1000 Series

Installation Manual with Service Replacement Parts

For Champion Models: DH-1000, DL-1000 • Moyer Diebel Models: MD1000HT, MD1000LT • Valu-Clean Models: VC1000, VC1000HT

High Temp

Low Temp

Door-type Dishwasher

Model: **1000 Series**

High Temp
Hot water sanitizing machine w/ pumped rinse and built-in stainless steel electric booster

Low Temperature
Chemical sanitizing machine w/ pumped rinse and 3 built-in chemical dispensing pumps

Dishwasher serial no.

Issue Date: 4.23.08

***Manual P/N** 114313 rev. D*

For machines beginning with S/N D07106631 and above

P.O. Box 4149
Winston-Salem, NC 27115
336/661-1556 Fax: 336/661-1660
Toll-free: 800.858.4477

2674 N. Service Road, Jordan Station
Ontario, Canada L0R 1S0
905/562-4195 Fax: 905/562-4618
Toll-free: 800.263.5798

Printed in the USA

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

Model Number_____ Serial Number_____

Voltage_____Hertz_____ Phase_____

Service Agent _____ Tel:_____

Parts Distributor _____ Tel:_____

For all models:

The data plate mounts to the right-side of the top-mounted control cabinet.

National Service Department

In Canada:
Toll-free: 800/ 263-5798
Tel: 905/ 562-4195
Fax: 905/ 562-4618
email: service@moyerdiebellimited.com

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

ATTENTION:

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

Please have this information on-hand if you call for service assistance.

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3026604 **01**

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MOYER DIEBEL LIMITED
PO BOX 301
JORDAN STATION ON L0R 1S0

ATTENTION:

Complete the back of the POSTAGE PAID WARRANTY CARD below, then cut along the dashed lines and mail immediately to make sure that your machine warranty is validated.

USE CANADIAN WARRANTY CARD IN CANADA AND USA WARRANTY CARD IN THE UNITED STATES.

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL
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POSTAGE WILL BE PAID BY ADDRESSEE

MOYER DIEBEL
PO BOX 4183
WINSTON-SALEM, NC 27119-0981

WARRANTY REGISTRATION CARD

MODEL	SERIAL #

Date of Installation:_____

Owner's Location: Company_____

Address_____

Address_____

Telephone_____

Contact Name_____

Purchased from: Dealer_____

Telephone_____

Contact Name_____

Note: This card must be returned to validate warranty.

IMPORTANT IMPORTANT

WARRANTY REGISTRATION CARD

MODEL	SERIAL #

Date of Installation:_____

Owner's Location: Company_____

Address_____

Address_____

Telephone_____

Contact Name_____

Purchased from: Dealer_____

Telephone_____

Contact Name_____

Note: This card must be returned to validate warranty.

IMPORTANT IMPORTANT

Revision History

- The Revision History can contain part number changes, new instructions, or information that was not available at print time.
- We reserve the right to make changes to these instructions without notice and without incurring any liability by making the changes..
- Equipment owners may request revised instructions, at no charge, by calling 1 (800) 858-4477 in the USA or by caling 1 (800) 263-5798) in Canada.

Revision Date	Revised Pages	Serial Number Effectivity	Revision Description
3.14.06	*All*	*D2466*	*Released first edition*
2.15.07	*All*	*D5937*	*Revisions to consolidate manual*
4.18.07	*50-51*	*D5937*	*Add P/N 114236, thermometer to parts list*
6.01.07	*50, 54*	*D6336*	*SST timer assy replaces plastic cam timer Conversion kit P/N 900892 retrofits old timer P/N 0512018, & P/N 0512025 to P/N 417081*
4.23.08	*4, 6, 28, 30*	*All*	*Changed water supply specification to 20 ± 5 psi/138 ± 35 kPa, recommend 0-60 psi/0-414 kPa pressure gauge install*
	5, 48,49	*D07106631*	*Control cabinet lock and key deleted*
	11, 12	*All*	*Revised photos of timer switches*
	73, 74	*All*	*Corrected header description for electrical schematics*
	IFC	*All*	*Added MDL Canadian PPD warranty card*

Dear Owner:
Thank you for choosing our dishwasher.
We appreciate your business.

This manual covers:

High Temp	High temperature door-type dishwasher with standard built-in booster in 40°F/22°C rise or an optional 70°F/39° C rise booster.
Low Temp	Low temperature chemical sanitizing door-type dishwasher with built-in chemical dispensing pumps for detergent, rinse-aid, and sanitizer.

The installation, and initial start-up of your dishwasher must be performed by qualified electricians, plumbers, and authorized service technicians who are trained in commercial dishwashers.

High Temperature Door-Type Dishwasher

Low Temperature Door-Type Dishwasher

All Models

Limited Warranty

Valu-Clean, Champion or Moyer Diebel (hereinafter referred to as the Company), P.O. Box 4982, Winston-Salem, North Carolina 27115 & 2674 N. Service Road, Jordan Station, Canada, L0R 1S0, warrants machines, & parts, as set out below.

Warranty of Machines: Company warrants all new machines of its manufacture bearing the name the Company 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 the Company, whichever occurs first. [See below for special provisions relating to glasswashers.] The warranty registration card must be returned to the Company within ten (10) days after installation. If warranty card is not returned to the Company within such period, the warranty will expire after one year from the date of shipment.

The Company 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, the Company, 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, The Company'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 the Company elects to repair, the labor and work to be performed in connection with the warranty shall be done during regular working hours by a Company authorized service technician. Defective parts become the property of Company. Use of replacement parts not authorized by the Company will relieve the Company of all further liability in connection with its warranty. In no event will the Company's warranty obligation exceed the Company's charge for the machine. The following are not covered by the Company'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: The Company warrants all new machine parts produced or authorized by the Company 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 Valu-Clean will replace the defective part without charge.

DISCLAIMER OF WARRANTIES AND LIMITATIONS OF LIABILITY. VALU-CLEAN'S WARRANTY IS ONLY TO THE EXTENT REFLECTED ABOVE. VALU-CLEAN MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED, TO ANY WARRANTY OF MERCHANTABILITY, OR FITNESS OF PURPOSE. VALU-CLEAN 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 VALU-CLEAN DISHWASHING MACHINES AND VALU-CLEAN PARTS, AND ALL OTHER REMEDIES ARE EXCLUDED, INCLUDING ANY LIABILITY FOR INCIDENTALS OR CONSEQUENTIAL DAMAGES.

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

Installation Guide

☑ *Unpack and Place (1000 Series HT)*

1. Check the corrugated box that protected the dishwasher during shipment for punched holes or impact marks.
2. Inspect the shipping pallet for splintered or broken boards.
3. Inspect the exterior of the dishwasher while still mounted on the pallet for signs of damage.
4. Contact the freight company immediately if damage is found and save all packing for inspection to verify your damage claim.
5. Report the damage to your equipment supplier. They will contact our factory for repair or replacement of damaged components.
6. If no damage is found, proceed with lifting the dishwasher from its pallet. Be careful to lift the dishwasher by the main frame if using a forklift.
7. Make sure the four legs are screwed firmly in place after landing the machine.
8. Check the packing list to ensure all accessories are with the dishwasher.
9. Open the doors and remove the dishracks inside the machine.
10. Move the dishwasher close to its permanent location.
11. Locate the Installation Instructions attached to the front door of the dishwasher. These instructions should be used in conjunction with the detailed instructions contained in this manual.
12. Remove the protective covering from the dishwasher and identify the utility connections. Information cards and stickers must not be removed from the dishwasher until the installation is complete.

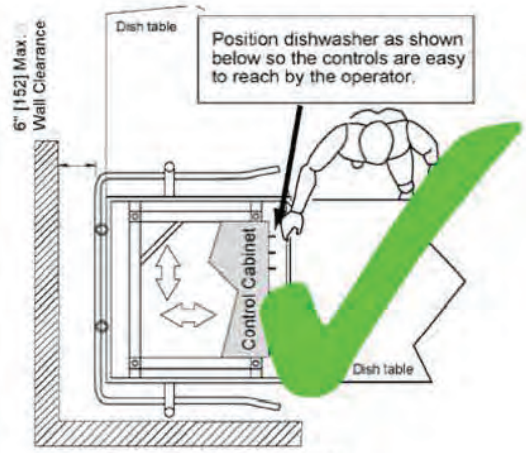
Installation Guide

☑ *Unpack and Place (1000 Series HT)*

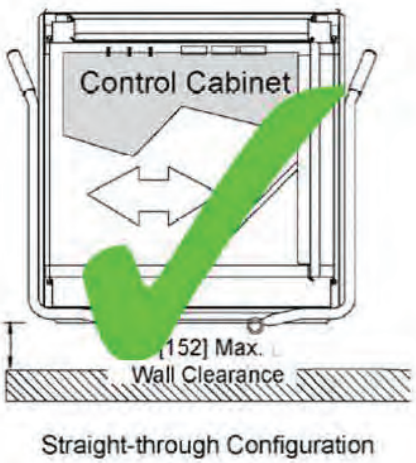
1. The installation of your dishwasher must be performed by qualified service personnel.
2. Problems due to improper installation are not covered by the Warranty.
3. The dishwasher data plate is located on the right-side of the top-mounted control cabinet cover.
4. Study the configuration diagrams below. They show the 2 ways that the dishwasher may be positioned.

Corner and straight-through dishwasher configurations

Incorrect Corner Configuration



Correct Corner Configuration



Straight-through Configuration

Note:
The correct corner installation places the dishwasher so the top-mounted controls are easy to reach.

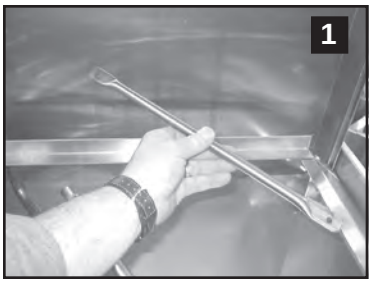
The minimum distance from wall to dishwasher is 4" [103mm]. The maximum distance is 6" [129].

The room ceiling height must be a minimum of 80" [2032mm] so the doors can be removed completely.

Installation Guide

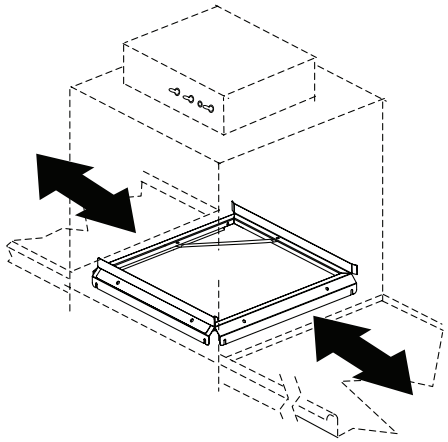
☑ Unpack and Place (1000 Series HT)

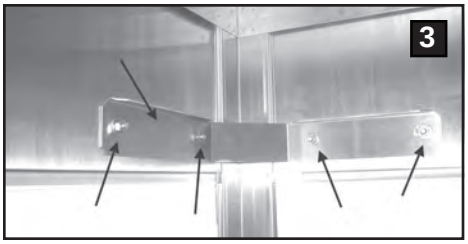
1. All dishwashers ship in the straight-through configuation.
2. Relocate the tracks and remove the wall-side door link components to convert the dishwasher for corner operation.



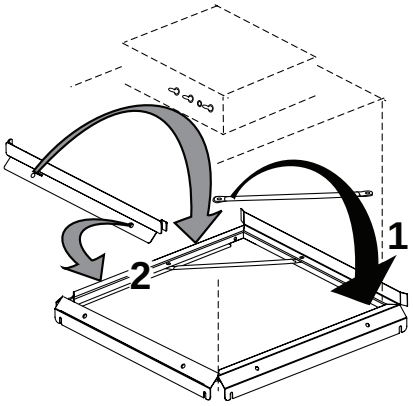
Move Part 1

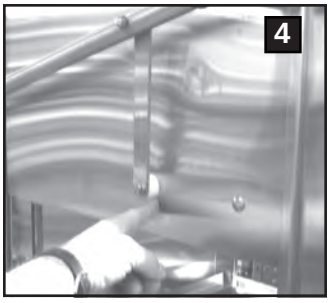
Move Part 2



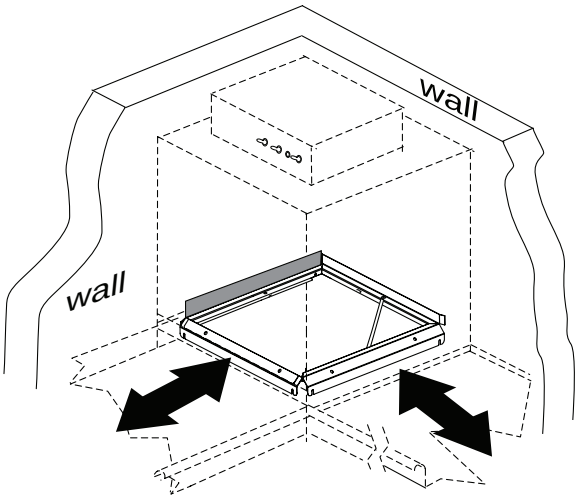


Remove Interior Door Bracket





Remove Door Linkage



Adjust Door Spring Tension

Installation Guide

☑ *Unpack and Place (1000 Series HT)*

1. Compare the dishwasher and site utility connections.
2. Level the dishwasher by adjusting the bullet feet.
3. Raise the doors and check the door clearance to the ceiling.
4. Move the dishwasher to its permanent location.

Note:
Installers must follow applicable sanitation, safety, plumbing, and electrical codes and regulations; and work in accordance with best practices for dishwasher installation.

Utility Connections - 1000 Series HT

Power:	208-240V Single or Three Phase
Water supply:	3/4" NPT hot water supply (140°F/60°C minimum) for 40° F/22°C rise booster 20 ± 5 psi/138 ± 35 kPa flow pressure. Installation of 0-60 psi/0-414 kPa pressure gauge *(supplied by others)* is recommended. 3/4" NPT hot water supply (110°F/43°C minimum) for 70°F/39°C rise booster 20 ± 5 psi/138 ± 35 kPa flow pressure. Installation of 0-60 psi/0-414 kPa pressure gauge *(supplied by others)* is recommended.
Drain:	1-7/8" stainless steel, slip-fit hose connection Max flow: 15 Us gal/min. (13.5 Imperial gal/min) 57liters/min.
Chemicals:	Detergent and rinse-aid products are supplied by a chemical supplier

Installation Guide

☑ *Electrical Connection (1000 Series HT)*

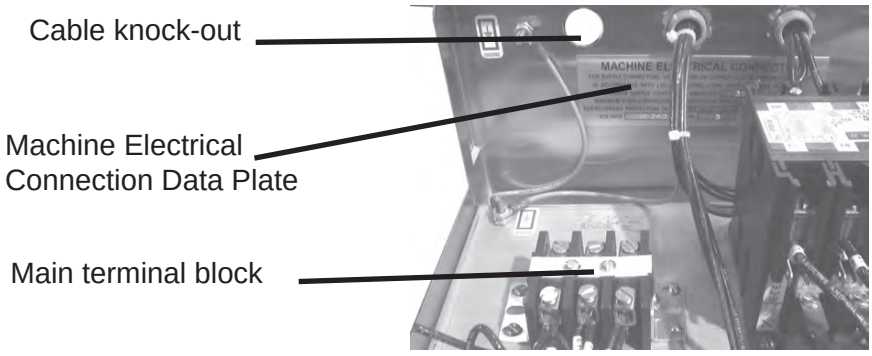
Warning:
The dishwasher must be electrically grounded according to all local codes and regulations governing the installation of electrical service.

Warning:
Disconnect the main electric supply and place a tag at the fuse or disconnect switch indicating that work is being performed on that circuit.

1. Locate the screw on each side of the top-mounted control cabinet.
2. Remove the screws, then lift the cover off the cabinet and set it aside.
3. Double-check that all power was disconnected from the dishwasher.
4. Locate the power cable knock out and main terminal block on the left-side of the cabinet.
5. Locate the Machine Electrical Connection Data Plate mounted near the terminal block.

The MACHINE ELECTRICAL CONNECTION DATA PLATE is the certified authority for the dishwasher power requirements. DO NOT use electrical data from any other sourceunless an authorized factory representative instructs you to use other data.

6. Connect the electric service to the dishwasher.



ATTENTION ELECTRICIAN

The Model 1000HT dishwasher must not be turned ON at the dishwasher's power switch located on the front of the top-mounted control cabinet without performing an Initial Start-up at the same time. Powering the dishwasher without performing the Initial Start-up may damage the dishwasher's electrical circuits.

Installation Guide

☑ *Water Connection (1000 Series HT)*

1. Locate the built-in stainless steel booster on the left-side of the dishwasher.

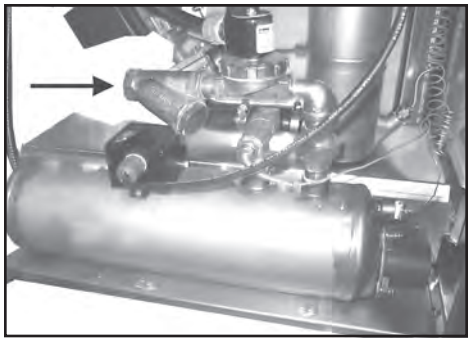
Note:
The existing hot water supply lines to the dishwasher must be 3/4" NPT or larger. To the best of your ability inspect, and verify that all supply piping meets the 3/4" NPT requirement.

Note:
The installing plumber must connect a water supply line to the dishwasher that is equal to or greater than 3/4" NPT in size and a 3/4" pressure regulating valve, PRV, and a 0-60 psi/0-414 kPa pressure gauge (not supplied)

Dishwasher water supply temperature and water pressure requirements:

140°F/60°C minimum for 40°F/22°C rise booster
3/4" NPT hot water supply (140°F/60°C minimum)
20 ± 5 psi/138 ± 35 kPa flow pressure.
Installation of 0-60 psi/0-414 kPa pressure gauge *(supplied by others)* is recommended.

110°F/43°C minimum for 70°F/39°C rise booster
3/4" NPT hot water supply (110°F/43°C minimum)
20 ± 5 psi/138 ± 35 kPa flow pressure. Installation of 0-60 psi/0-414 kPa pressure gauge *(supplied by others)* is recommended.



2. Connect a 3/4” NPT hot water supply to the dishwasher at the line strainer.

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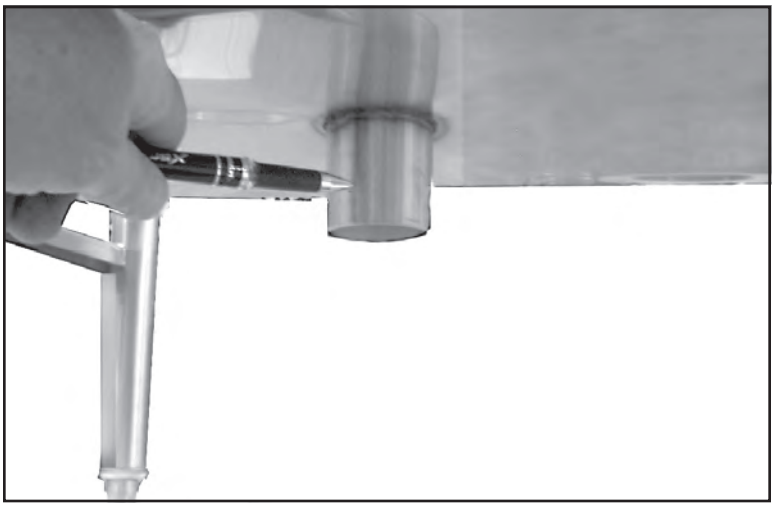
Installation Guide

☑ Drain Connection (1000 Series HT)

Continued from page 6

1. Locate the dishwasher drain connection underneath the machine frame.
2. Install a drain line conforming to local plumbing and health regulations.

Drain: 1-7/8" stainless steel, slip-fit hose connection
Max flow: 15 US gal/min. (13.5 Imperial gal/min) 57liters/min.



☑ Ventilation (1000 Series HT)

1. The factory has no requirements for vent hoods; but, local codes and regulations in your area supersede our suggestions. Consult your local building and health authorities for local requirements.
2. Dishroom ventilation must provide sufficient airflow to prevent excessive humidity in the work area. 200-400cfm/5.6- 11.3 k Liters/min - is sufficient.
3. The dishwasher must not be subjected to continual drafts or cold air.

Installation Guide

☑ *Chemical Dispensers (1000 Series HT)*

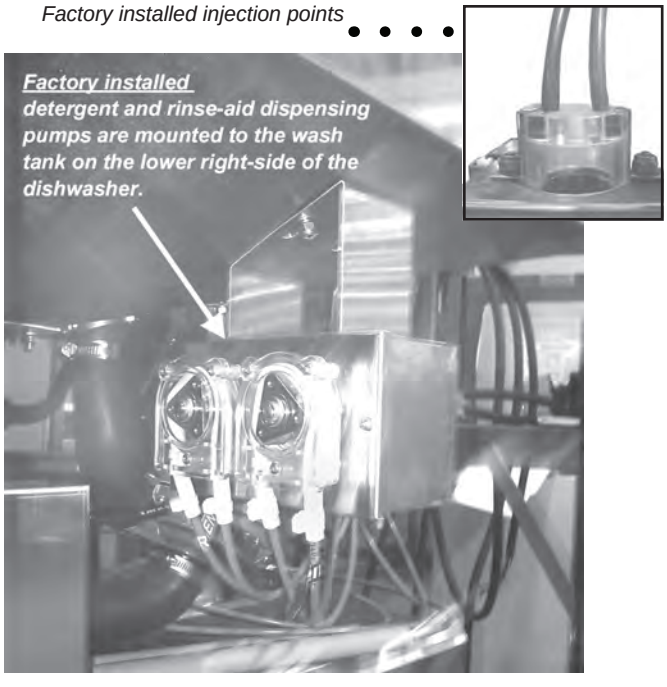
1. The 1000 Series HT high temperature dishwasher sanitizes with 180-195° F/82-91° C hot final rinse water.
2. Do not connect a sanitizer chemical dispenser to the 1000 Series HT.
3. You may wish to contact a chemical supplier to supply the chemical dispensers and chemicals for liquid detergent and liquid rinse-aid. (Consult your local listings).
4. The chemical supplier must adjust their dispensers to provide the proper dosages for the installed dispensing system.
5. The factory may have supplied the chemical dispensing system as an option. Your chemical supplier must adjust factory dispensers for the chemicals supplied also.

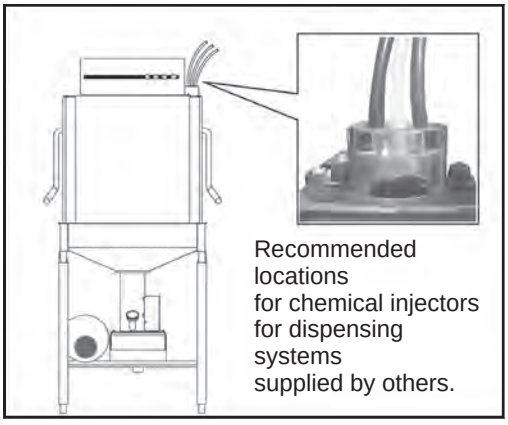
Note:
Manual dosing of detergent or rinse-aid is **NOT RECOMMENDED** for the 1000 Series HT dishwasher. Poor washing results may result if manual dosing is employed.

Note:
Cartridge detergent systems are **NOT RECOMMENDED** for the 1000 Series HT dishwasher. Poor washing results may result if installed on this model.

6. The factory recommends that the chemical injectors be installed in the right back corner of the hood as shown below.

Factory installed injection points





Recommended locations for chemical injectors for dispensing systems supplied by others.

Continued on page 10

Installation Guide

☑ *Chemical Dispensers (1000 Series HT)*

Continued from page 9

115VAC Power Connections for Chemical Dispensers

FOR QUALIFIED INSTALLERS ONLY

Warning:
Chemical dispensers must be electrically grounded in compliance with applicable electric codes.

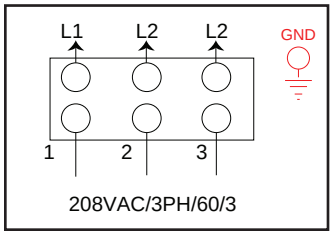
Warning:
Disconnect the main electric supply and place a tag at the fuse or disconnect switch indicating that work is being performed on that circuit.

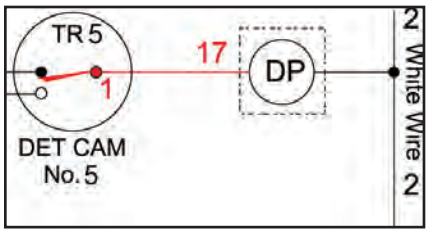
Caution:
Connecting chemical dispensers at points other than those recommended by the factory may damage the dishwasher electrical system.

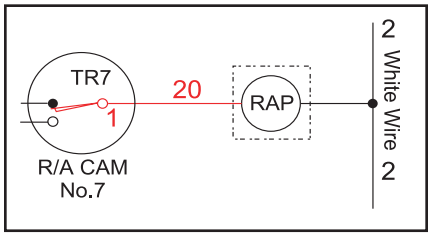
1. Remove 2 screws securing the top-mounted control cabinet cover. Set the cover aside.
2. Locate the cycle timer mounted in the right-rear corner of the control cabinet.
3. Refer to the 1000 Series HT electrical schematic located at the end of this manual.
4. Find the following components shown on the electrical schematic at end of this manual.

Installation Guide

☑ Chemical Dispensers (1000 Series HT)



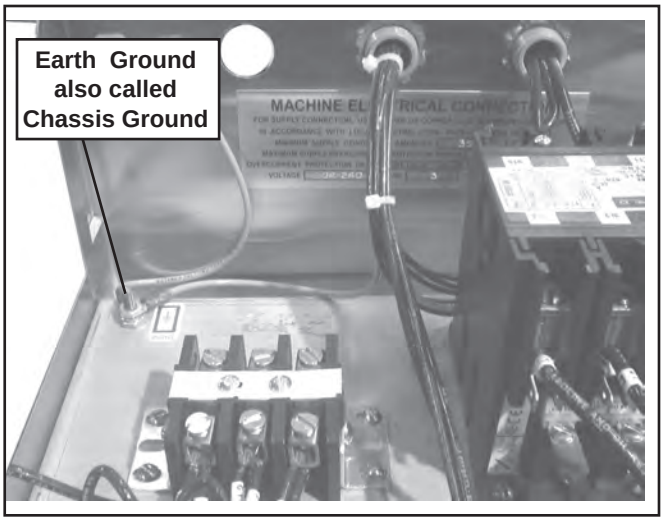




Main terminal block and ground lug	Detergent dispensing pump & cycle Timer cam No.5 with timer microswitch	Rinse-aid dispensing pump & cycle timer cam No.7 with timer microswitch

5. The main terminal board is the termination point for the incoming power and earth ground which is also called the chassis ground.

6. Chemical dispensers (not supplied by Factory) must be grounded to chassis to protect the dishwasher circuits if possible.



5. The main terminal board is the termination point for the incoming power and earth groundwhich is also called the chassis ground.

6. Chemical dispensers (not supplied by Factory) must be grounded to chassis to protect the dishwasher circuits if possible.

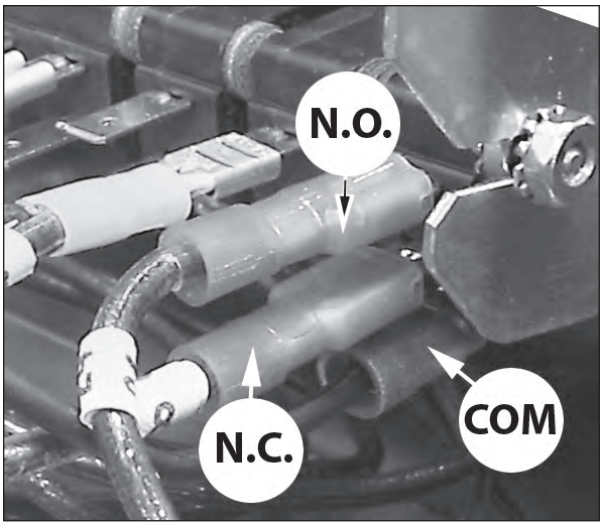
7. The detergent signal and the rinse-aid signal terminals for your chemical dispensing pumps are provided on the common terminal of each Timer Cam microswitch (See diagrams above).

   Cam No.5 operates the detergent microswitch

   Cam No.7 operates the rinse-aid microswitch

8. Look to the right for the photo of a timer cam microswitch. Note the configuration of the switch, do you see how the common terminal is different than the Normally Closed (N.C.) and the Normally Open (N.O.) terminals?

9. Look again at the Cycle Timer and locate the Detergent Cam No.5 and the Rinse-aid cam No.7.



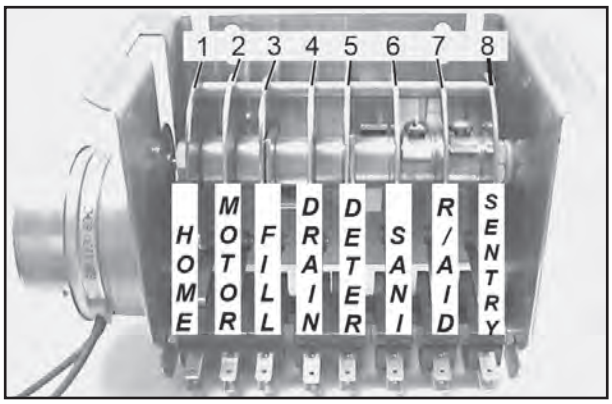
Continued on page 12

Installation Guide

☑ *Chemical Dispensers (1000 Series HT)*

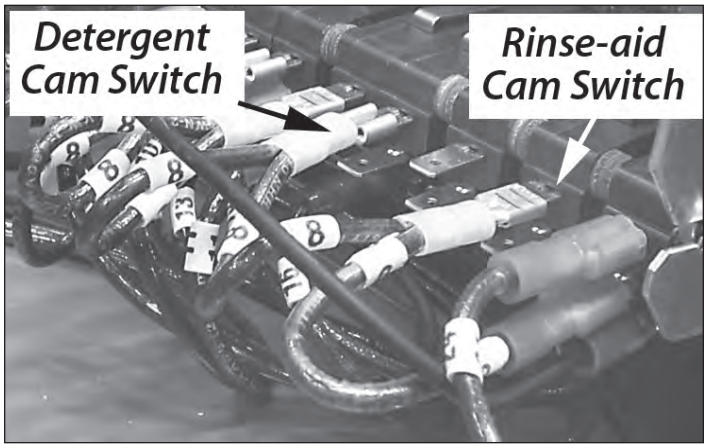
Continued from page 11

10. There are 8 Cams on the cycle timer. They are numbered 1-8 starting at the timer motor side of the assembly.



11. Look at the underside of the detergent and the Rinse-aid timer microswitches and identify the common terminals.

12. Connect the hot lead for the detergent pump to the common terminal of Cam Switch No. 5. Make the connection using a 12-14 slip-on terminal. Do the same for the rinse-aid switch.



13. Now you must connect your pumps to the dishwasher neutral return. All white wires marked with No. 2 are neutral wires; however, you are not authorized to connect to any #2 wire that you may identify.

14. Run a 12 gauge white wire with spade terminal connector *(not supplied)* from your chemical dispensing pumps to the neutral #2 white wire located on the main power transformer in the control cabinet.

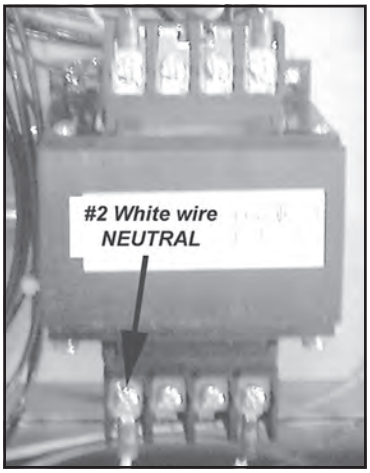
Installation Guide

☑ *Chemical Dispensers (1000 Series HT)*

Caution:

The **NEUTRAL RETURN (#2 white wires)** and **Chassis Ground** are not the same point electrically. Improper wiring to these points may result in unusual voltage readings and damage to the dishwasher's electrical circuits.

STOP WORKING ON THE DISHWASHER AT ONCE, if you do not know the difference between a neutral return and chassis ground.



ATTENTION INSTALLER

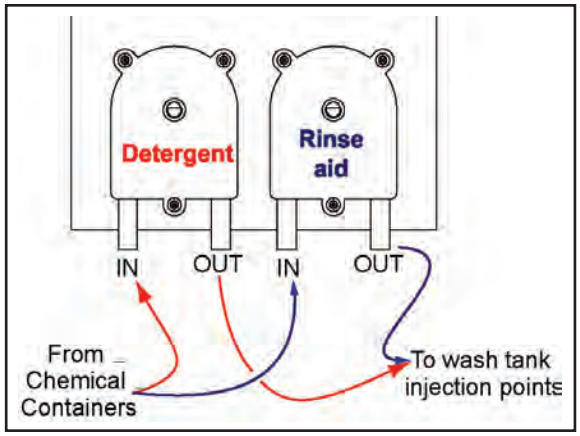
DO NOT TURN ON the dishwasher power switch
located on the front of the top-mounted control cabinet
before the Initial Start-up is completed

Powering the dishwasher as described above, without knowing for certain that the Initial Start-up was performed, may make you liable for any damages stemming from your actions.

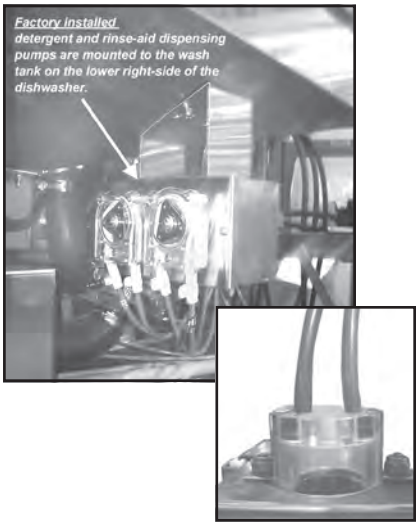
Installation Guide

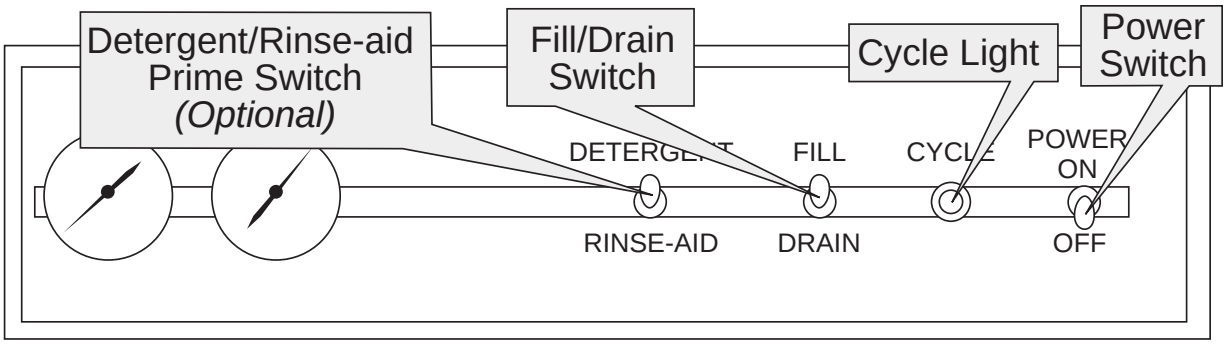
☑ Chemical Dispensers (1000 Series HT)

Priming the chemical dispensers *(Factory dispensers only)*



1. Factory dispensers are optional equipment;however, an automatic dispenser mustbe installed by someone in lieu of the factory.
2. The dispensers are mounted on the right-hand side of the lower wash tank.
3. Chemical pick-up tubes are inserted into their respective containers.
4. Detergent and Rinse-aid chemical containers can be placed a maximum of 11" [280 mm] above the finished floor, (ABF).
5. Place the chemical containers as close to the dishwasher as possible.
6. **Each day** check the detergent and rinse-aid chemical containers to make sure they are at least 1/2 full.
7. Push and hold the 2-position prime switch located on the front of the top-mounted control cabinet. Push UP to prime the detergent and DOWN to prime the rinse-aid.
8. Watch the chemical as it travels up the tube to the injection point sight-glass located on the right-hand side, top-rear corner of the machine.
9. Release the switch when the chemical enters the sight-glass.
10. Chemicals should reach the sight-glass within 2 minutes of prime.A problem may exist if it takes longer than 3 minutes.





Installation Guide

☑ *Initial Start-up (1000 Series HT)*

CAUTION
DO NOT flip the dishwasher power switch "ON" until you read the instructions below.

1. The built-in stainless steel electric booster **was shipped without water.**

2. A manila card located above the power switch explains how to turn the machine on for the first time.

   See step No. 10 on the next page for the first DISHWASHER POWER UP procedure.

Let's begin the Initial Start-up:

1. Check the placement of the dishwasher:

   ☑ Compare the machine location with the building plan or consult the owner or the General Contractor for approval.

   ☑ Check that the dishwasher configuration straight-through or corner operation is correct *(See page 2 for details).*

2. Check that all options and/or accessories are installed.

3. Remove protective white wrapping, tape, and other packing materials and discard.

4. Remove any foreign materials from the interior of the machine.

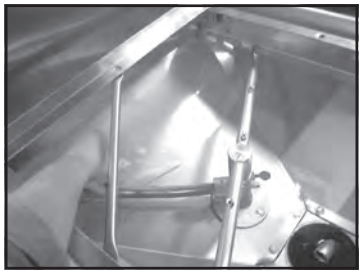
Continued on page 16

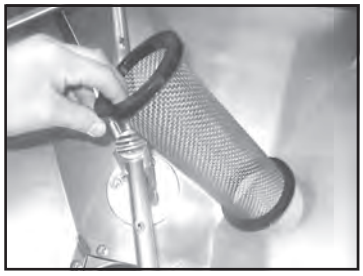
Installation Guide

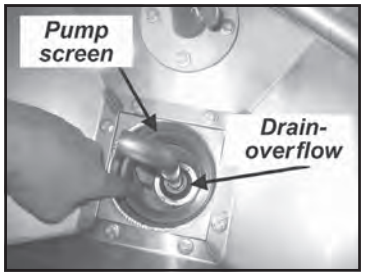
☑ *Initial Start-up (1000 Series HT)*

Continued from page 15

5. Check that the following utilities are connected to the dishwasher and ready for use:
   - ☑ Electrical service
   - ☑ Hot water supply
   - ☑ Drain
   - ☑ Ventilation *(if required by local regulations)*.
6. Check the chemical connections and chemical containers to ensure that enough chemical supplies are available.
7. Turn on the water supply to the dishwasher.
8. Turn on the main power switch at the service disconnect switch.
9. Open the dishwasher doors fully.
10. Check upper and lower spray arms are in place and spin freely.
11. Check that the drain-overflow and pump screen are in place.







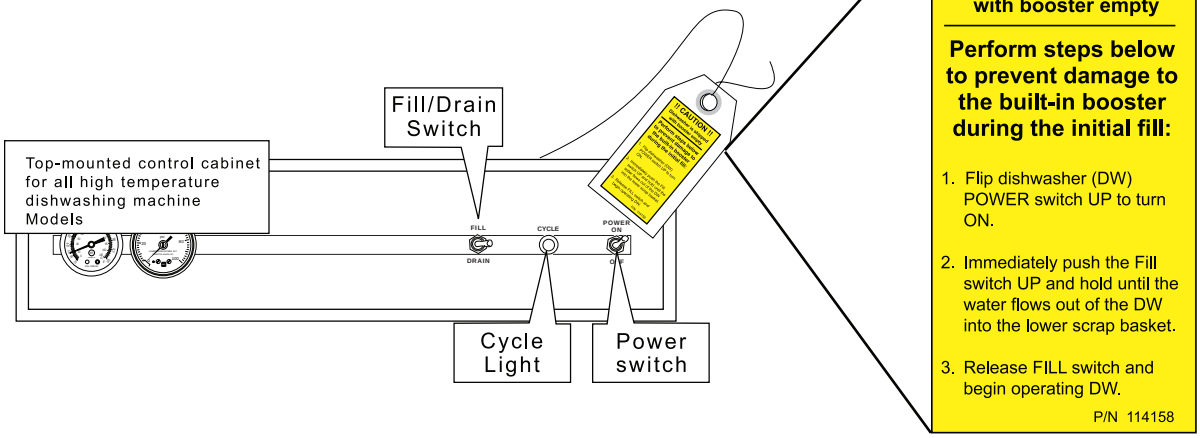
12. Check that the lower scrap screen is clean and in place.

Installation Guide

☑ Initial Start-up (1000 Series HT)

POWER UP THE DISHWASHER:

As stated on page 15, the dishwasher power switch must not be turned without reading the instructions below.:



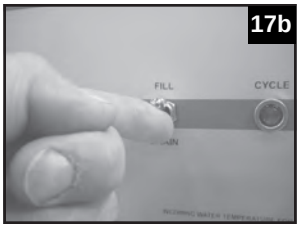
13. Turn on the main power switch at the service disconnect switch.

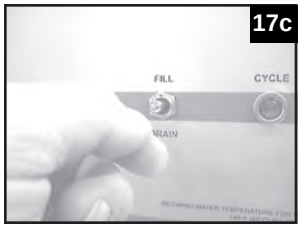
14. Flip the dishwasher power switch UP to turn on the dishwasher.

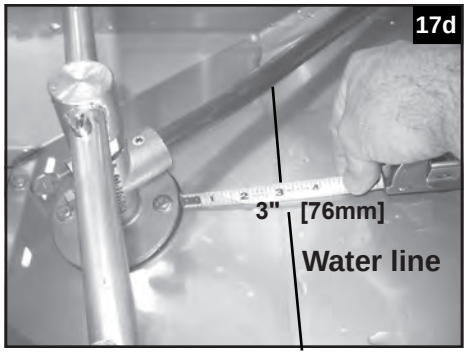
15. Immediately, push the fill switch up and hold it in the up position until the water flows out of the wash tank and into the lower scrap screen.

16. Release the fill switch.

17. Open the dishwasher door fully and check the water level inside the tank. The proper water level is just below the overflow tube and 3" [76 mm] from the lower sprayarm support. Measure from the back of the support up the tank toward the rear wall of the dishwasher.







Installation Guide

☑ Initial Start-up (1000 Series HT)

18. Operate the dishwasher for 10 cycles. **Monitor the wash and final rinse gauges** located on the lower front panel of the dishwasher to ensure the machine is maintaining the proper temperatures.

In the USA, the NSF standards are:

150° F/66° C minimum wash temperature
180° F/82° C minimum final rinse temperature

Note:
In Canada, sanitary standards are regulated by each province. Consult your provincial authorities for temperature requirements and other sanitary standards.

19. Check the green cycle light. It should illuminate throughout the 90-second cycle, then go out at the end of the cycle. When the doors are raised, the cycle light should again illuminate for 3-seconds and then go out. The 3-second light indicates the timer is resetting. DO NOT CLOSE the doors until the cycle light goes out.

20. Check the dishwasher piping for leaks.

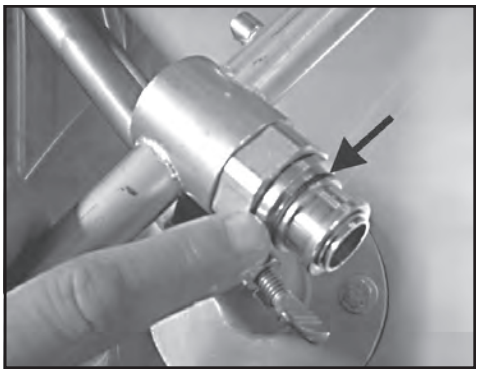
21. Check the drain connection and make sure the house drain piping handles the dishwasher drain flow. Max flow is 15 USgpm/58 lpm or 1.7 US gals/6.6 Liters per rack.

22. Check the operation of the doors. They should go up and down smoothly. Check the white door guides to ensure they move with the doors.

23. Inspect the table connections to the dishwasher making sure they are secure and sealed with 100% silicon sealant on the mating flanges. The soiled table must slope away from the dishwasher and the clean table must slope toward the dishwasher.

24. Remove the upper and lower sprayarms and check the condition of the sprayarm bearing O-rings.

25. The initial start-up is complete. Turn off power to the dishwasher.



Operation *(1000 Series HT)*

1. Make sure there is adequate supply of liquid detergent and rinse-aid. Check the chemical containers and refill if necessary.

2. Ensure internal circular tank screen, upper and lower spray arms and lower external scrap screen are clean and in place.

3. Close door. Turn POWER switch to the " ON " position. Lift "FILL/DRAIN" switch to the "FILL" position and hold for approximately 15-20 seconds, or until water flows from the wash tank into the lower scrap pan.

4. Check the wash temperature gauge. Minimum reading must be 150°F/66°C. Operate the dishwasher through 2 complete cycles to increase the wash temperature to 150°F/66°C. Check the temperature gauge reading on the front of the dishwasher to ensure minimum temperatures are maintained.

5. Open doors completely and slide pre-scrapped rack of dishes into dishwasher. Check that control panel green light is out.

6. Close doors to automatically start the cycle. Total cycle time is 90-seconds.

7. The RINSE SENTRY feature monitors the final rinse water temperature being generated in the built-in booster. The rinse sentry will extend the wash cycle in the event that the final rinse temperature is less than 180°F/82°C. Rinse Sentry deactivates when the final rinse water in the built-in booster is a minimum of 180°F/82°C. Then the dishwasher timed cycle will complete the wash cycle, drain and refill with the final rinse water and complete the cycle.
(See page 20 for an in-depth explanation of the Rinse Sentry feature.)

8. The final rinse cycle begins after the dishwasher washes and then drains. The rinse-aid is automatically added to the wash tank.

9. Cycle ends when green cycle light goes out. Opening the doors anytime during the timed cycle will stop the dishwasher. The dishwasher will resume operation as soon as the doors are closed. The timed cycle will begin at the place where it had stopped.

10. Open door. Remove the clean rack of dishes and insert another rack of soiled dishes.

11. Repeat steps 5-10 until all wares are clean.

Note:

Wash temperature must be a minimum of 150°F/66°C for optimum wash performance. Final rinse temperature must be a minimum of 180°F/82°C and a maximum of 195°F/91°C for optimum sanitizing.

Operation *(1000 Series HT)*

The Rinse Sentry Feature

The 1000 Series HT Rinse Sentry automatically monitors the final rinse water temperature in the built-in stainless steel electric booster heater. If the final rinse water in the booster falls below **180°F/82°C,** *the Rinse Sentry will extend the dishwasher's wash cyle time in order to give the booster heater additional time to provide the 180°F/82°C water temperature required.*

Sanitization using hot final rinse water:

1. The 1000 Series HT sanitizes dishware with **hot final rinse water at a minimum temperature of 180°F/82°C.**

2. The 1000 Series HT includes a built-in stainless steel electric booster heater which heats incoming water temperatures to **180-195°F/82-91°C.**

3. With Rinse Sentry, if the final rinse temperature inside the booster tank is below the minimum ***180°F/82°C,*** the timed cycle pauses the wash cycle until the minimum temperature is available.

4. If something is defective and the final rinse water cannot reach the ***180°F/82°C,*** then the dishwasher will wash indefinitely.

5. This is usually the point where the operator realizes that the dishwasher has a problem because the wash cycles are way too long.

Who is responsible for checking the final rinse water temperature?

1. ***Everyone in the dishroom; but, the operator has the main responsibility.***

2. You are required to check to make sure that the final rinse water temperature gauge always reads a temperature of **180-195°F/82-91°C** during the final rinse cycle. And, It is your job to immediately stop washing dishes if the temperature falls below the minimum temperature of ***180°F/82°C.***

3. Guess what? Most people will forget to check the final rinse temperature at least once in their careers! ***That's why the Rinse Sentry is a part of your dishwasher.***

Rinse Sentry constantly checks the final rinse water temperature to ensure the minimum required temperature of 180°F/82°C is available to sanitize the dishware for the health and safety of your guests.

Cleaning and Maintenance

☑ *Cleaning and Maintenance (1000HT Series)*

1. Leave the machine power switch in the ON position. Doors are fully closed.
2. Push and hold the “FILL/DRAIN” switch down in the “DRAIN” position for approximately 15-20 seconds. The water in the wash tank will drain completely.
3. Raise doors fully. Use caution, as metal surfaces may be hot. Allow interior to cool.
4. Rinse the interior of the dishwasher with fresh water. Wipe the interior with a soft cloth.

Do not scrub the interior with scouring pads, nor harsh detergents.

5. Close the doors fully; the dishwasher will begin a normal cycle. At the end of the cycle, Push & hold the Fill/drain switch in the DRAIN position until the wash tank is empty
6. Flip the dishwasher power switch to the OFF position
7. Remove and clean circular wash tank screen.
8. Check the overflow /drain assembly. Ensure the drain seat is clean.
9. Loosen the upper and lower thumbscrews (Do not remove the screws)
   Remove upper and lower sprayarms. Flush the sprayarm nozzles and check the bearing o-rings.
10. Replace sprayarms (they are interchangeable) and tighten thumbscrews.
11. Replace circular tank screen.
12. Remove lower scrap screen. Empty debris and flush both sides with fresh water.
13. Check the drain pan and flush with clean water.
14. Wipe the exterior of the dishwasher with a soft cloth.

Do not hose the exterior with water nor scrub with scouring pads or harsh detergents.

15. Replace lower scrap screen, circular screen, and leave doors open for overnight drying.
16. Check the chemical supplies to ensure there are adequate supplies for the next shift.

Cleaning and Maintenance

☑ *Cleaning and Maintenance (1000 Series HT)*

Thoroughly cleaning your dishwasher every day is very best maintenance that you can do!!

Daily Maintenance

1. Keep your dishwasher and the surrounding area spotlessly clean.
2. Immediately report loose, broken or missing parts to your supervisor.
3. Check drains for flow restrictions.
4. Check the dishwasher for leaks.
5. Operate the dishwasher as explained in this manual.

Monthly Maintenance

1. Inspect pump hoses, door linkage, springs, and exterior of dishwasher for wear.
2. Inspect the wash arm bearings and O-rings.
3. Check the condition of scrap screens,. and dishracks for bent or broken pieces.
4. Check the toggle switches and indicator lights for damage.
5. Check the wash pump motor for loud bearings and leaking pump seal.
6. Create a simple Maintenance Tracking System as a guide for service.

Annual Maintenance

Call your authorized service agent or local service representative and schedule a complete inspection of your dishwasher by a trained professional.

A Maintenance Tip -

Schedule your annual maintenance when you can give the service agent unrestricted access to the dishwasher for at least 2 to 2-1/2 hours.

Troubleshooting - *(1000 Series HT)*

In order to find the cause of a breakdown or abnormal operating condition in your dishwasher please ensure that:

1. All switches are ON
2. Drain overflow tube is in place and seated
3. Wash pipe and rinse nozzles are clean
4. Spray arms are in their proper positions
5. Round screen is properly positioned
6. Detergent, sanitizer and rinse additive dispensers are adequately filled
8. Doors are fully closed.

That wasn't it? Check for a solution below:

Condition	***Cause***	***Solution***
Cycle will not start	Door not closed	Make sure doors are fully closed
	Door safety switch faulty	Contact your service agency
	Main switch off	Check disconnect
Low or no water	Main water supply is turned off	Turn on house water supply
	Drain/overflow tube is not in place and seated	Clean, replace and seat drain tube as needed.
	Faulty fill valve	Contact your chemcial supplier.
Continuous water filling	Fill valve will not close	Clean or replace
Motor not running	Defective contactor	Contact your servicer
	Defective motor	Contact your servicer
Wash tank water temperature is low when in use		Incoming water temperature at machine too low Raise temperature to 140°F/60°C
	Defective thermometer	Check or replace
	Defective solenoid valve	Check or replace
Arms not rotating	Rinse nozzles not clean	Clean
	Bearings worn	Replace
	Water supply pressure low	Check incoming water pressure
Insufficient pumped spray pressure	Clogged intake screen	Clean
	Clogged spray pipe	Clean
	Low water level in tank	Check drain and overflow tube, timer may need adjustment, contact servicer
	Defective pump seal	Contact service agent
Insufficient rinse or no rinse	Faulty pressure regulating valve	Clean or replace
	Improper setting on pressure regulating valve	Set static pressure to 35 psi
	Clogged rinse nozzle and/or pipe	Clean with paper clip/delime
	Improper water line size	Have installer change to proper size 3/4" NPT

Troubleshooting (continued)

☑ *(1000 Series HT)*

Condition	*Cause*	*Solution*
Insufficient rinse or no rinse	Faulty pressure regulating valve...	Clean or replace
	Improper setting on pressure regulating valve	Set static pressure to 35 psi
	Clogged rinse nozzle and/or pipe.....	Clean with paper clip/delime
	Improper water line size	Have installer change to proper size 3/4" NPT
Low final rinse temperature	Low incoming water.....	Check valve to be sure it is clean and operating.
	Defective thermometer	Check for proper setting or replace
Machine leaking	Leaking at chemical hose.....	Replace hoses
	Pump seal leaking	Replace seal
	Leaking at pump hose	Contact your chemical supplier
	Leaking at doors.....	Check to make sure that doors are fully closed
Water splashing out door	Nozzles/End caps missing.....	Replace caps
	Wash nozzles blocked.....	Clean
	Arms not rotating	Replace bearings
	Door handle twisted.....	Adjust or replace handle
Poor washing results	Detergent dispenser not operating properly.....	Contact detergent supplier
	Insufficient detergents	Contact detergent supplier
	Food Soil concentration too high in wash tank.....	Prescrap dishes throughly
	Wash water temperature too low	See condition “Wash Tank Water Temperature” above
	Wash arm clogged.....	Clean
	Improperly scraped dishes	Check scraping procedures
	Ware improperly placed in rack	Use proper racks. Do not overload racks
	Improperly cleaned equipment.....	Unclog wash sprays and rinse nozzles to maintain proper pressure and flow conditions. Overflows must be open. Keep wash water as clean as possible.

Model 1000 Series LT Installation Guide

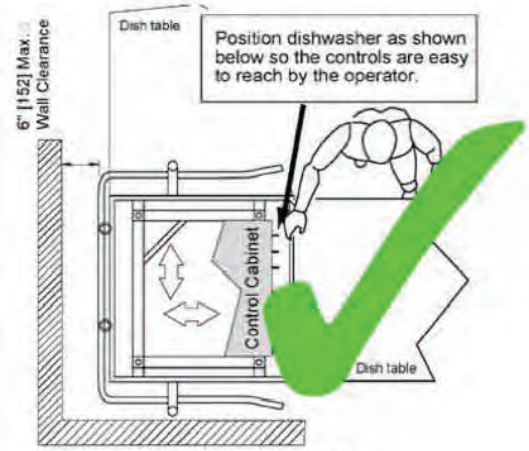
Installation Guide

☑ *Unpack and Place (1000 Series LT)*

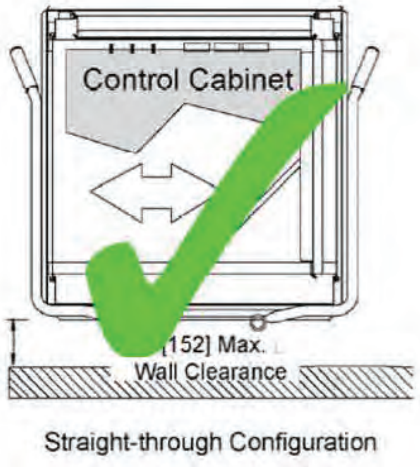
1. The installation of your dishwasher must be performed by qualified service personnel.
2. Problems due to improper installation are not covered by the Warranty.
3. The dishwasher data plate is located on the right-side of the top-mounted control cabinet cover.
4. Study the configuration diagrams below. They show the 2 ways that the dishwasher may be positioned.

Corner and straight-through dishwasher configurations.

Incorrect Corner Configuration



Correct Corner Configuration



Straight-through Configuration

Note:
The correct corner installation places the dishwasher so the top-mounted controls are easy to reach.

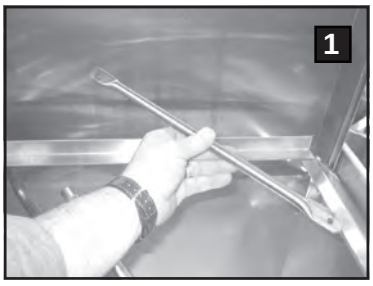
The minimum distance from wall to dishwasher is 4" [103mm]. The maximum distance is 6" [129].

The room ceiling height must be a minimum of 80" [2032mm] so the doors can be removed completely.

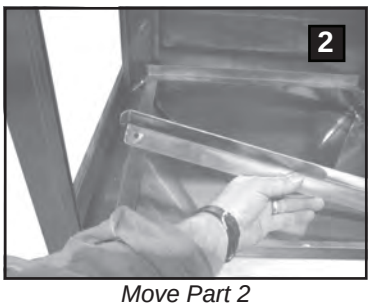
Installation Guide

☑ Unpack and Place (1000 Series LT)

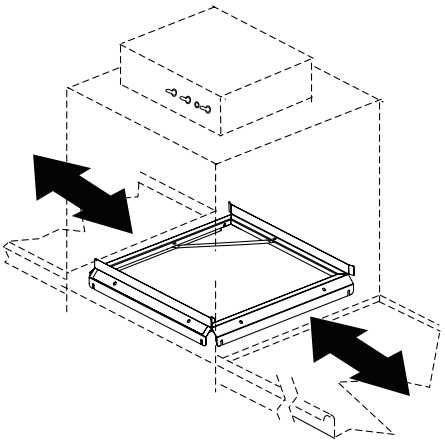
1. All dishwashers ship in the straight-through configuation.
2. Relocate the tracks and remove the wall-side door link components to convert the dishwasher for corner operation.

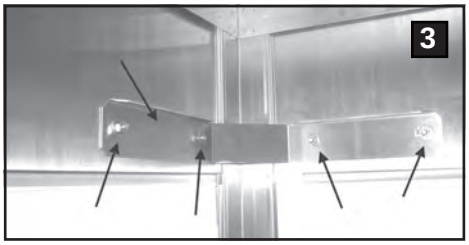


Move Part 1

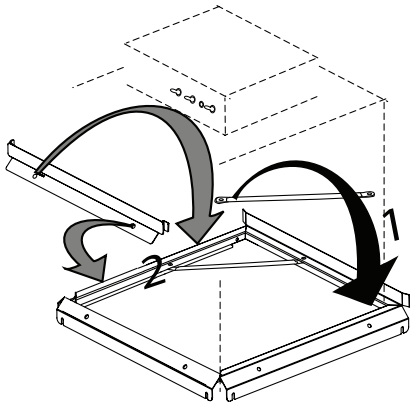


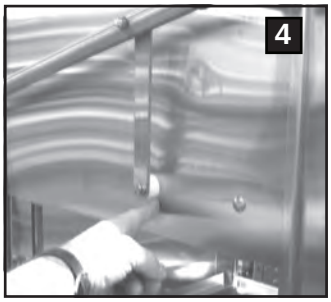
Move Part 2



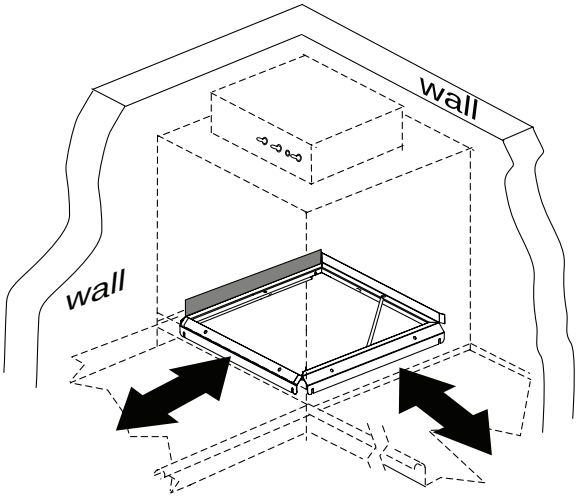


Remove Interior Door Bracket





Remove Door Linkage



Adjust Door Spring Tension

Installation Guide

☑ *Unpack and Place (1000 Series LT)*

1. Compare the dishwasher and site utility connections.
2. Level the dishwasher by adjusting the bullet feet.
3. Raise the doors and check the door clearance to the ceiling.
4. Move the dishwasher to its permanent location.

Note:
Installers must follow applicable sanitation, safety, plumbing, and electrical codes and regulations; and work in accordance with best practices for dishwasher installation.

Utility Connections - 1000 Series LT

Power:	115VAC 15Amp circuit
Water supply:	3/4" NPT hot water supply (140°F/60°C minimum) 20 ± 5 psi/138 ± 35kPa flow pressure. Installation of 0-60 psi/0-414 kPa pressure gauge is recommended.
Drain:	1-7/8" stainless steel, slip-fit hose connection Max flow: 15 Us gal/min. (13.5 Imperial gal/min) 57liters/min.
Chemicals:	Detergent, rinse-aid, and sanitzer pumps are standard equipment. Chemicals supplied by a chemical supplier

Chemical Dispensing Pumps - *Factory Installed -1000 Series LT*

- All pumps use liquid chemicals
- Detergent pump capacity = 165ml / min @ 108 RPM
  Factory setting for detergent = 10 sec. / 28ml
- Sanitizer pump capacity = 35cc/min @ 14RPM
  Factory setting for Sanitizer= 14cc in 23 sec.
  maintains 50PPM concentration of 5.25% sodium hypochlorite during the final rinse cycle.
- Rinse-aid pump capacity = 21 ml / min @ 14RPM
  Factory setting for rinse-aid 10 sec. / 3.5 ml

Installation Guide

☑ *Electrical Connections (1000 Series LT)*

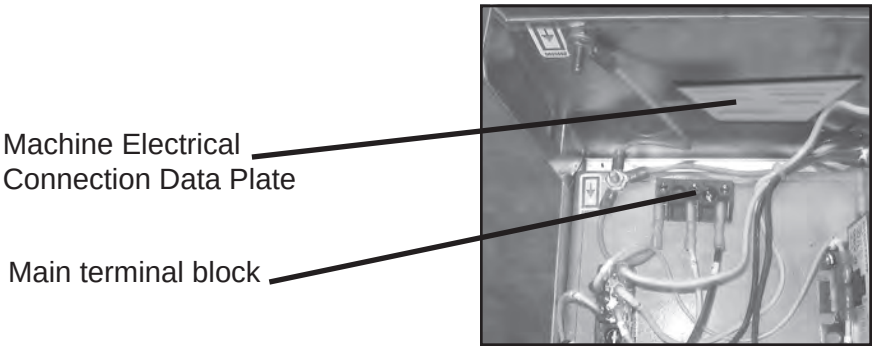
Warning:
The dishwasher must be electrically grounded according to all local codes and regulations governing the installation of electrical service.

Warning:
Disconnect the main electric supply and place a tag at the fuse or disconnect switch indicating that work is being performed on that circuit.

1. Locate the control cabinet keys on the rear of the control cabinet.
2. Remove 1 key to unlock the cabinet; do not remove the other key.
3. Unlock the control cabinet and remove the cover.
4. Locate the power cord on the left rear side of the control cabinet.
5. Locate the Machine Electrical Connection Data Plate mounted near the terminal block.

The MACHINE ELECTRICAL CONNECTION DATA PLATE is the certified authority for the dishwasher power requirements. DO NOT use electrical data from any other source unless an authorized factory representative instructs you to use other data.

6. Check the power cord terminal connections at the main terminal board.



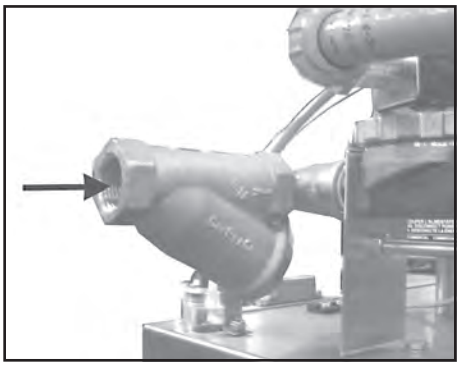
Installation Guide

☑ Water Connection (1000 Series LT)

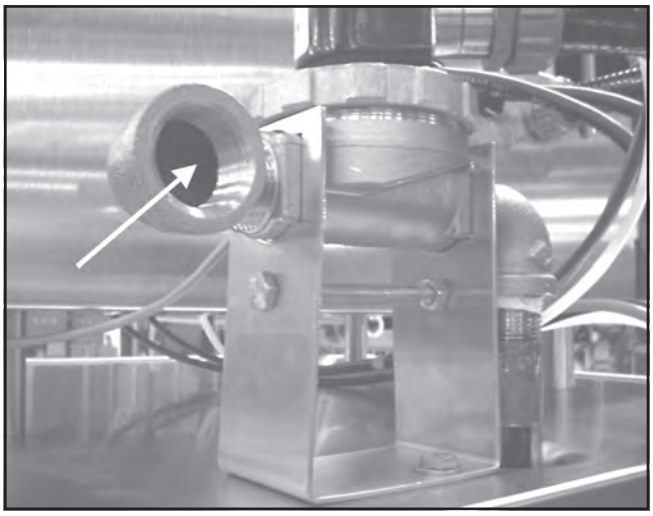
Water supply: 3/4" NPT hot water supply (140°F/60°C minimum)
20 ± 5 psi/138 ± 35kPa flow pressure. Installation of 0-60 psi/0-414 kPa pressure gauge is recommended.

Note:
Plumbing installer must connect a 3/4" NPT hot water supply line to the dishwasher. A 3/4" pressure regulating valve (PRV) (not supplied) must be installed in the water supply line and adjusted to 20 ± 5 psi/138 ± 35 kPa flow pressure. Installation of a 0-60 psi/0-414 kPa pressure gauge is recommended.

Note:
Under NO circumstances, may the installing plumber connect a water supply line to the dishwasher that is less than 3/4" NPT in size.



(3/4" NPT line strainer not supplied)

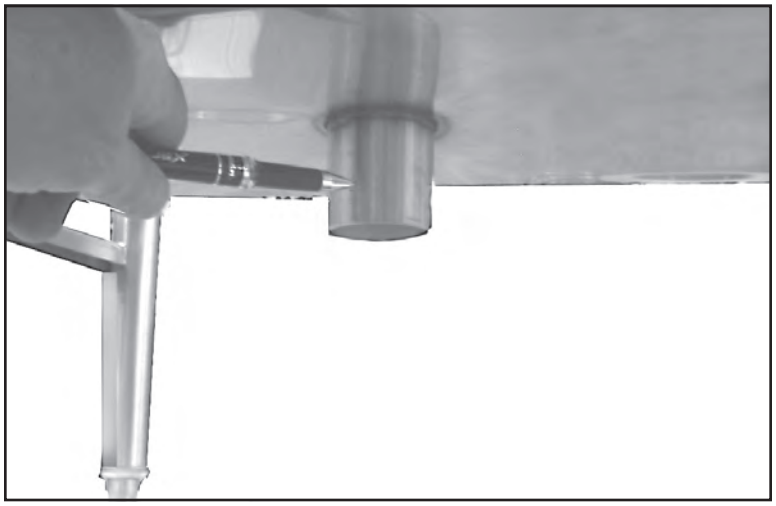


Installation Guide

☑ *Drain Connection (1000 Series LT)*

1. Locate the dishwasher drain connection underneath the machine frame.
2. Install a drain line conforming to local plumbing and health regulations.

Drain: 1-7/8" stainless steel, slip-fit hose connection
Max flow: 15 Us gal/min. (13.5 Imperial gal/min) 57liters/min.



☑ *Ventilation 1000 Series LT*

1. The factory has no requirements for vent hoods; but, local codes and regulations in your area supersede our suggestions. Consult your local building and health authorities for local requirements.
2. Dishroom ventilation must provide sufficient airflow to prevent excessive humidity in the work area. 200-400cfm/5.6- 11.3 k Liters/min - is sufficient.
3. The dishwasher must not be subjected to continual drafts or cold air.

Installation Guide

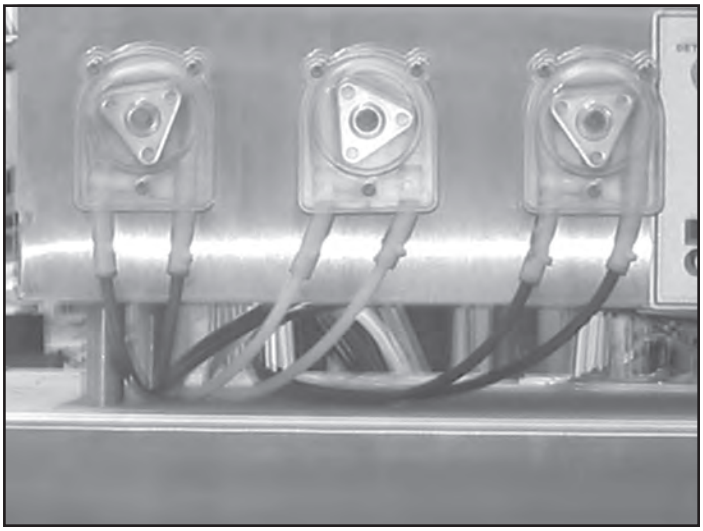
☑ *Chemical Dispensers (1000 Series LT)*

Note:
Manual dosing of detergent or rinse-aid is **NOT RECOMMENDED** for the 1000 Series LT dishwasher. Poor washing results may result if manual dosing is employed..

Note:
Cartridge detergent systems are **NOT RECOMMENDED** for the 1000 Series LT dishwasher. Poor washing results may result if installed on this model.

Note:
The 1000 Series LT chemical dispensers are standard equipment. There are 3 built-in dispensers located on the front of the 1000 Series LT top-mounted control cabinet.

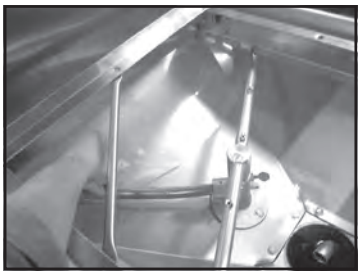
Consult a local commercial dishwasher chemical supplier for the set-up and operation of the dispensing system.

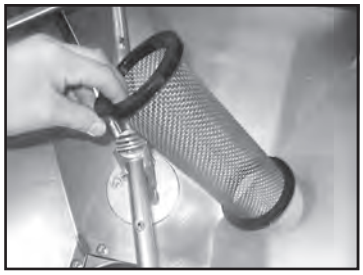


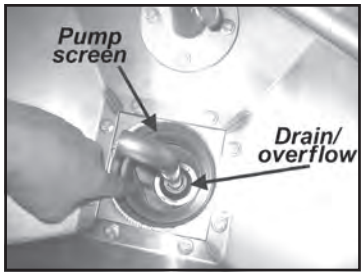
Installation Guide

☑ *Initial Start-Up (1000 Series LT)*

1. Check that the following utilities are connected to the dishwasher and ready for use:
   - ☑ Electrical service
   - ☑ Hot water supply
   - ☑ Drain
   - ☑ Ventilation *(if required by local regulations)*.
2. Check the chemical connections and chemical containers to ensure that enough chemical supplies are available.
3. Turn on the water supply to the dishwasher.
4. Turn on the main power switch at the service disconnect switch.
5. Open the dishwasher doors fully.
6. Check upper and lower spray arms are in place and spin freely.
7. Check that the drain-overflow and pump screen are in place.







8. Check that the lower scrap screen is clean and in place.

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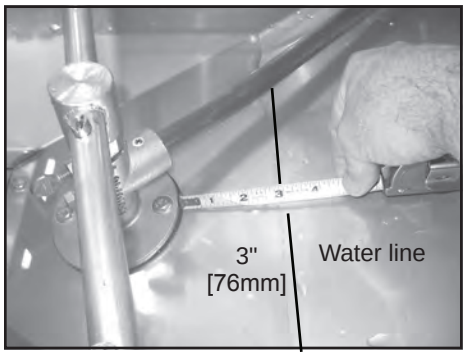
Installation Guide

☑ *Initial Start-Up (1000 Series LT)*

POWER UP THE DISHWASHER:

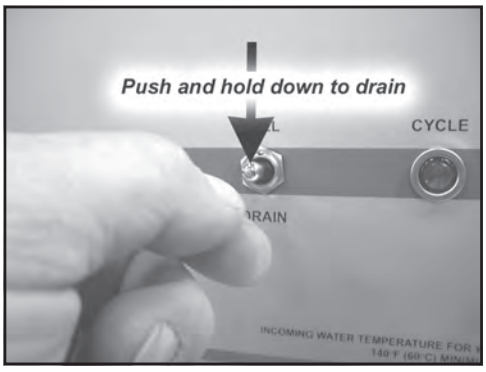
1. Flip the dishwasher power switch UP to turn on.
2. Turn on the main power switch at the service disconnect switch.
3. Release the fill switch.
4. Open the dishwasher door fully and check the water level inside the tank. The proper water level is just below the overflow tube and 3" [76 mm] from the lower manifold measuring up the tank toward the rear of the dishwasher.



5. Operate the dishwasher for 10 cycles checking the temperature gauges to ensure the machine is maintaining the proper temperatures.

140° F/60° C minimum wash temperature
140° F/60° C minimum final rinse temperature

6. To drain the dishwasher, leave the machine power switch in the ON position. Doors are fully closed.
7. Push and hold the “FILL/DRAIN” switch down in the “DRAIN” position for approximately 15-20 seconds.
8. The water in the wash tank will drain completely.
9. Open the doors and check that all water has drained for the machine.
10. The initial start-up is complete.

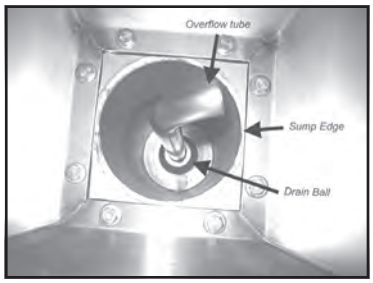


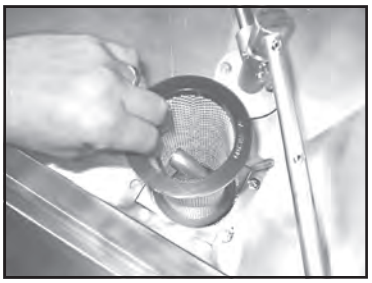
Operation

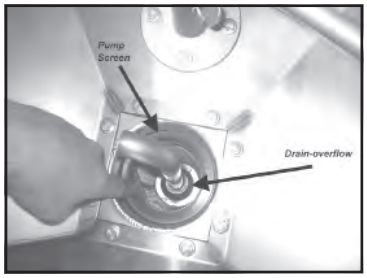
☑ How to Operate your Dishwasher (1000 Series LT)

1. Make sure there is adequate supply of liquid detergent and rinse-aid, and sanitizer. Check the chemical containers and refill if necessary.

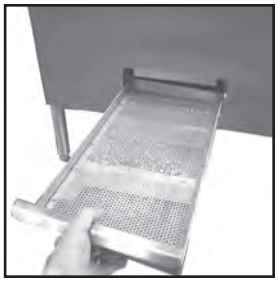
2. Ensure the overflow tube/drain ball are clean and in place, and the circular pump screen, upper and lower spray arms and lower external scrap screen are clean and in place.







3. Close door. Turn POWER switch to the “ON ” position. Lift “FILL/DRAIN” switch to the “FILL” position and hold for approximately 15-20 seconds, or until water flows from the wash tank into the lower scrap pan.



4. Check the wash temperature gauge. Minimum reading must be 120°F/49°C. Recommended optimum temperature should be140°F/60°C. Operate the dishwasher through 2 complete cycles to increase the wash temperature to 140°F/60°C optimum. Check the temperature gauge reading on the front of the dishwasher

5. Open doors completely and slide pre-scrapped rack of dishes into dishwasher. Check that control panel green light is out.

6. Close doors to automatically start the cycle. Total cycle time is 90-seconds.

7. The final rinse cycle begins after the dishwasher washes and then drains. The rinse-aid and sanitizer are automatically added to the wash tank.

8. Use a sodium hypochlorite (Chlorine) based sanitizer at a minimum concentration of 50PPM in the final rinse. Routinely check the 50PPM chlorine level with test strips (supplied by chemical supplier).

9. Cycle ends when green cycle light goes out.

Note:

Wash temperature must be a minimum of 140°F/60°C for optimum wash performance.

Final rinse temperature must be a minimum 140°F/60°C for optimum sanitizing.

10. Open door. Remove the clean rack of dishes and insert another rack of soiled dishes.

11. Repeat steps 5-12 until all wares are clean.

Cleaning and Maintenance

☑ How to Clean your Dishwasher (1000 Series LT)

1. Leave the machine power switch in the ON position. Doors are fully closed.
2. Push and hold the “FILL/DRAIN” switch down in the “DRAIN” position for approximately 15-20 seconds. The water in the wash tank will drain completely.
3. Raise doors fully. Use caution, as metal surfaces may be hot. Allow interior to cool.
4. Rinse the interior of the dishwasher with fresh water. Wipe the interior with a soft cloth.

Do not scrub the interior with scouring pads, nor harsh detergents.

5. Close the doors fully; the dishwasher will begin a normal cycle. At the end of the cycle, Push & hold the Fill/drain switch in the DRAIN position until the wash tank is empty
6. Flip the dishwasher power switch to the OFF position
7. Remove and clean circular wash tank screen.
8. Check the overflow /drain assembly. Ensure the drain seat is clean.
9. Loosen the upper and lower thumbscrews (Do not remove the screws)
   Remove upper and lower sprayarms. Flush the sprayarm nozzles and check the bearing o-rings.
10. Replace sprayarms (they are interchangeable) and tighten thumbscrews.
11. Replace circular tank screen.
12. Remove lower scrap screen. Empty debris and flush both sides with fresh water.
13. Check the drain pan and flush with clean water.
14. Wipe the exterior of the dishwasher with a soft cloth.

Do not hose the exterior with water nor scrub with scouring pads or harsh detergents.

15. Replace lower scrap screen, circular screen, and leave doors open for overnight drying.
16. Check the chemical supplies to ensure there are adequate supplies for the next shift.

Cleaning and Maintenance

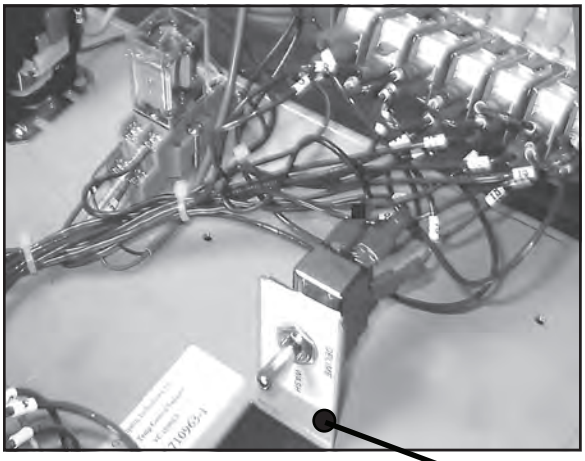
☑ *How to Clean your Dishwasher (1000 Series LT)*

Warning:
Electrocution or chemical burns may occur if untrained persons attempt the deliming procedure. Only qualified service personnel should delime the dishwasher.

1. The 1000 Series LT is equipped with a delime switch on the left front side inside the top-mounted control cabinet.

2. After all necessary preparations have been performed in accordance with the chemical supplier's instructions, the chemical supplier or qualified service agent may operate the delime switch to lock the dishwasher in a continuous wash mode.

Refer to the photographs below:



3. Flip the delime switch down to the wash position when the deliming is complete.

Cleaning and Maintenance

☑ *How to Maintain your Dishwasher (1000 Series LT)*

Thoroughly cleaning your dishwasher every day is very best maintenance that you can do!!

Daily Maintenance

1. Keep your dishwasher and the surrounding area spotlessly clean.
2. Immediately report loose, broken or missing parts to your supervisor.
3. Check drains for flow restrictions.
4. Check the dishwasher for leaks.
5. Operate the dishwasher as explained in this manual.

Monthly Maintenance

1. Inspect pump hoses, door linkage, springs, and exterior of dishwasher for wear.
2. Inspect the wash arm bearings and O-rings.
3. Check the condition of scrap screens,. and dishracks for bent or broken pieces.
4. Check the toggle switches and indicator lights for damage.
5. Check the wash pump motor for loud bearings and leaking pump seal.
6. Create a simple Maintenance Tracking System as a guide for service

Annual Maintenance

Call your authorized service agent or local service representative and schedule a complete inspection of your dishwasher by a trained professional.

A Maintenance Tip -

Schedule your annual maintenance when you can give the service agent unrestricted access to the dishwasher for at least 2 to 2-1/2 hours.

Troubleshooting

In order to find the cause of a breakdown or abnormal operating condition in your dishwasher please ensure that:

1. All switches are ON
2. Drain overflow tube is in place and seated
3. Wash pipe and rinse nozzles are clean
4. Spray arms are in their proper positions
5. Round screen is properly positioned
6. Detergent, sanitizer and rinse additive dispensers are adequately filled
8. Doors are fully closed.

That wasn't it? Check for a solution below:

Condition	Cause	Solution
Cycle will not start	Door not closed	Make sure doors are fully closed
	Door safety switch faulty	Contact your service agency
	Main switch off	Check disconnect
Low or no water	Main water supply is turned off	Turn on house water supply
	Drain/overflow tube is not in place and seated	Clean, replace and seat drain tube as needed.
	Faulty fill valve	Contact your chemcial supplier.
Continuous water filling	Fill valve will not close	Clean or replace
Motor not running	Defective contactor	Contact your servicer
	Defective motor	Contact your servicer
Wash tank water temperature is low when in use	Incoming water temperature at machine too low	Raise temperature to 140°F/60°C
	Defective thermometer	Check or replace
	Defective solenoid valve	Check or replace
Arms not rotating	Rinse nozzles not clean	Clean
	Bearings worn	Replace
	Water supply pressure low	Check incoming water pressure
Insufficient pumped spray pressure	Clogged intake screen	Clean
	Clogged spray pipe	Clean
	Low water level in tank	Check drain and overflow tube, timer may need adjustment, contact servicer
	Defective pump seal	Contact service agent
Insufficient rinse or no rinse	Faulty pressure regulating valve	Clean or replace
	Improper setting on pressure regulating valve	Set static pressure to 35 psi
	Clogged rinse nozzle and/or pipe	Clean with paper clip/delime
	Improper water line size	Have installer change to proper size 3/4" NPT

Troubleshooting *(continued)*

Condition	Cause	Solution
Low final rinse temperature	Low incoming water	Check valve to be sure it is clean and operating.
	Defective thermometer	Check for proper setting or replace
Machine leaking	Leaking at chemical hose	Replace hoses
	Pump seal leaking	Replace seal
	Leaking at pump hose	Contact your chemical supplier
	Leaking at doors	Check to make sure that doors are fully closed
Water splashing out door	Nozzles/End caps missing	Replace caps
	Wash nozzles blocked	Clean
	Arms not rotating	Replace bearings
	Door handle twisted	Adjust or replace handle
Poor washing results	Detergent dispenser not operating properly	Contact detergent supplier
	Insufficient detergents	Contact detergent supplier
	Food Soil concentration too high in wash tank	Prescrap dishes throughly
	Wash water temperature too low	See condition “Wash Tank Water Temperature” above
	Wash arm clogged	Clean
	Improperly scraped dishes	Check scraping procedures
	Ware improperly placed in rack	Use proper racks. Do not overload racks
	Improperly cleaned equipment	Unclog wash sprays and rinse nozzles to maintain proper pressure and flow conditions. Overflows must be open. Keep wash water as clean as possible.

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Service Replacement Parts

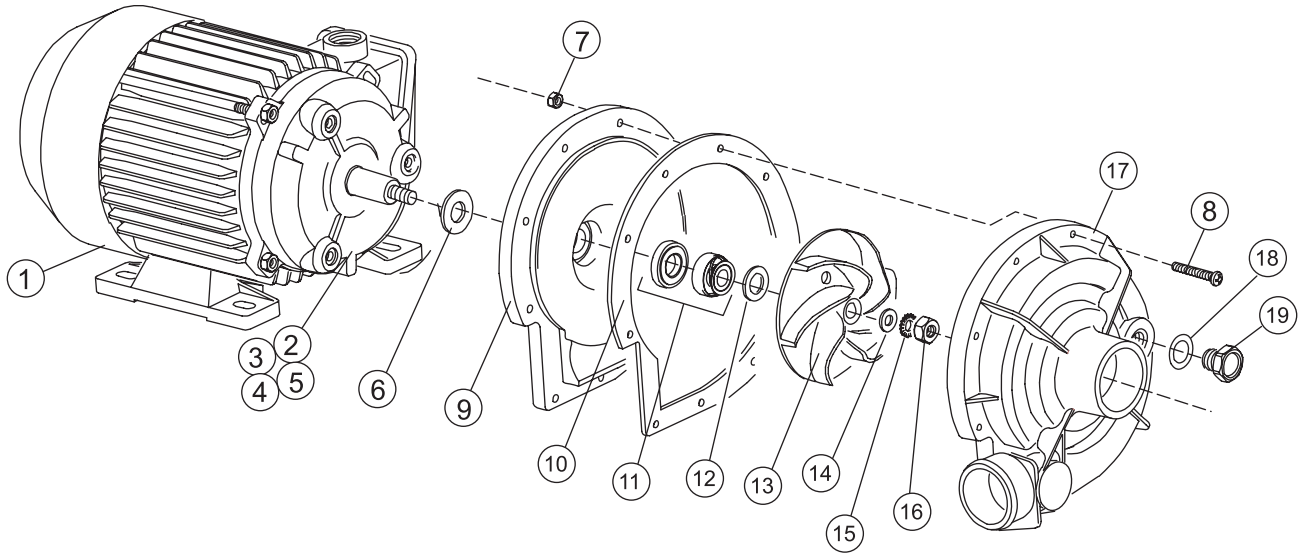
Models: 1000 Series HT • 1000 Series LT

Illustrations

Item No.	Part No.	Description	Qty.	Unit
1	----------	motor pump	1	ea
2	0512015	complete motor/pump assy , 115VAC/60/1	1	ea
3	0512015-2	complete motor/pump assy , 220/60/1	1	ea
4	0512015-3	complete motor/pump assy , 220/60/3	1	ea
5	0512015-4	complete motor/pump assy , 220/50/3	1	ea
6	114134	water slinger	1	ea
7	114135	nut	10	ea
8	114136	screw	10	ea
9	114137	pump support	1	ea
10	114138	gasket	1	ea
11	114139	pump seal	1	ea
12	114140	washer	1	ea
13	114141	impeller, 60 Hz voltage	1	ea
13b	114324	impeller, 50 Hz voltage	1	ea
14	114142	washer	1	ea
15	114143	lock washer	1	ea
16	114144	impeller nut	1	ea
17	114145	pump housing	1	ea
18	114146	o-ring	1	ea
19	114147	cap nut	1	ea
20	0310943	pump motor support	1	ea
21	107340	hose clamp	4	ea
22	0510942	discharge hose	1	ea
23	0510941	suction hose	1	ea

CAPACITORS

114322	Capacitor. 50uf / 240VAC
114323	Capacitor. 15uf / 115VAC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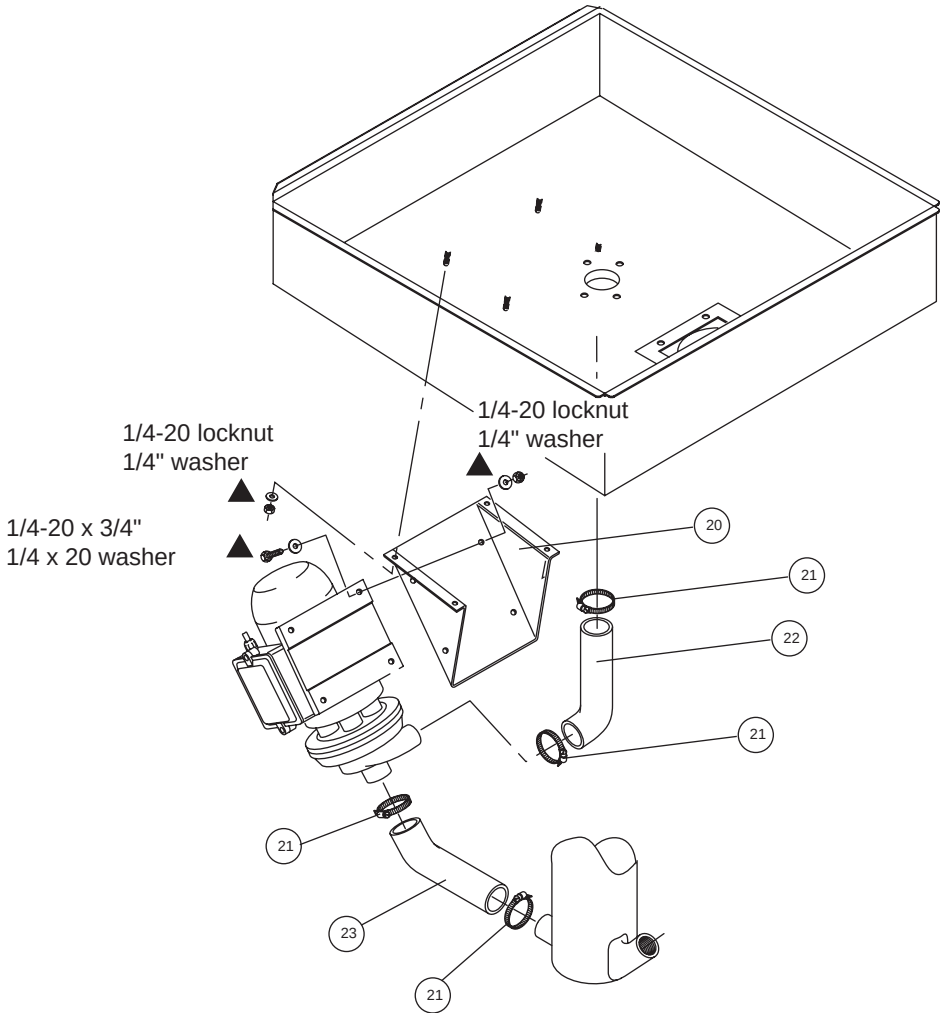
1/4-20 locknut
1/4" washer
1/4-20 locknut
1/4" washer
1/4-20 x 3/4"
1/4 x 20 washer
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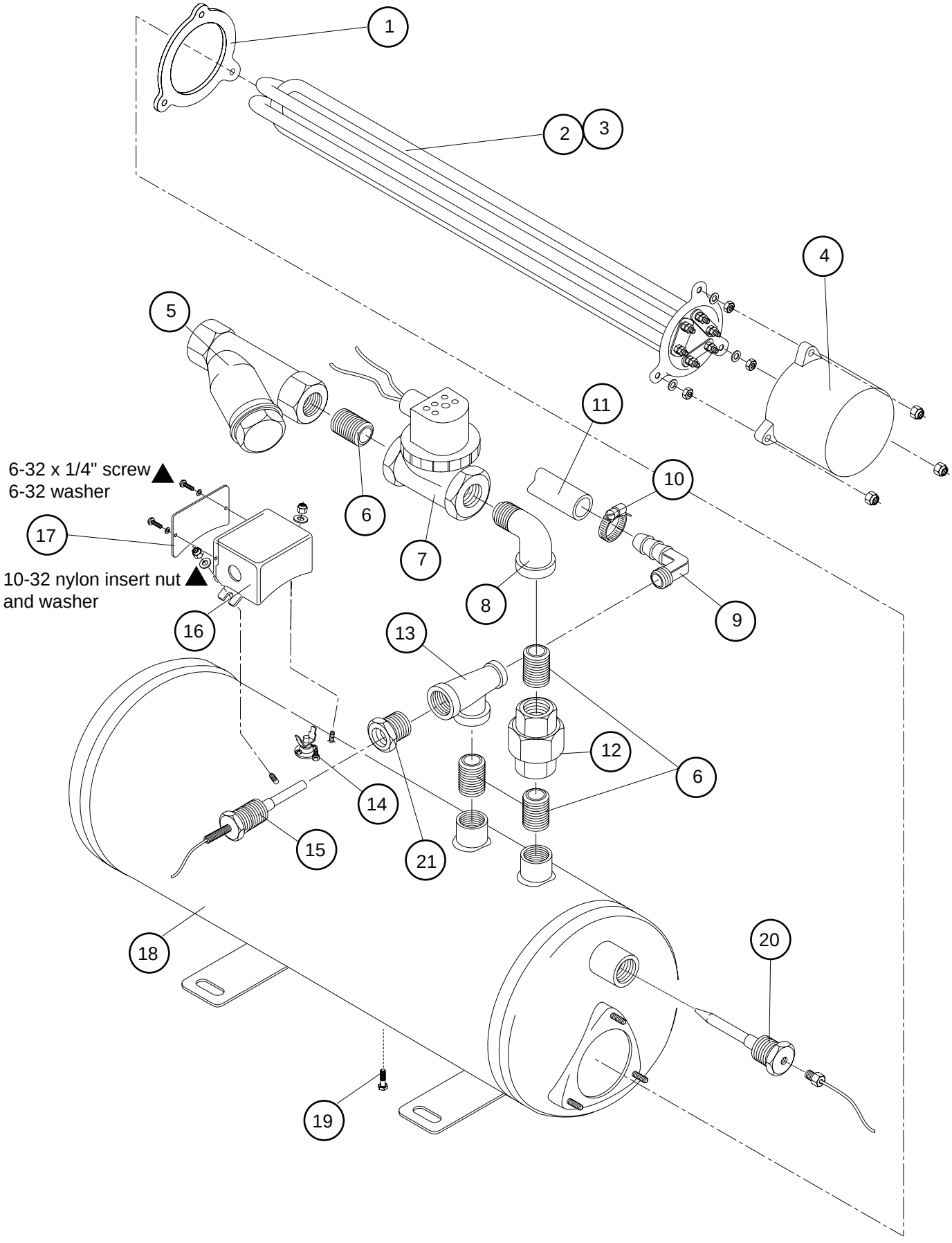
Item No.	Part No.	Description	Qty.	Unit
1	109985	booster element o-ring	1	ea
2	111233	booster heater, 220V/60/1 & 3 9kW, 40°F rise	1	ea
3	112059	booster heater, 220V/60/1 & 3 12kW, 70°F rise	1	ea
4	107908	booster element cover	1	ea
5	110768	3/4" brass line strainer	1	ea
6	100184	3/4" brass close nipple	4	ea
7	111437	3/4" solenoid valve 115VAC	1	ea
Nshown	108516	3/4" water solenoid valve coil	1	ea
Nshown	109903	3/4" water solenoid rebuild kit	1	ea
8	102444	3/4" brass street elbow	1	ea
9	113178	3/4" barb fitting	1	ea
10	113269	hose clamp	1	ea
11	114121	3/4" ID red hose	7	ft.
12	100571	3/4" brass union	1	ea
13	101525	Tee reducing 3/4" x 1/2" x 3/4"	1	ea
14	110562	fixed high limit thermostat	1	ea
15	114236	final rinse thermometer 8 ft. capilliary	1	ea
16	110929	high limit box	1	ea
17	100930	high limit box panel	1	ea
18	0509042	booster cannister	1	ea
19	101210	1/8" brass plug	1	ea
20	109069	temperature control thermostat	1	ea
21	0512027	bushing	1	ea
Nshown	107922	control thermostat metal box and base plate	1	ea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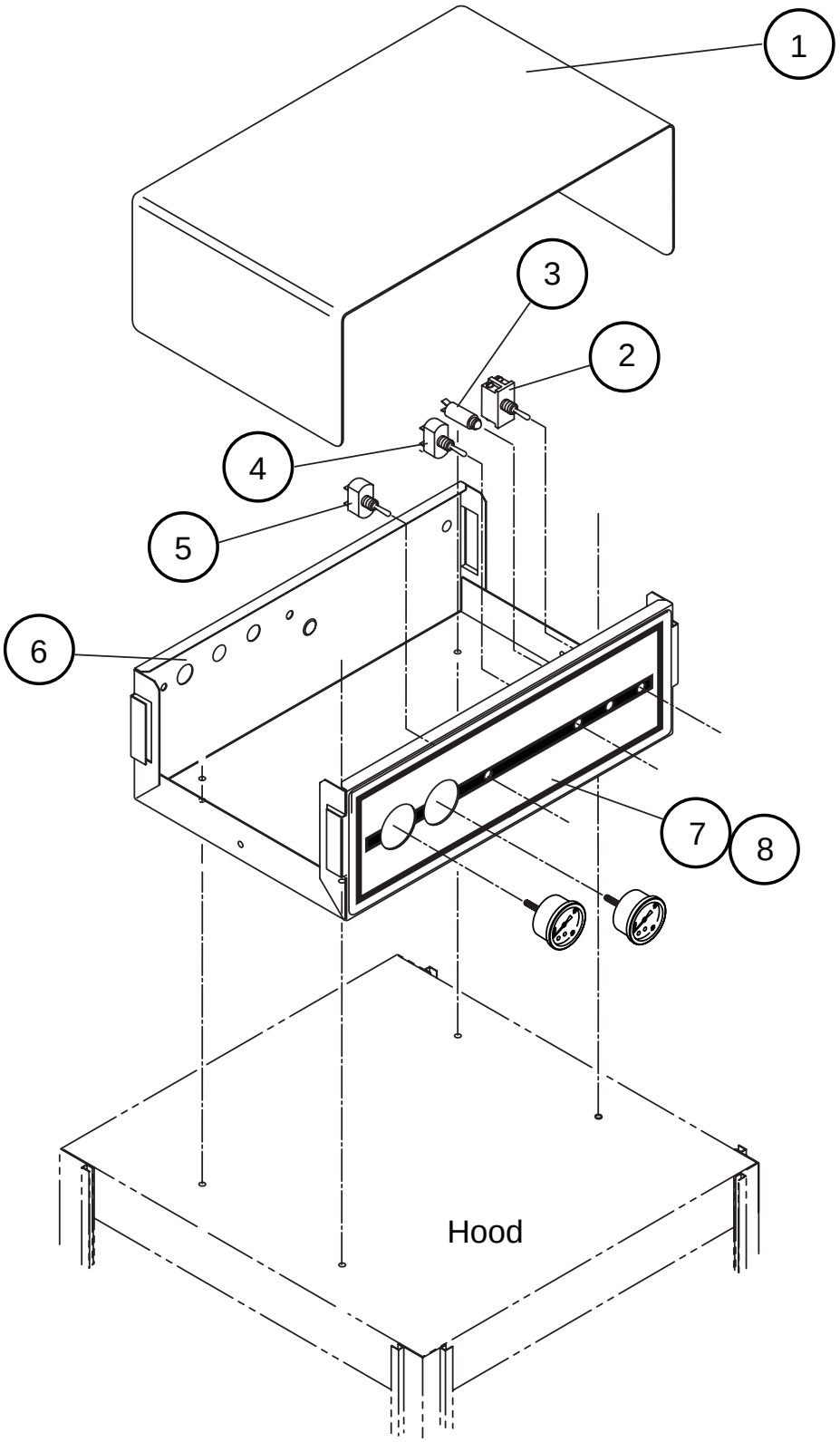
6-32 x 1/4" screw ▲
6-32 washer
10-32 nylon insert nut ▲
and washer

Item No.	Part No.	Description	Qty.	Unit
1	331082	control cabinet cover	1	ea
2	107351	power switch	1	ea
3	0508551	green cycle light	1	ea
4	0510399	fill and drain switch	1	ea
5	0510399	detergent /rinse-aid prime switch (optional)	1	ea
6	331078	control cabinet wrap	1	ea
7	0510833-1	std. cntrl. panel decal w/o prime switch/ prior to S/N D5937	1	ea
8	0510833-11	opt. cntrl. panel decal w/ prime switch/ prior to S/N D5937	1	ea
N/S	0510824-1	control cabinet lock w/2 keys prior to S/N D07106631	1	ea

DECALS

7	Champion		HT	114245
8	Champion		HT Prime	114242
7	Moyer		HT	114241
8	Moyer		HT Prime	114244
7	Valu-Clean		HT	114240
8	Valu-Clean		HT Prime	114243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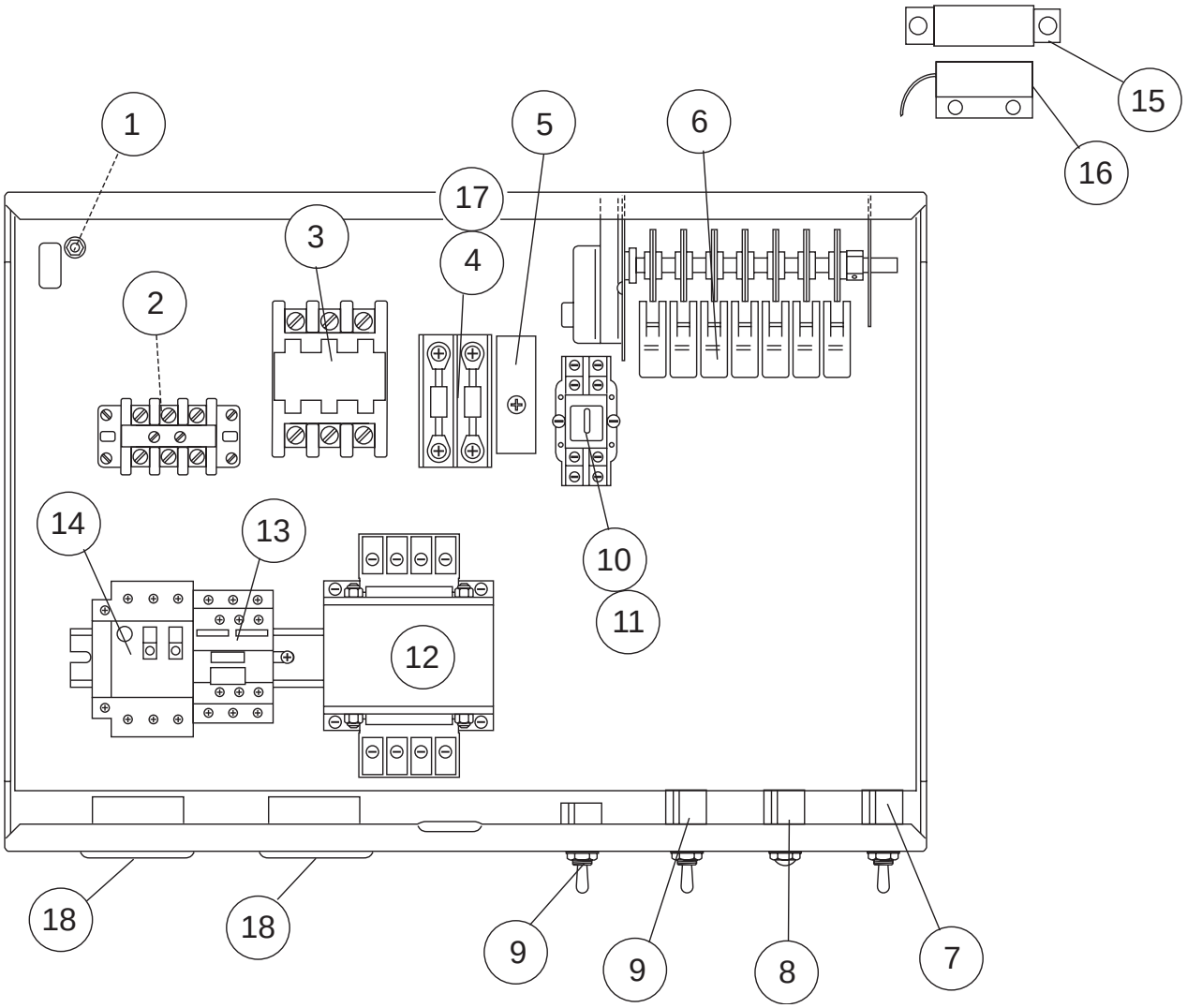
Hood

Item No.	Part No.	Description	Qty.	Unit
1	0501403	brass screw	1	ea
----	0501533	brass nut	1	ea
----	0501472	brass 1/8” flat washer	1	ea
----	0501493	brass lock washer	1	ea
2	0504951	terminal block	1	ea
3	105514	booster heat contactor	1	ea
4	106402	fuse block	1	ea
5	0503749	terminal board	1	ea
6	900892	90-sec. timer conversion kit (Prior to S/N D6336)	1	ea
6	417081	90-sec. timer assy SST (For S/N D6336 and above)	1	ea
7	107351	power switch	1	ea
8	0508551	green cycle light	1	ea
9	0510399	fill/drain switch	1	ea
----	0510399	optional detergent/rinse-aid prime switch	1	ea
10	111036	relay socket	1	ea
11	111068	120VAC relay	1	ea
12	109064	step down transformer	1	ea
13	108122	12 Amp motor contactor	1	ea
14	110806	motor overload	1	ea
14a	110806	motor overload	1	ea
15	113937	door safety switch magnet after S/N 5697	1	ea
15a	111026	door safety switch magnet before S/N 5697	1	ea
16	113719	door safety reed switch after S/N 5697	1	ea
16a	111090	door safety reed switch before S/N 5697	1	ea
17	112484	ADTR-1.5 Amp fuse	2	ea
18	114236	thermometer, 8 ft. capillary	2	ea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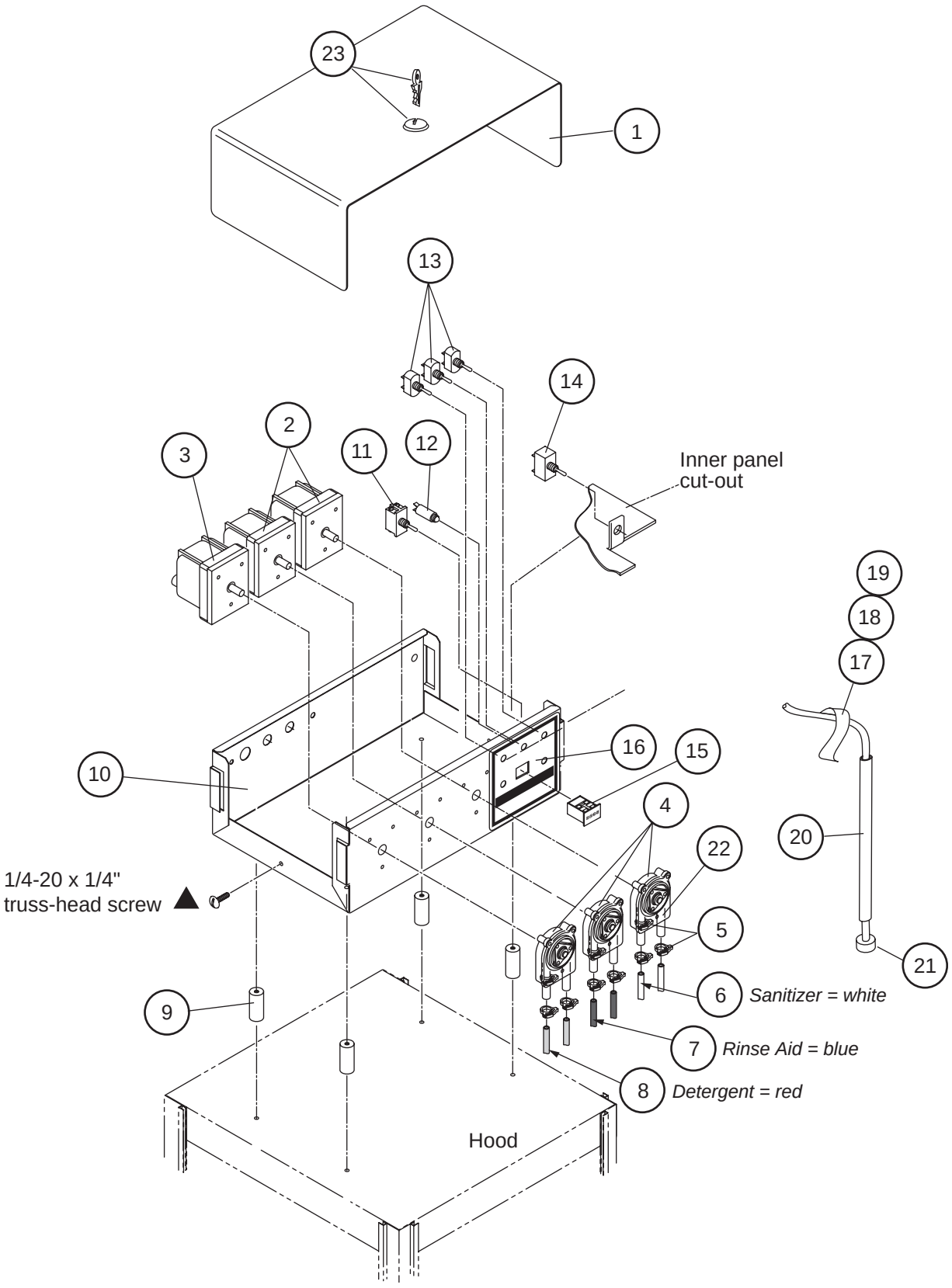
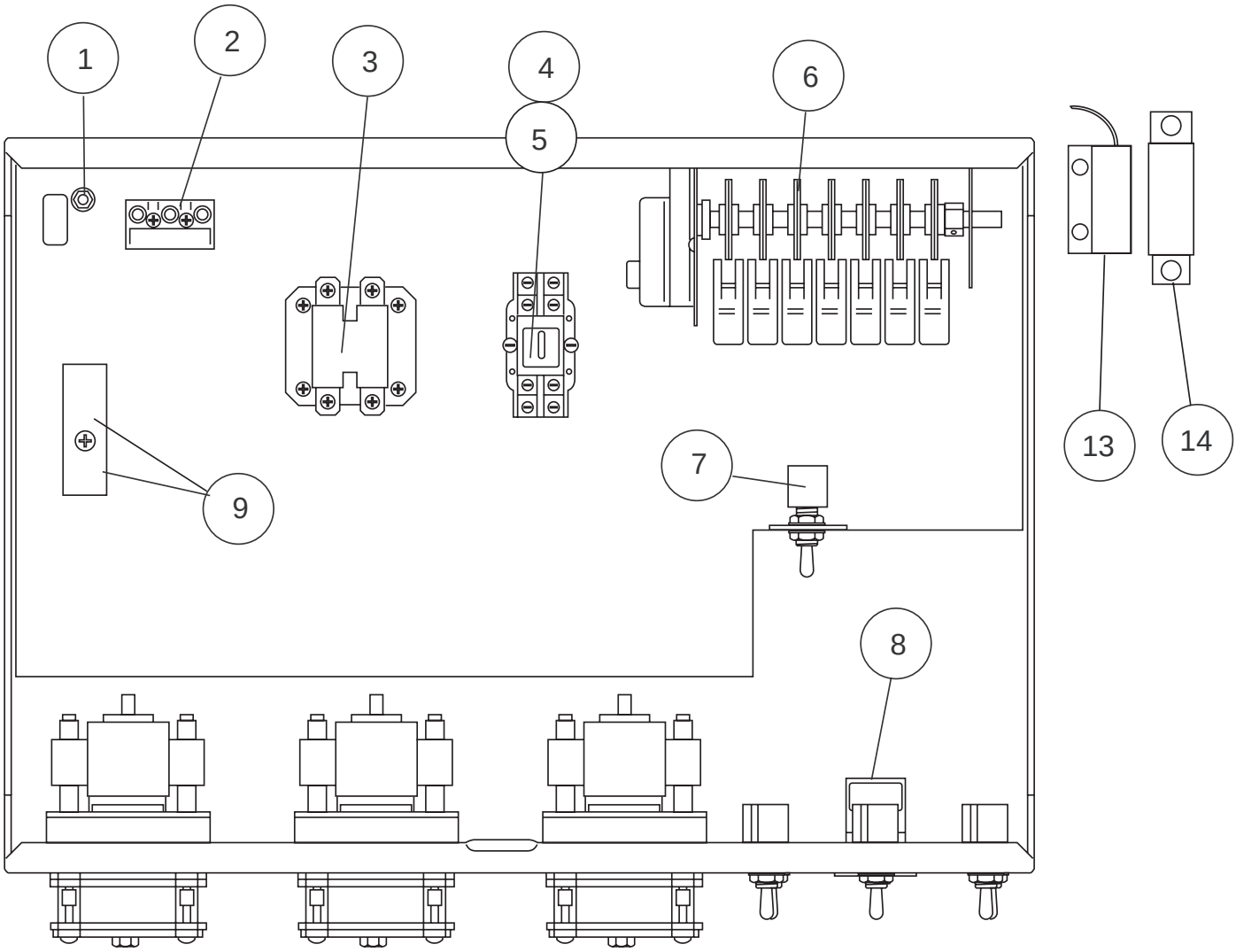
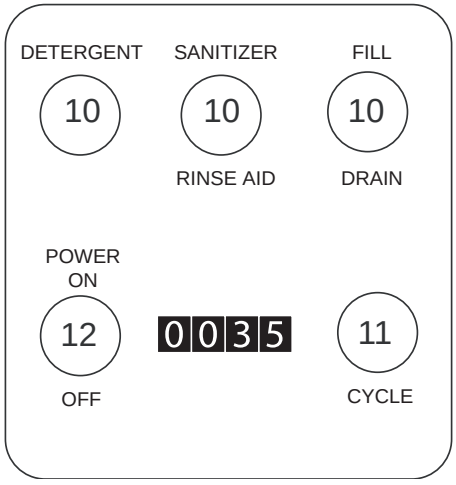
Item No.	Part No.	Description	Qty.	Unit
1	331081	control cabinet cover	1	ea
2	0510872-1	sanitizer & rinse aid pump mtr. 115VAC, 14RPM	2	ea
3	0510870-1	detergent pump motor, 115VAC, 108 RPM	1	ea
4	114203	pump head assy.	3	ea
5	108412	tube clamp SMP-2	14	ea
6	107928	clear sanitizer feed tubing	20	feet
7	107930	blue rinse-aid feed tubing	16	feet
8	107929	red detergent feed tubing	16	feet
9	0312062	control cabinet leg	4	ea
10	331077	control cabinet bottom	1	ea
11	107351	power switch	1	ea
12	0508551	green cycle light	1	ea
13	0510399	momentary switch	3	ea
14	0501373-1	delime switch	1	ea
15	114192	cycle counter	1	ea
16		decal VC:114237 / MD: 114238 / Champion: 114239	1	ea
17	0503695	detergent label	1	ea
18	0505483	rinse-aid label	1	ea
19	0503694	sanitizer label	1	ea
20	0306363	stiffener tube	3	ea
21	0501869	strainer	3	ea
22	114202	squeeze tube	3	ea
23	0510824-1	lock w/ 2 keys	1	ea


23
1
13
14
2
3
11
12
Inner panel
cut-out
19
18
17
16
15
10
4
22
20
1/4-20 x 1/4"
truss-head screw ▲
5
21
6 Sanitizer = white
9
7 Rinse Aid = blue
8 Detergent = red
Hood

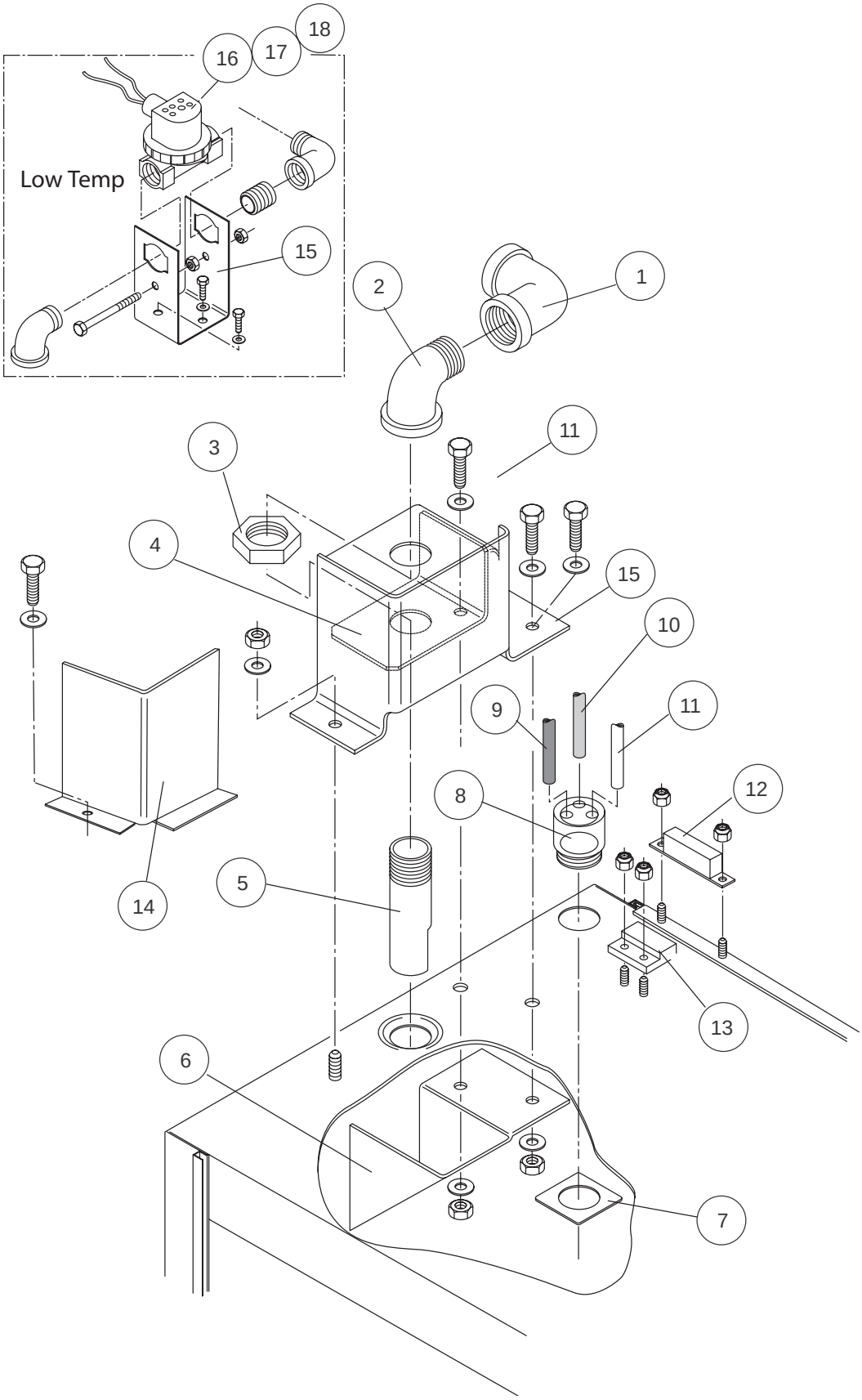
Item No.	Part No.	Description	Qty.	Unit
1	0501403	brass screw	1	ea
----	0501533	brass nut	1	ea
----	0501472	brass 1/8” flat washer	1	ea
----	0501493	brass lock washer	1	ea
2	0510635	terminal block	1	ea
3	107369	pump motor contactor 25 FLA	1	ea
4	111036	relay socket	1	ea
5	111068	120VAC relay	1	ea
6	900892	90-sec. timer conversion kit (Prior to S/N D6336)	1	ea
6	417081	90-sec. timer assy SST (For S/N D6336 and above)	1	ea
7	0501373-1	delime switch	1	ea
8	114192	cycle counter	1	ea
9	0503749	terminal board #27	1	ea
10	0501399	momentary toggle switch	3	ea
11	0508551	green cycle light	1	ea
12	107351	power switch	1	ea
13	113719	door safety reed switch (starting w/ SN 05697)	1	ea
14	113937	door safety switch magnet	1	ea



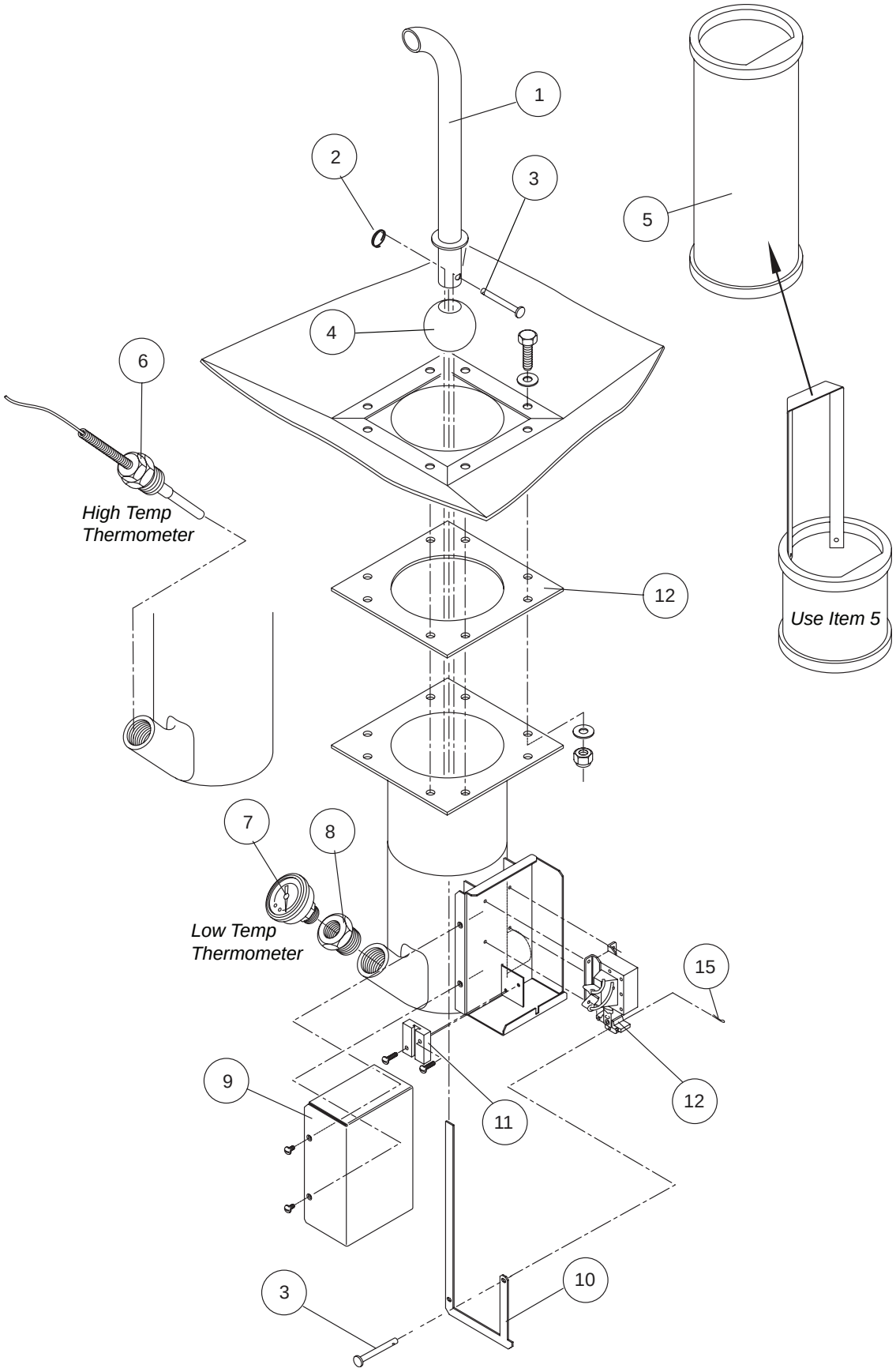
See page 52-53 for chemical dispenser pumps



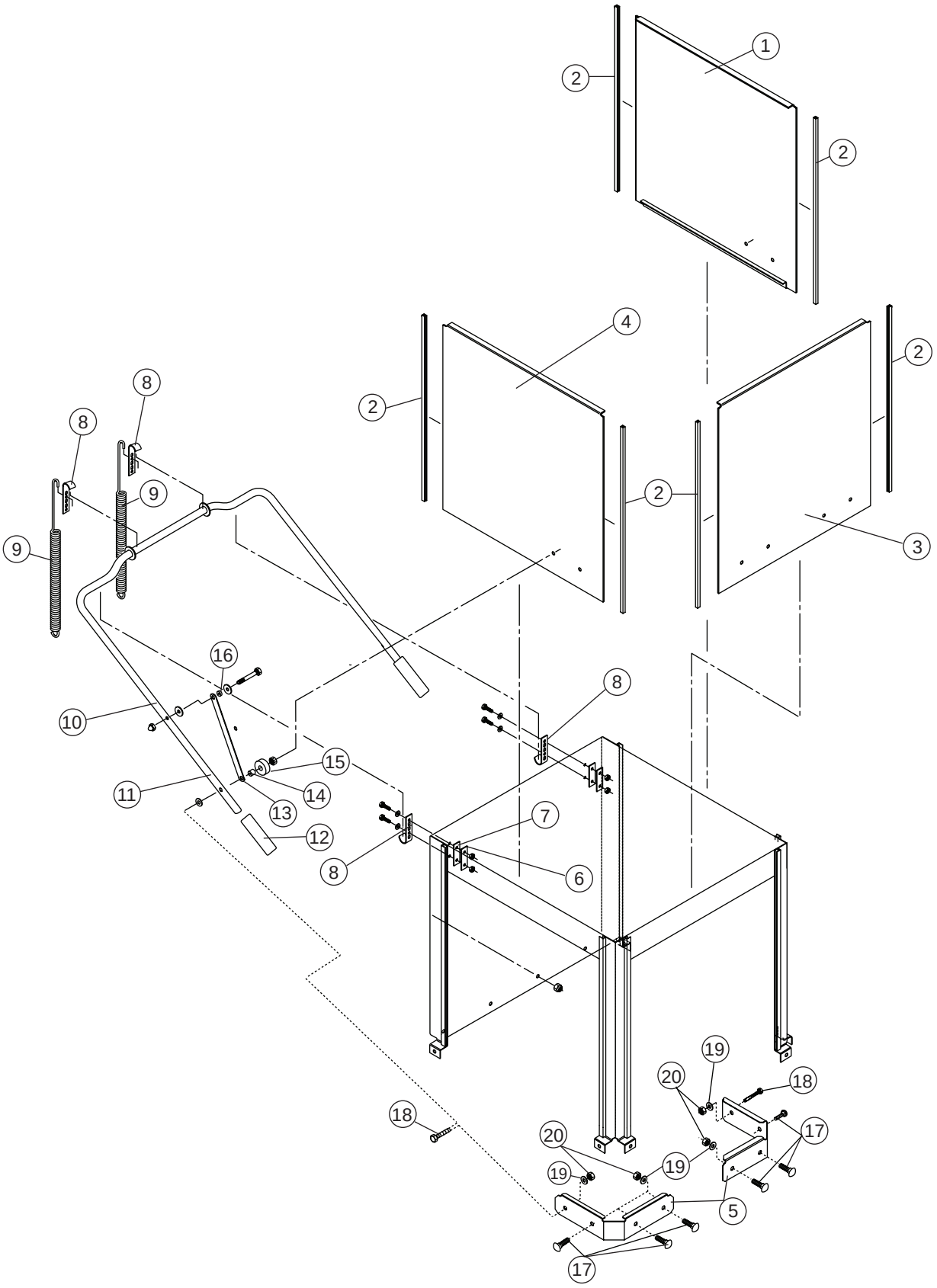
Item No.	Part No.	Description	Qty.	Unit
1	102442	90 degree x 3/4" elbow	1	ea
2	102444	90 degree x 3/4" street elbow	1	ea
3	100156	3/4" locknut	1	ea
4	0310422-2	water inlet bracket	1	ea
5	0512021	air gap fitting	1	ea
6	0312014	water diverter	1	ea
7	0303590	sight-glass retaining plate	1	ea
8	0510987	sight-glass	1	ea
9	107930	blue rinse-aid feed tube	16	feet
10	107929	red detergent feed tubing	16	feet
11	107928	clear sanitizer feed tubing (1000 Series LT only)	20	feet
12	113937	door safety magnet	1	ea
13	113719	door safety switch	1	ea
14	0312046-2	splash guard (1000 Series HT only)	1	ea
15	0712046	valve mount bracket	1	ea
16	111437	3/4" solenoid valve (1000 Series LT top mounted)	1	ea
17	108516	3/4" solenoid coil 115VAC	1	ea
18	109903	3/4" solenoid valve rebuild kit	1	ea


Low Temp
18
16
17
15
2
1
11
3
4
15
10
9
11
12
8
5
14
13
6
7

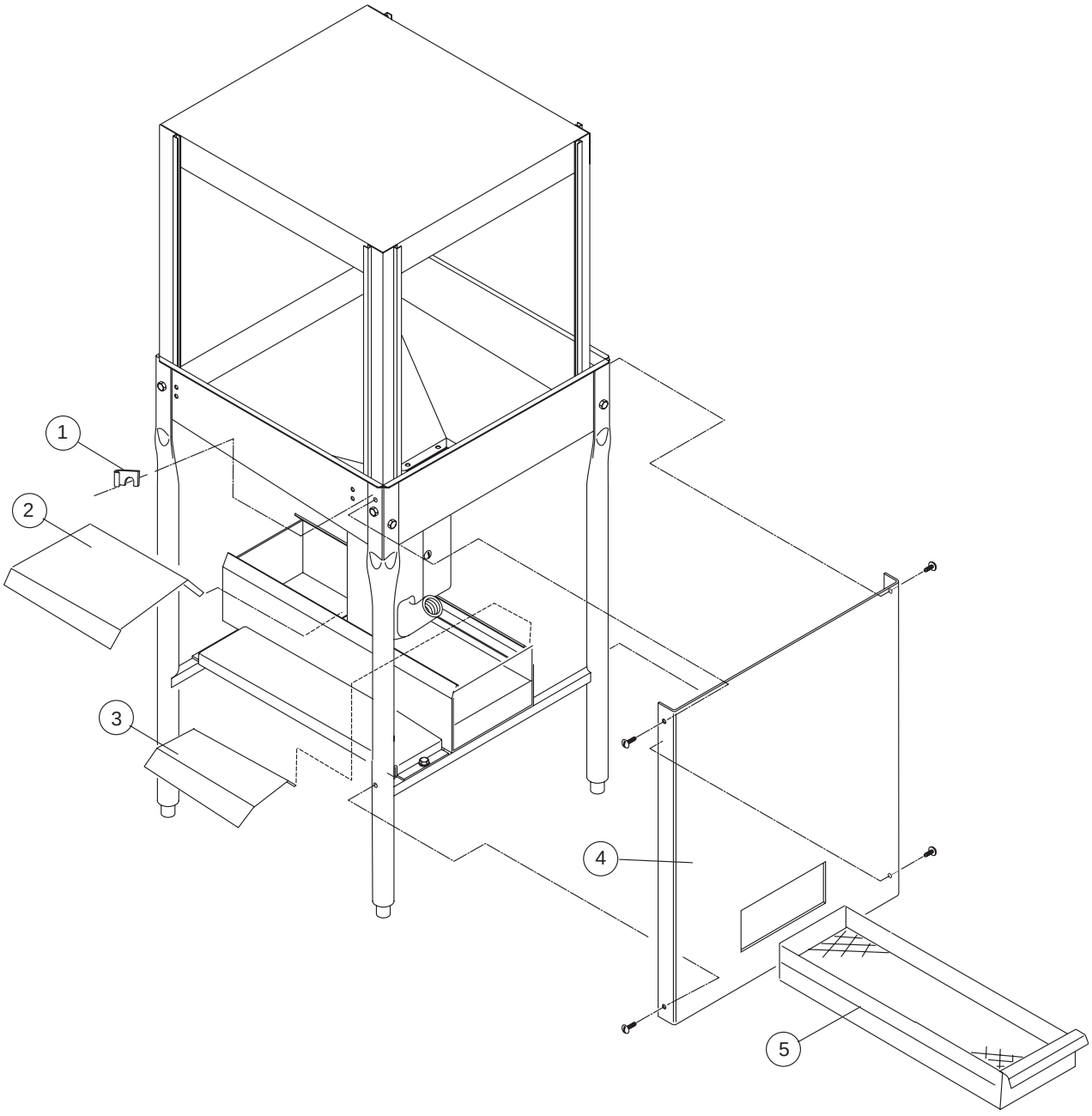
Item No.	Part No.	Description	Qty.	Unit
1	0512012	drain overflow tube	1	ea
2	113489	retaining ring	2	ea
3	202009	pin	2	ea
4	0510497	drain ball	1	ea
5	0512049	sump screen	1	ea
6	114236	thermometer w/ 8 ft. capillary (1000 Series HT)	1	ea
7	0510845-1	2" stem thermometer (1000 Series LT)	1	ea
8	0510846-1	reducing bushing	1	ea
9	0312017	drain solenoid cover	1	ea
10	0310771-3	drain lift rod	1	ea
11	0510773-1	lift rod guide	1	ea
12	0510400-1	drain solenoid	1	ea
13	0710739-2	drain sump	1	ea
14	0510202-3	sump gasket	1	ea
15	106551	cotter pin	1	ea


1
2
3
4
5
6
High Temp
Thermometer
12
Use Item 5
7
8
Low Temp
Thermometer
15
9
11
12
3
10

Item No.	Part No.	Description	Qty.	Unit
1	0712060-2	right-hand door	1	ea
2	0510844-1	door guide	6	ea
3	0712060-1	front door	1	ea
4	0712060-3	left-hand door	1	ea
5	0312061	door lift bracket	4	ea
6	0310792-1	pivot plate	2	ea
7	0510791-1	pivot plate gasket	2	ea
8	0310781-1	door pivot hook	4	ea
9	0510459	door spring	2	ea
10	0510779	door handle	1	ea
11	0501421	door handle mounting bolt	2	ea
12	107962	handle grip	2	ea
13	0301789-1	door lift bar	2	ea
14	0510788-1	pivot bushing	4	ea
15	0510787-1	white spacer	2	ea
16	0310788-1	door handle pivot	2	ea
17	114154	carriage bolt, 1/4-20 x 1/2"	6	ea
18	0501421	hex head bolt, 1/4-20 x 1-3/8"	2	ea
19	106026	flat washer, 1/4-20	8	ea
20	100141	top-lock hex head nut, 1/4-20	8	ea

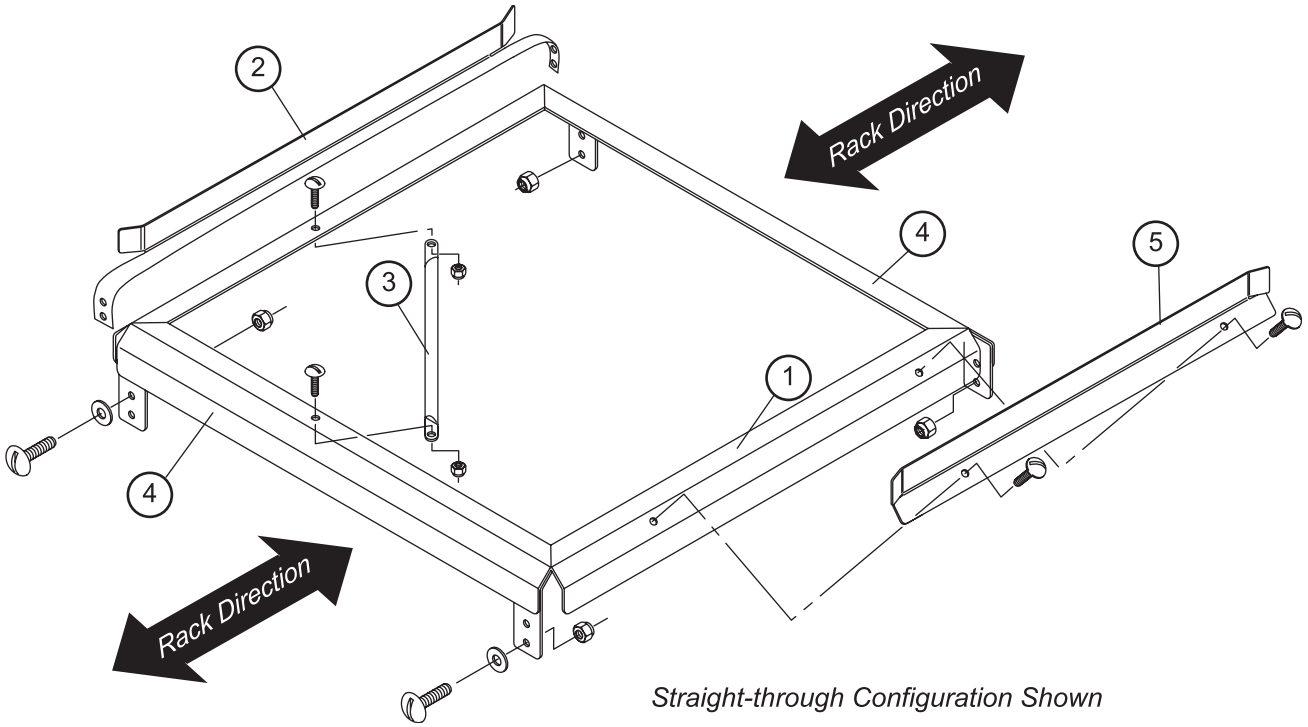

1
2
2
4
2
2
3
2
8
8
9
9
16
10
15
11
14
13
12
8
7
6
8
19
20
18
17
18
20
19
19
5
17

Item No.	Part No.	Description	Qty.	Unit
1	0312011	front panel clip	2	ea
2	0312029-1	rear drain pan cover	1	ea
3	0312029	front drain pan cover	1	ea
4	331083	front panel (1000 Series HT only)	1	ea
5	0310979	scrap basket	1	ea

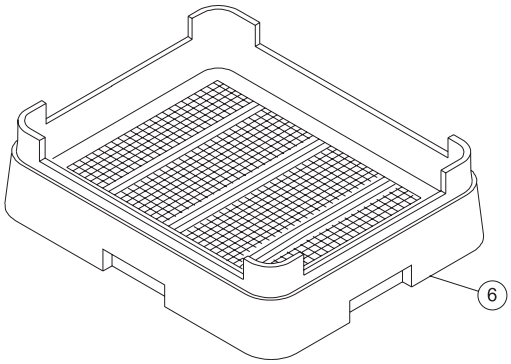

1
2
3
4
5

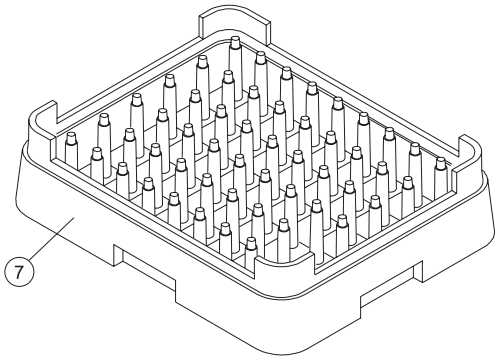
Item No.	Part No.	Description	Qty.	Unit
1	0309472-4	front track	1	ea
2	0309472-3	rear track	1	ea
3	0309470-3	cross tube	1	ea
4	0309472-6	cross track splash guard	2	ea
5	0309472-5	track rail	1	ea
6	101273	flat-bottom silverware rack	A/R	ea
7	101285	peg rack dishware	A/R	ea

A/R = as requested

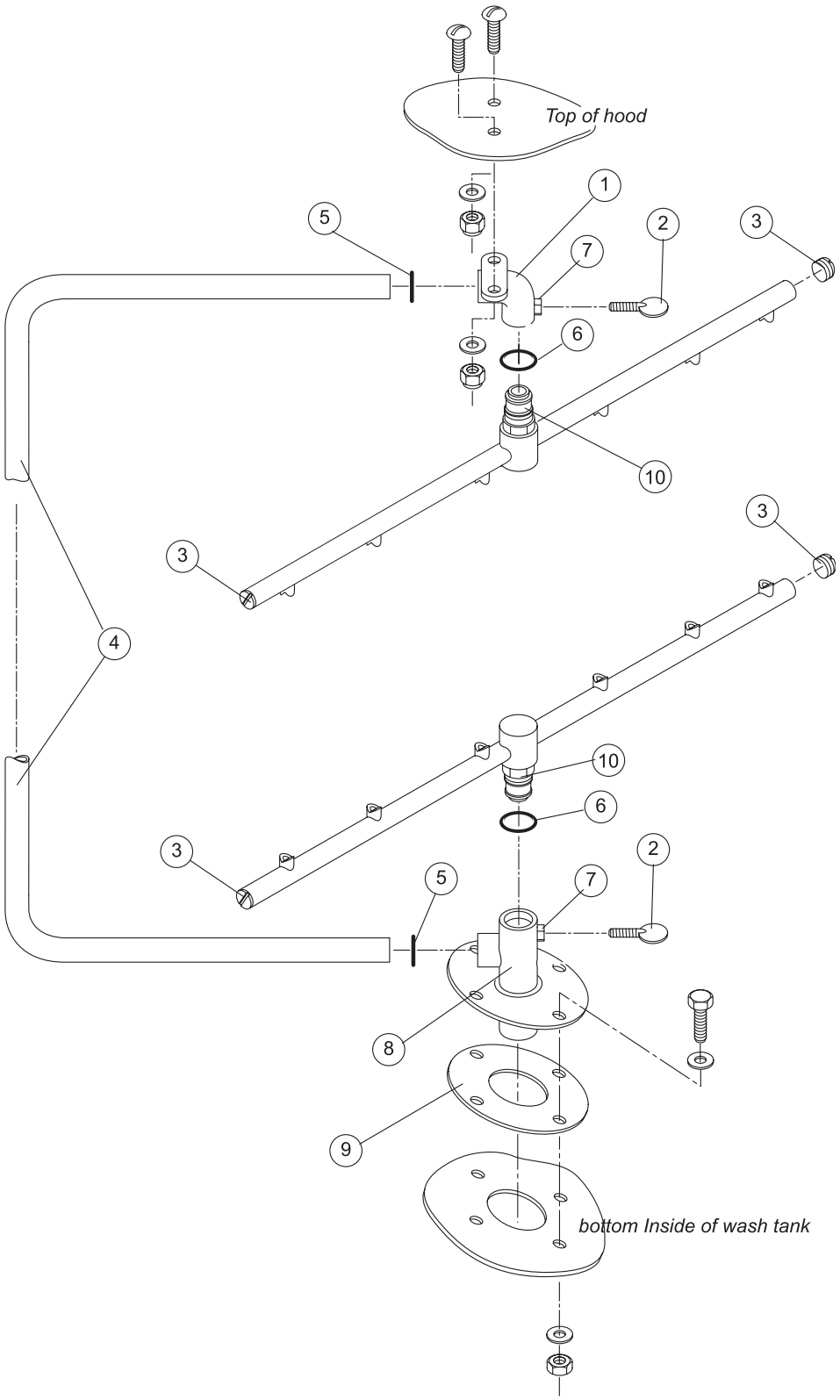


Straight-through Configuration Shown





Item No.	Part No.	Description	Qty.	Unit
1	0510743-1	upper wash hub	1	ea
2	0510495	thumbscrew	2	ea
3	114153	sprayarm end plug (remove for cleaning)	4	ea
4	0510774-2	spray pipe	1	ea
5	0510849	spray pipe o-ring	2	ea
6	114133	sprayarm bearing o-ring	2	ea
7	0512063	thumbscrew bushing	2	ea
8	0510741-1	lower wash hub	1	ea
9	0510769-1	lower wash hub gasket	1	ea
10	0510535-1	sprayarm bearing assembly	2	ea


Top of hood
1
2
3
4
5
6
7
8
9
10
bottom Inside of wash tank

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Electrical Schematics
and Timer Cycle Charts

Models: 1000 Series HT • 1000 Series LT

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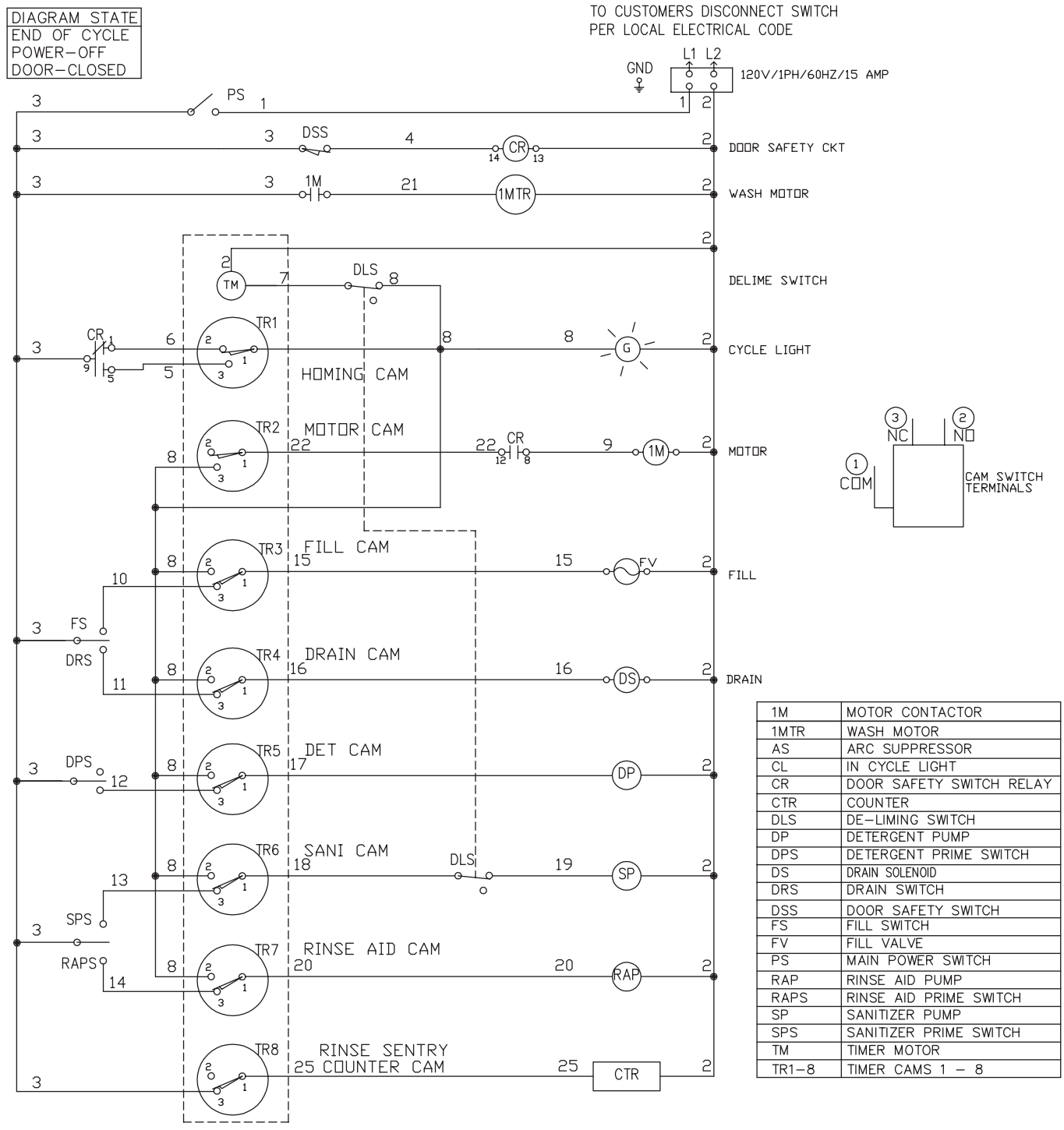
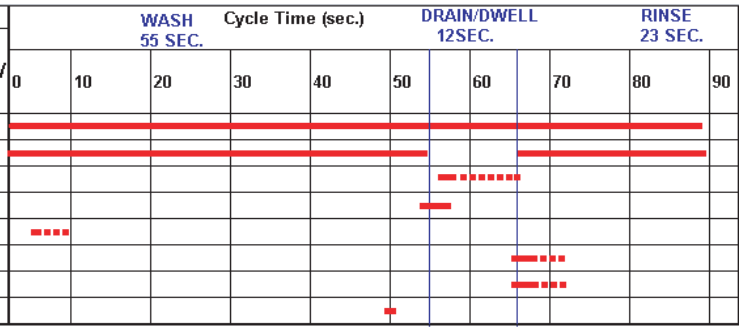


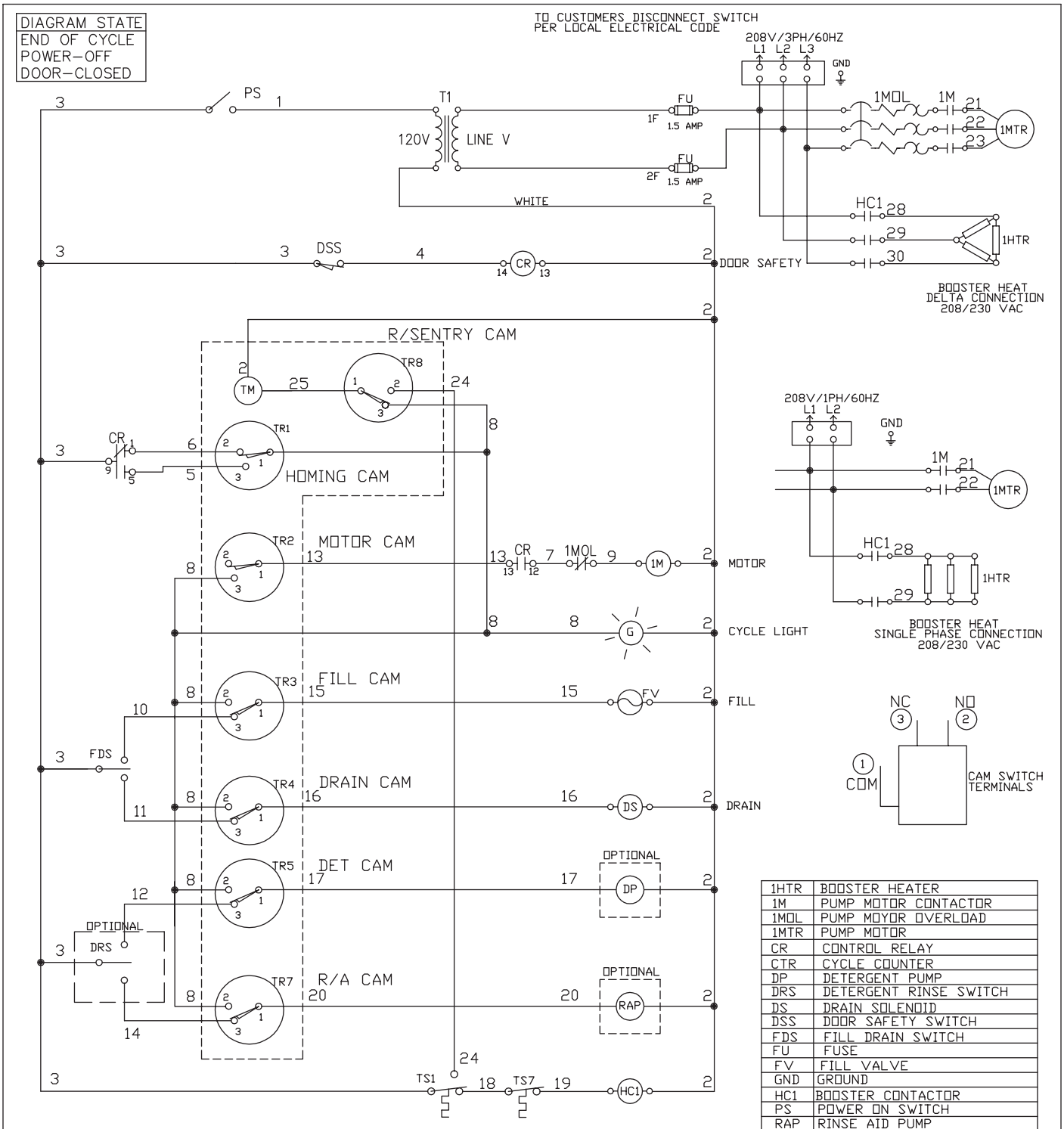
1M	MOTOR CONTACTOR
1MTR	WASH MOTOR
AS	ARC SUPPRESSOR
CL	IN CYCLE LIGHT
CR	DOOR SAFETY SWITCH RELAY
CTR	COUNTER
DLS	DE–LIMING SWITCH
DP	DETERGENT PUMP
DPS	DETERGENT PRIME SWITCH
DS	DRAIN SOLENOID
DRS	DRAIN SWITCH
DSS	DOOR SAFETY SWITCH
FS	FILL SWITCH
FV	FILL VALVE
PS	MAIN POWER SWITCH
RAP	RINSE AID PUMP
RAPS	RINSE AID PRIME SWITCH
SP	SANITIZER PUMP
SPS	SANITIZER PRIME SWITCH
TM	TIMER MOTOR
TR1–8	TIMER CAMS 1 – 8

CAM DESCRIPTION	CAM ORDER OLD LOW TEMP	CAM ORDER OLD HIGH TEMP	CAM ORDER NEW
HOMING	1	1	1
MOTOR	2	2	2
FILL	3	3	3
DRAIN	4	4	4
DETERGENT	5	6	5
SANITIZER	6	N/A	6
RINSE AID	7	7	7
RINSE SENTRY	N/A	5	8

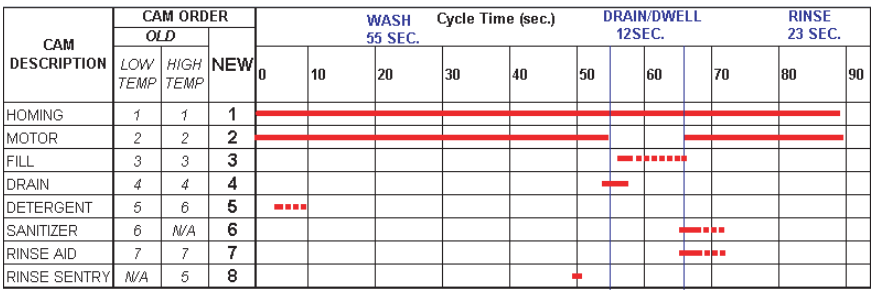


1000LT LOW TEMP

DATE	PART#/REV
25JAN07	0512020/E



1HTR	BOOSTER HEATER
1M	PUMP MOTOR CONTACTOR
1MOL	PUMP MOYOR OVERLOAD
1MTR	PUMP MOTOR
CR	CONTROL RELAY
CTR	CYCLE COUNTER
DP	DETERGENT PUMP
DRS	DETERGENT RINSE SWITCH
DS	DRAIN SOLENOID
DSS	DOOR SAFETY SWITCH
FDS	FILL DRAIN SWITCH
FU	FUSE
FV	FILL VALVE
GND	GROUND
HC1	BOOSTER CONTACTOR
PS	POWER ON SWITCH
RAP	RINSE AID PUMP
T1	CONTROL TRANSFORMER
TM	TIMER MOTOR
TS1	BOOSTER THERMOSTAT
TS7	BOOSTER SAFTEY THERMOSTAT



SANI CAM
NOT USED
TR6

1000HT HIGH TEMP

DATE	PART#/REV
25JAN07	0512020–1/F