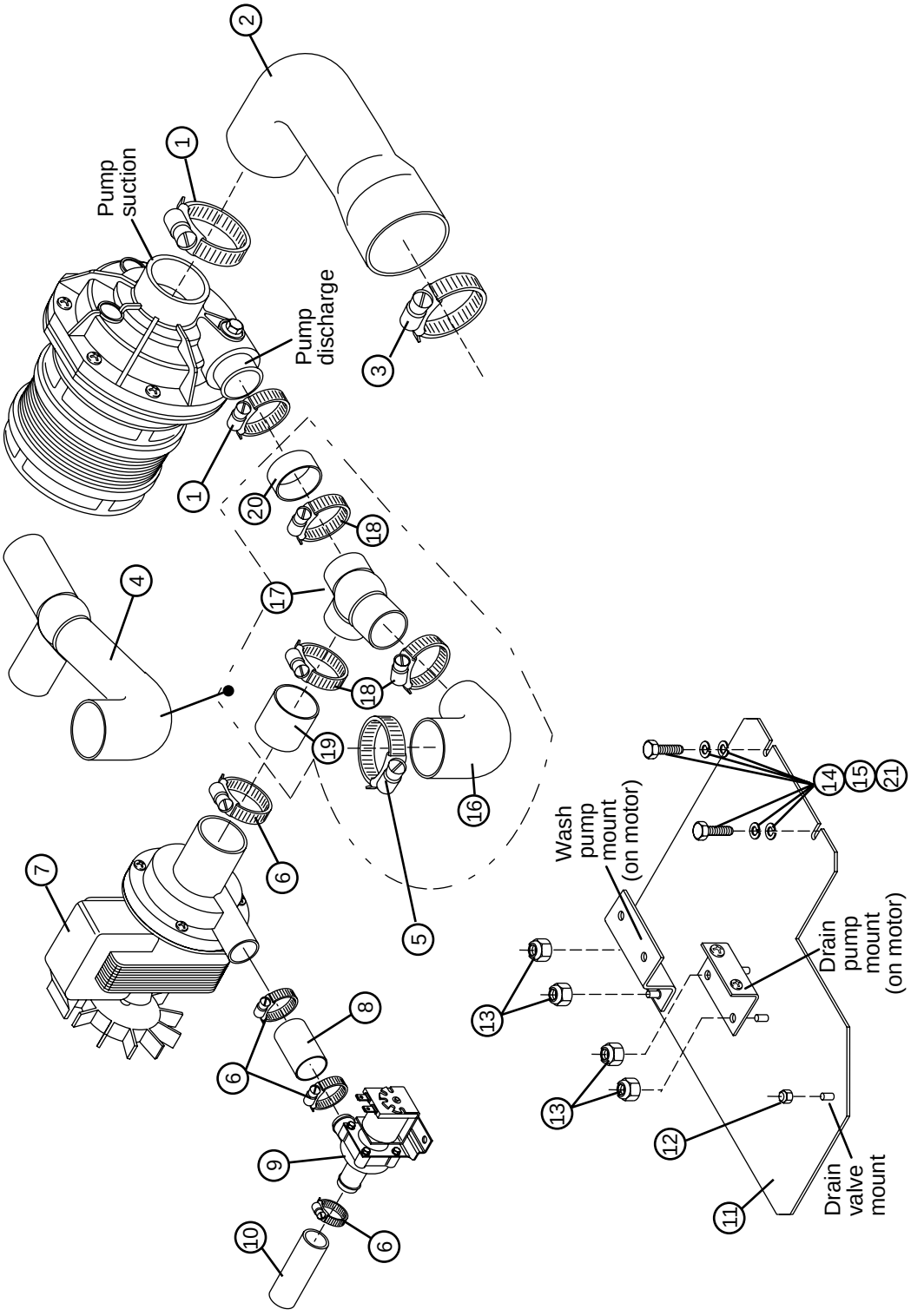

Figure 9.10-
Wash Pump Piping, Drain Pump, Drain Valve and Drain Piping
(All Models)

WASH PUMP PIPING
DRAIN PUMP, DRAIN VALVE AND DRAIN PIPING
(ALL MODELS)

Fig. 9.10 Item No.	Part No.	Part Description	Qty.
1	107340	CLAMP, HOSE	1
2	112530	HOSE, ELBOW- PUMP INTAKE	1
3	104165	HOSE, CLAMP	1
4	112529	HOSE, PUMP OUTLET (REPLACED BY ITEMS 16-20)	1
5	104165	CLAMP, HOSE	1
6	105993	CLAMP, HOSE	4
7	112540	PUMP, DRAIN	1
8	112531	HOSE, DRAIN PUMP	1
9	112541	VALVE, DRAIN	1
10	112729	TUBING, DRAIN 5/8" ID X 1" OD	1
11	323201	PLATE, PUMP MOUNTING	1
12	107966	NUT, GRIP 10-32 W/NYLON INSERT	1
13	100141	NUT, GRIP 1/4" W/NYLON INSERT	4
14	100734	BOLT, 1/4-20 X 1/2"	2
15	106026	WASHER, FLAT 1/4"	2
16	112850	HOSE, ELBOW LOWER WASH	1
17	323393	TEE, SPECIAL	1
18	105993	CLAMP, HOSE	3
19	112849	HOSE, DRAIN PUMP INTAKE	1
20	112848	HOSE, WASH PUMP DISCHARGE	1
21	106482	WASHER, LOCK 1/4"	2

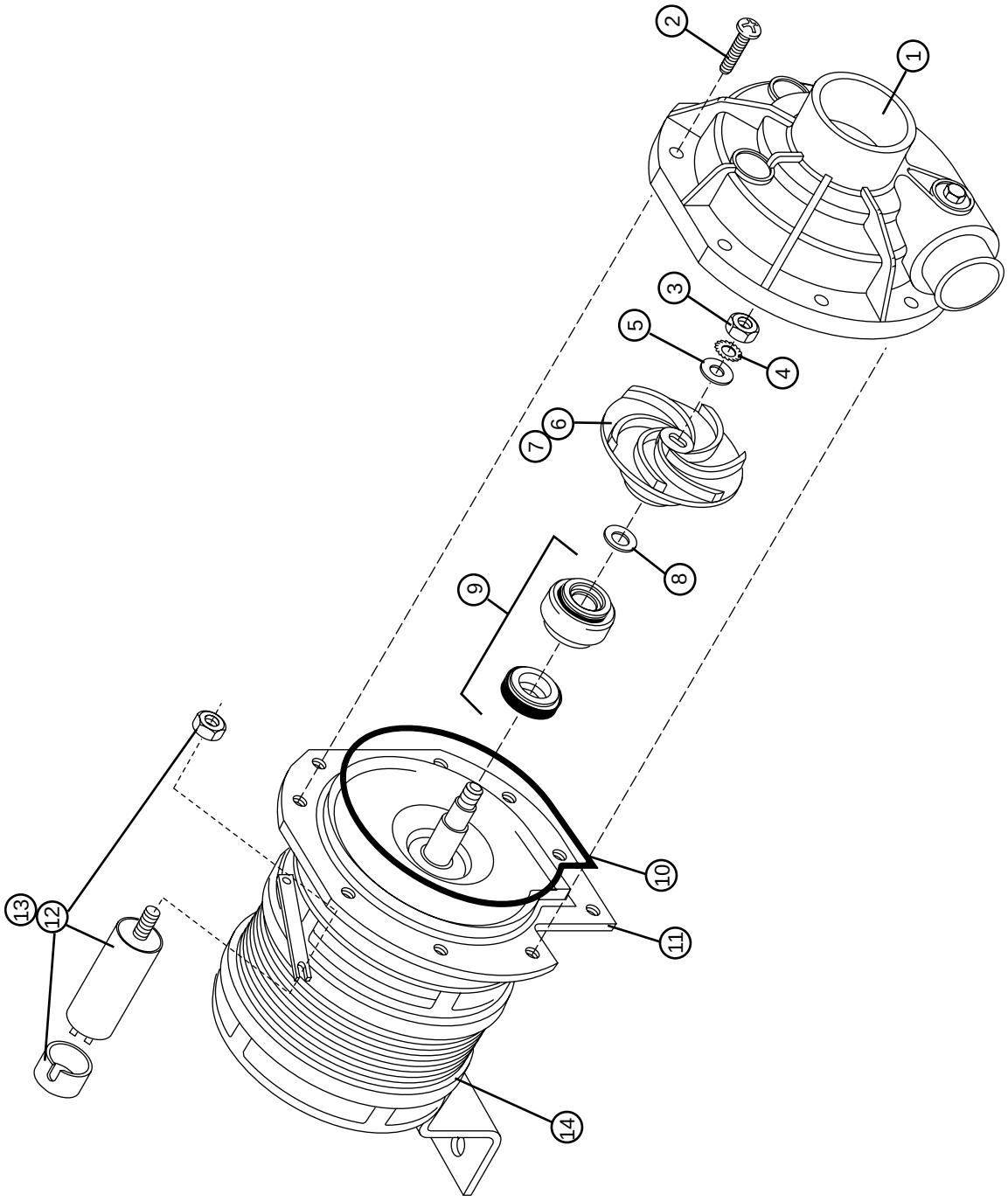

Figure 9.11-
Wash Pump/Motor Assembly
(All Models)

WASH PUMP/MOTOR ASSEMBLY (ALL MODELS)

Fig. 9.11 Item No.	Part No.	Part Description	Qty.
1	113021	VOLUTE, PUMP	1
2	———	SCREW, SELF TAPPING	9
3	———	NUT, RETAINING	1
4	———	WASHER, LOCK	1
5	———	WASHER	1
6	112843	IMPELLER, 60HZ	1
7	112842	IMPELLER, 50HZ	1
8	———	WASHER	1
9	112838	SEAL ASSEMBLY	1
10	113022	GASKET	1
11	113023	FLANGE, PUMP	1
12	112636	CAPACITOR, 10 mf, 220V (UH-200B)	1
13	112637	CAPACITOR, 31.5 mf, 115V (UH-200)	1
14	113018	MOTOR, PUMP, 115V/60/1 (INCLUDES ITEMS 1-6, 10-11, 13) (UH-200)	1
—	113019	MOTOR, PUMP, 208-240V/60/1 (INCLUDES ITEMS 1-6, 9-12) (UH-200B)	1
—	113020	MOTOR, PUMP, 208-240V/50/1 (INCLUDES ITEMS 1-5, 7, 9-12)	1

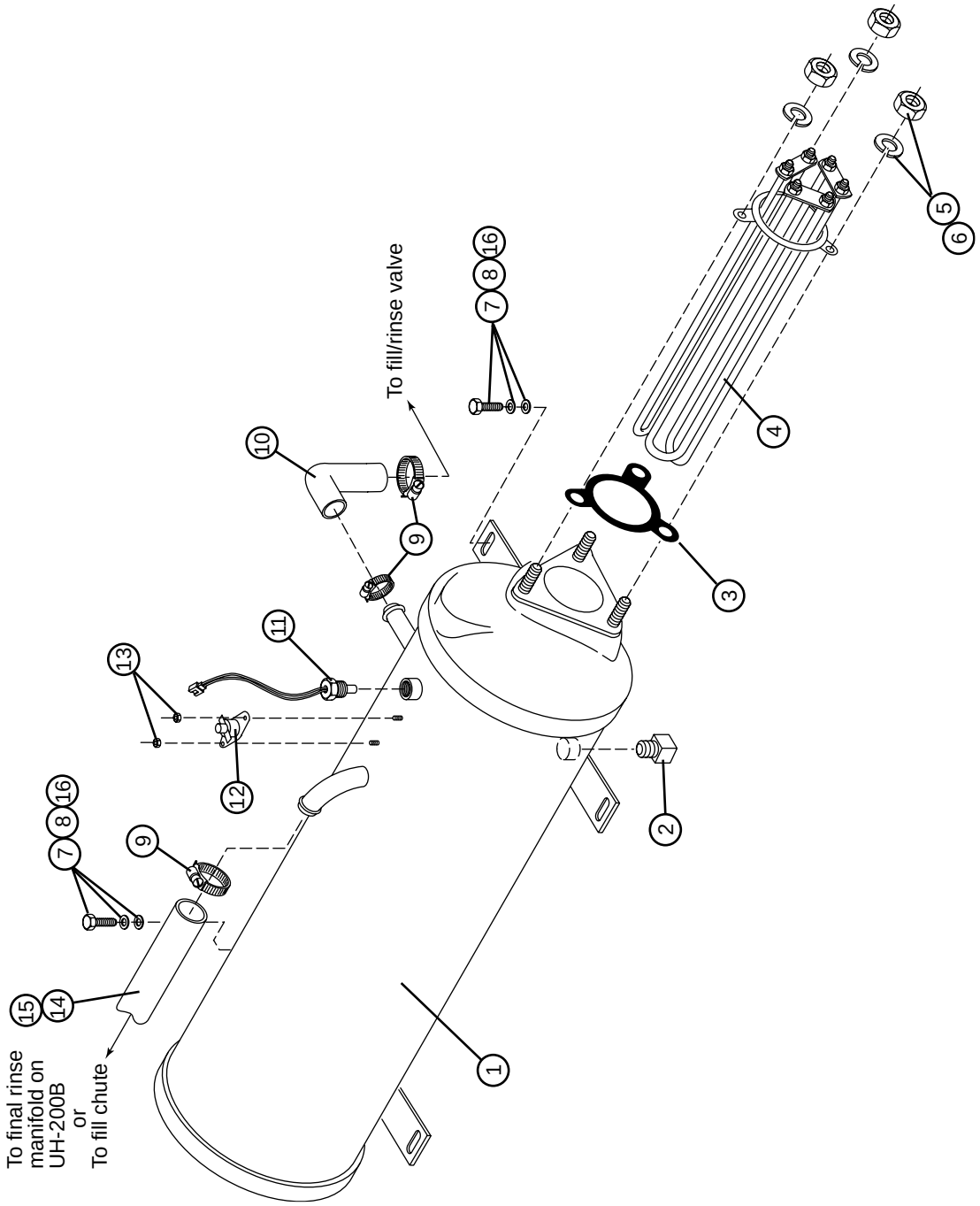

Figure 9.12-
Booster Assembly
(UH-200B)

BOOSTER ASSEMBLY
(UH-200B)

Fig. 9.12 Item No.	Part No.	Part Description	Qty.
1	112542	TANK, BOOSTER	1
2	101259	PLUG, 1/8" NPT BRASS	1
3	109985	GASKET, HEATER	1
4	112949	HEATER, BOOSTER 6 KW, 208-240V/60/1	1
—	112950	HEATER, BOOSTER 9 KW, 208-240V/60/1	1
—	107909	HEATER, BOOSTER 6 KW, 208-240V/60/3	1
—	111334	HEATER, BOOSTER 9 KW, 208-240V/60/3	1
5	100003	NUT, PLAIN 1/4"	3
6	106482	WASHER, LOCK 1/4"	3
7	100734	BOLT, 1/4-20 X 1/2" HEX HD	2
8	106026	WASHER, FLAT 1/4"	2
9	105994	CLAMP, HOSE	3
10	112851	HOSE, MOLDED	1
11	112612	THERMISTOR, TEMPERATURE PROBE	1
12	110562	THERMOSTAT, FIXED HIGH LIMIT	1
13	108954	NUT, GRIP 6-32 W/NYLON INSERT	2
14	112536	HOSE (UH-200B)	1
15	112648	HOSE, MOLDED	1
16	106482	WASHER, LOCK 1/4"	2

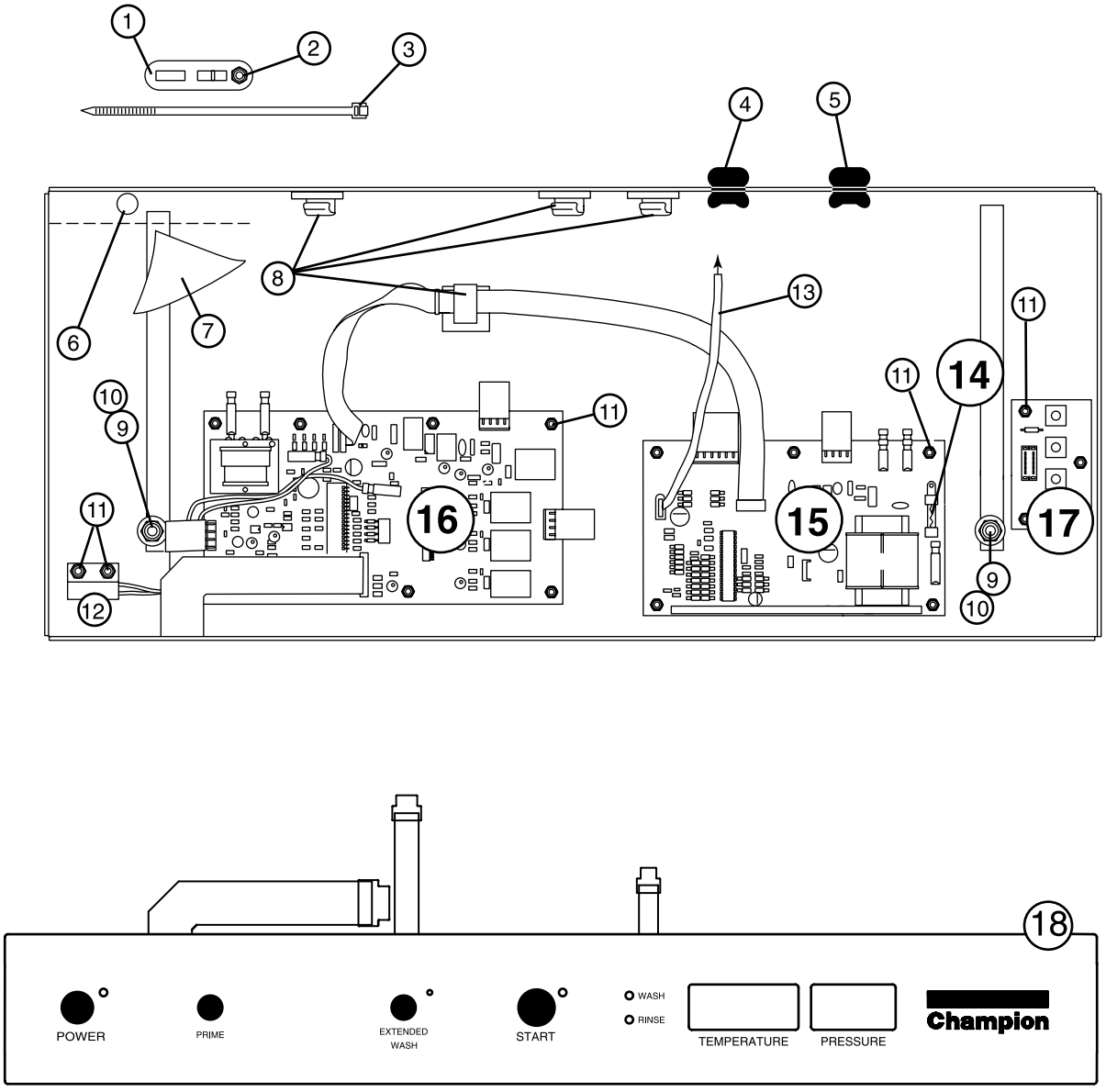

Figure 9.13-
Solid State Controls
(All Models)

SOLID STATE CONTROLS
(ALL MODELS)

Fig. 9.13 Item No.	Part No.	Part Description	Qty.
1	106090	PLATE, CABLE TIE	6
2	107966	NUT, GRIP 10-32 W/NYLON INSERT	6
3	103378	TIE, CABLE	A/R
5	0503647	BUSHING, STRAIN RELIEF (UH-200B, UH-200)	1
6	112856	FASTENER, PUSH-N	2
7	112855	SHIELD, DRIP	1
8	112903	CLIP, RETAINING	4
9	107967	NUT, GRIP 1/4" W/NYLON INSERT	2
10	106026	WASHER, FLAT 1/4"	2
11	108954	NUT, GRIP, 6-32 W/NYLON INSERT	10
12	112659	SWITCH, MAGNETIC REED DOOR SAFETY	1
13	112741	HARNESS, PRESSURE TRANSDUCER	1
14	112780	FUSE 2A, 250V FAST ACTING	1
15	112627	BOARD, TEMPERATURE AND PRESSURE DISPLAY (ALL MODELS)	1
16	112628	BOARD, TIMER CONTROL (UH-200B, UH-200)	1
17	112629	BOARD, TIME SELECT (FILL/CHEMCIAL DISPENSER) (ALL MODELS)	1
18	113292	TOUCHPAD/DISPLAY (UH-200B, UH-200) (AFTER S/N U1938)	1
18	900827	KIT #UH200 2 PIECE CONTROL CABINET W/TPAD (BEFORE S/N U1938)	1
—	112736	HARNESS, WIRING (UH-200B)	1
—	112737	HARNESS, WIRING (UH-200)	1
—	112944	HARNESS, WIRING (UH-200B) THREE PHASE	1

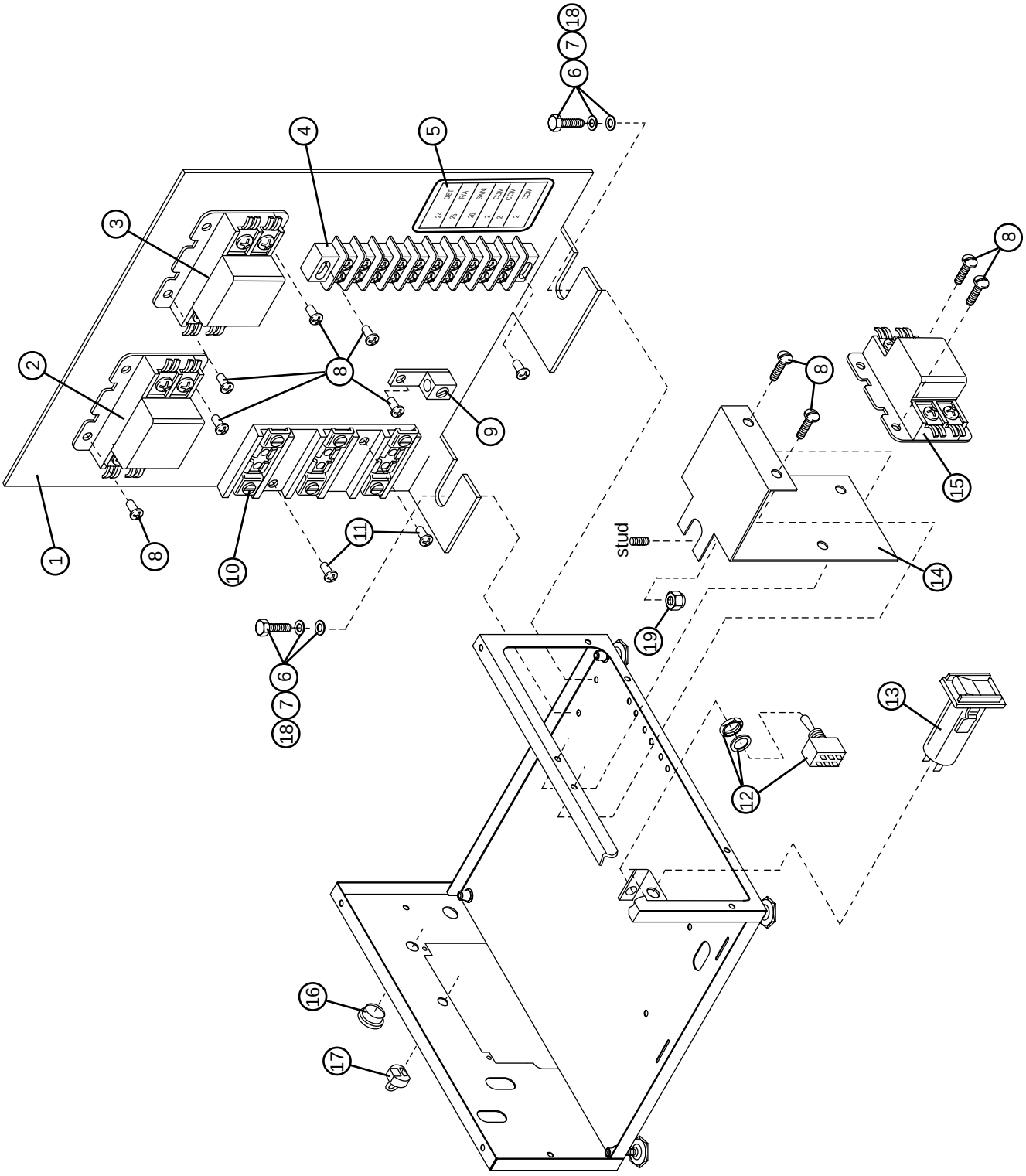

Figure 9.14-
Base Mounted Electrical Controls
(All Models)

BASE MOUNTED ELECTRICAL CONTROLS (ALL MODELS)

Fig. 9.14 Item No.	Part No.	Part Description	Qty.
1	322661	BRACKET, ELECTRICAL MOUNTING (SINGLE PHASE)	1
—	322693	BRACKET, ELECTRICAL MOUNTING (THREE PHASE)	1
2	107369	CONTACTOR, 25A, 2P, 120V COIL (SINGLE PHASE) (ALL MODELS) (WASH PUMP/MOTOR)	1
3	107369	CONTACTOR, 25A, 2P, 120V COIL (UH-200B, UH-200) (WASH TANK HEATER)	1
4	112897	BOARD, TERMINAL 10PT	1
5	112916	LABEL, CHEMICAL CONNECTION	1
6	100734	BOLT, 1/4-20 X 1/2"	2
7	106026	WASHER, FLAT 1/4"	2
8	104624	SCREW, 8-32 X 3/8" TRUSS HD	11
9	103310	LUG, GROUND	1
10	112791	BLOCK, TERMINAL 75A-300V, SINGLE PHASE	1
—	0509527	BLOCK TERMINAL, THREE PHASE	1
11	109345	SCREW, 8-32 X 7/8" TRUSS HD	1
12	0501373	SWITCH, 3 POSITION (UH-200B)	1
13	112769	BREAKER, CIRCUIT 8A	1
14	322681	BRACKET, BOOSTER CONTACTOR (UH-200B) (SINGLE PHASE)	1
—	322692	BRACKET, BOOSTER CONTACTOR (UH-200B) (THREE PHASE)	1
15	112518	CONTACTOR, 40A, 2P, 120V COIL (UH-200B) (SINGLE PHASE) (BOOSTER HEATER)	1
—	111826	CONTACTOR, 50A, 3P, 120V COIL (UH-200B) (THREE PHASE) (BOOSTER HEATER)	1
16	110068	BUSHING, SNAP 1-1/2"	1
17	0503574	BUSHING, STRAIN RELIEF	1
18	106482	WASHER, LOCK 1/4"	2
19	107967	NUT, GRIP W/NYLON INSERT 1/4"	1

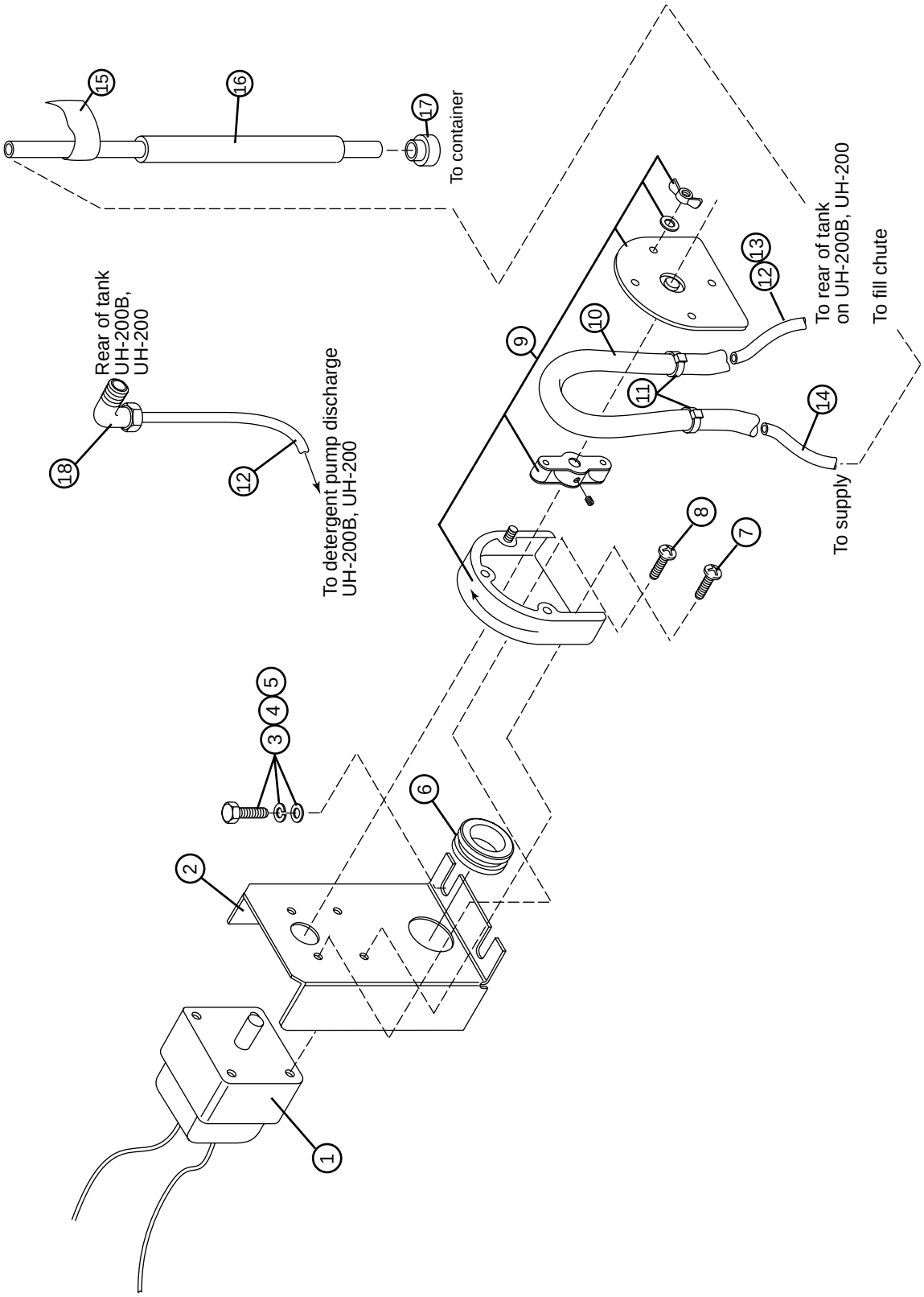

Figure 9.15-
(Optional) Detergent Pump for High Temp Machines
(UH-200B, UH-200)

(OPTIONAL)
DETERGENT PUMP FOR HIGH TEMP MACHINES
(UH-200B, UH-200)

Fig. 9.15 Item No.	Part No.	Part Description	Qty.
1	108299	MOTOR, PUMP DRIVE	1
2	322675	BRACKET, SINGLE CHEMICAL PUMP	1
3	100734	BOLT, 1/4-20 X 1/2" HEX HD	2
4	106482	WASHER, LOCK 1/4"	2
5	106026	WASHER, FLAT 1/4"	2
6	107050	GROMMET	1
7	110159	SCREW, 8-32 X 5/8" ROUND HD	2
8	102564	SCREW, 8-32 X 3/8" ROUND HD	2
9	111884	PUMP ASSEMBLY (DOES NOT INCLUDE ITEM 10)	1
10	108194	TUBE, 3/16" ID X 3/8" OD	1
11	108411	CLAMP, HOSE	2
12	112879	TUBING (UH-200B, UH-200)	1
13	112880	TUBING	1
14	112878	TUBING (UH-200B, UH-200)	1
15	0503695	LABEL, DETERGENT	1
16	112754	TUBE, PICK-UP	1
17	0501869	STRAINER	1
18	112728	FITTING, COMPRESSION 1/8" NPT X 1/4" OD	1
—	900799	**(UH-200B, UH-200)** INSTALLATION KIT, DETERGENT PUMP (INCLUDES ITEMS 1-12, 14-18)	1

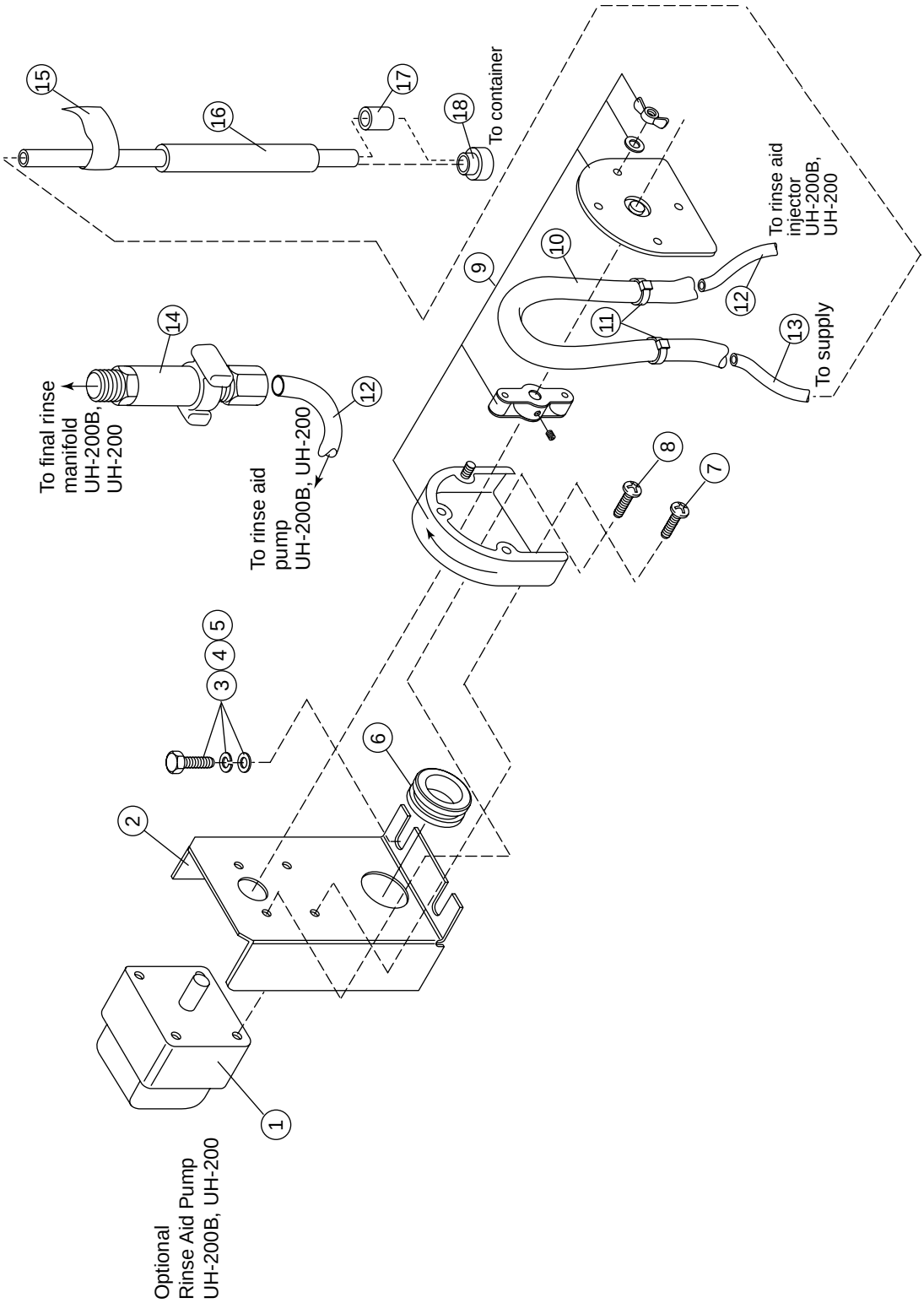

Figure 9.16-
(Optional) Rinse Aid Pump for High Temp Machines
(UH-200B, UH-200)

(OPTIONAL) RINSE AID PUMP FOR HIGH TEMP MACHINES (UH-200B, UH-200)

Fig. 9.16 Item No.	Part No.	Part Description	Qty.
COMMON PARTS			
1	108299	MOTOR, PUMP DRIVE	1
2	322675	BRACKET, SINGLE CHEMICAL PUMP	1
3	100734	BOLT, 1/4-20 X 1/2" HEX HD	2
4	106482	WASHER, LOCK 1/4"	2
5	106026	WASHER, FLAT 1/4"	2
6	107050	GROMMET	1
7	110159	SCREW, 8-32 X 5/8" ROUND HD	2
8	102564	SCREW 8-32 X 3/8" ROUND HD	2
9	111884	PUMP ASSEMBLY (DOES NOT INCLUDE ITEM 10 OR 19)	1
UH-200B, UH-200			
10	112759	TUBE, 1/8" ID	1
11	108411	CLAMP, HOSE	2
12	112883	TUBING (PUMP TO INJECTOR)	1
13	112882	TUBING (PUMP TO SUPPLY)	1
14	112763	INJECTOR, RINSE AID	1
15	0505483	LABEL, RINSE AID	1
16	112754	TUBE, PICK-UP	1
17	112881	CONNECTOR, STRAINER	1
18	0501869	STRAINER	1
—	900803	**(UH-200B, UH-200)** INSTALLATION KIT, RINSE AID PUMP (INCLUDES ITEMS 1-18)	1

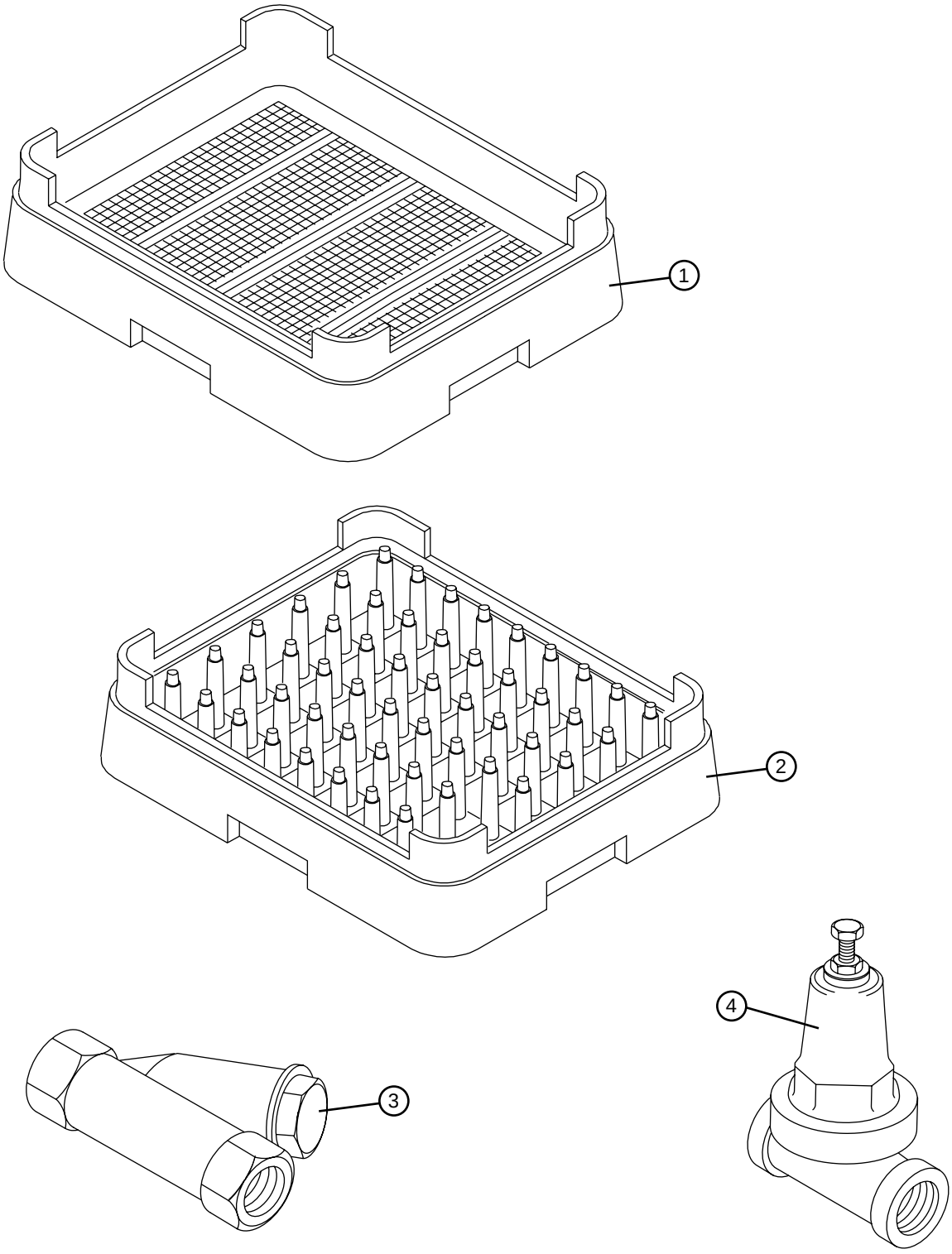

Figure 9.17-
Dishracks, Line Strainer, PRV
(All Models)

DISHRACKS, LINE STRAINER, AND PRV (ALL MODELS)

Fig. 9.17 Item No.	Part No.	Part Description	Qty.
1	101273	DISHRACK, FLAT BOTTOM	1
2	101285	DISHRACK, PEG	1
3	104421	STRAINER, LINE 1/2" (UH-200B, UH-200 ONLY)	1
4	107550	VALVE, PRESSURE REDUCING (PRV) (OPTIONAL) 3/4" ..... (UH-200B, UH-200)	A/R

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PART 10:

ELECTRICAL SCHEMATICS

In This Part—

- Electrical Schematics by Model and Phase

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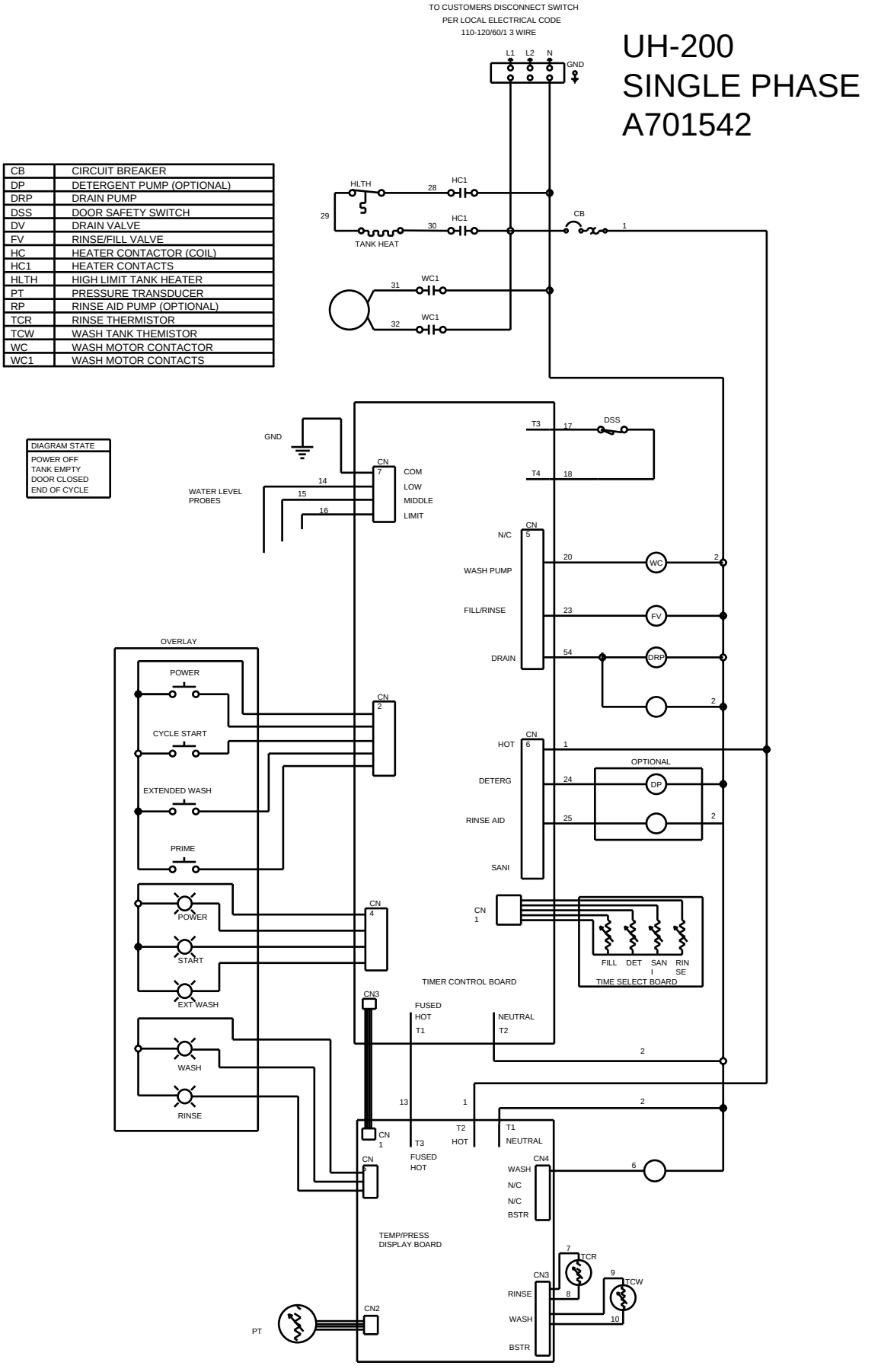
UH-200
SINGLE PHASE
A701542

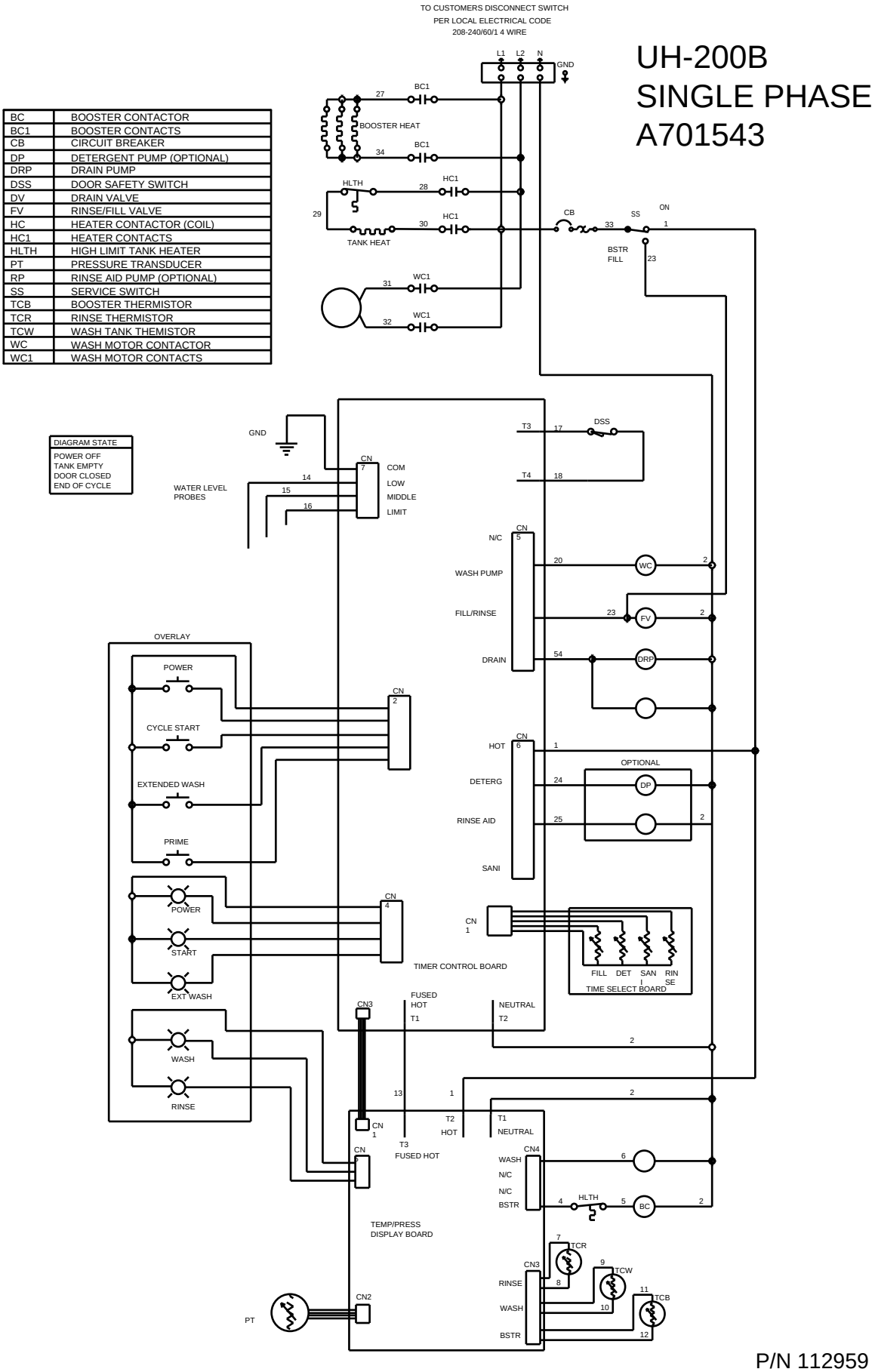
CB	CIRCUIT BREAKER
DP	DETERGENT PUMP (OPTIONAL)
DRP	DRAIN PUMP
DSS	DOOR SAFETY SWITCH
DV	DRAIN VALVE
FV	RINSE/FILL VALVE
HC	HEATER CONTACTOR (COIL)
HC1	HEATER CONTACTS
HLTH	HIGH LIMIT TANK HEATER
PT	PRESSURE TRANSDUCER
RP	RINSE AID PUMP (OPTIONAL)
TCR	RINSE THERMISTOR
TCW	WASH TANK THEMISTOR
WC	WASH MOTOR CONTACTOR
WC1	WASH MOTOR CONTACTS



P/N 112958

UH-200B SINGLE PHASE A701543

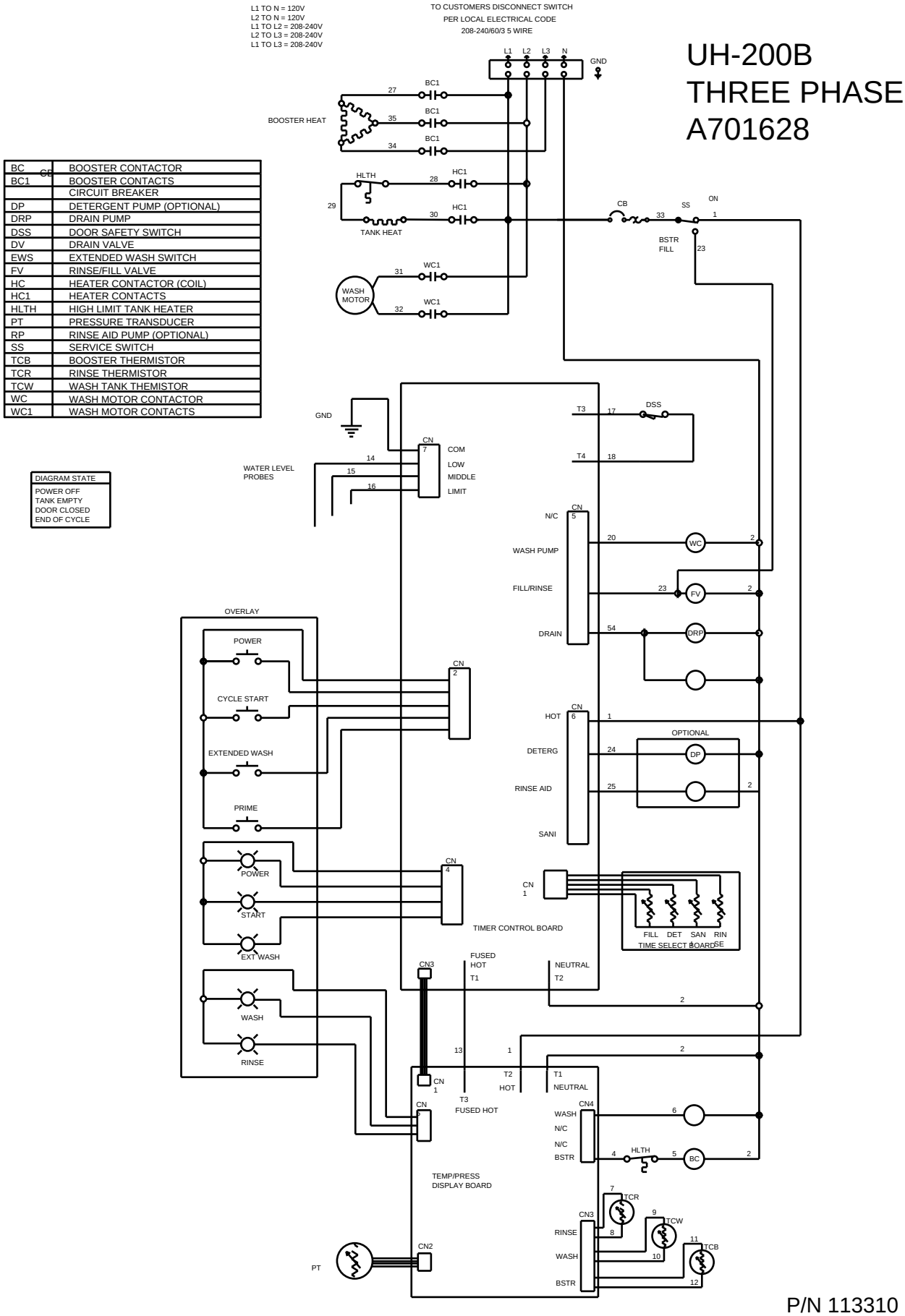
BC	BOOSTER CONTACTOR
BC1	BOOSTER CONTACTS
CB	CIRCUIT BREAKER
DP	DETERGENT PUMP (OPTIONAL)
DRP	DRAIN PUMP
DSS	DOOR SAFETY SWITCH
DV	DRAIN VALVE
FV	RINSE/FILL VALVE
HC	HEATER CONTACTOR (COIL)
HC1	HEATER CONTACTS
HLTH	HIGH LIMIT TANK HEATER
PT	PRESSURE TRANSDUCER
RP	RINSE AID PUMP (OPTIONAL)
SS	SERVICE SWITCH
TCB	BOOSTER THERMISTOR
TCR	RINSE THERMISTOR
TCW	WASH TANK THEMISTOR
WC	WASH MOTOR CONTACTOR
WC1	WASH MOTOR CONTACTS



P/N 112959

UH-200B
THREE PHASE
A701628

BC	BOOSTER CONTACTOR
BC1	BOOSTER CONTACTS
	CIRCUIT BREAKER
DP	DETERGENT PUMP (OPTIONAL)
DRP	DRAIN PUMP
DSS	DOOR SAFETY SWITCH
DV	DRAIN VALVE
EWS	EXTENDED WASH SWITCH
FV	RINSE/FILL VALVE
HC	HEATER CONTACTOR (COIL)
HC1	HEATER CONTACTS
HLTH	HIGH LIMIT TANK HEATER
PT	PRESSURE TRANSDUCER
RP	RINSE AID PUMP (OPTIONAL)
SS	SERVICE SWITCH
TCB	BOOSTER THERMISTOR
TCR	RINSE THERMISTOR
TCW	WASH TANK THEMISTOR
WC	WASH MOTOR CONTACTOR
WC1	WASH MOTOR CONTACTS



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