

# Champion®

## Operation, Cleaning, and Maintenance Manual



44 PRO

### PRO Series Rack Conveyor Dishwashers

#### STANDARD MODELS

44 PRO	44 FF PRO	76 PRO
54 PRO	54 FF PRO	90 PRO
66 PRO	66 FF PRO	



44 PRO-VHR

#### Ventless Heat Recovery

#### VHR MODELS

44 PRO-VHR	44 FF PRO-VHR	80 PRO HD-VHR
54 PRO-VHR	54 FF PRO-VHR	76 PRO HD-VHR
66 PRO-VHR	66 FF PRO-VHR	



[www.championindustries.com](http://www.championindustries.com)

Issue Date: 7.1.23

**Manual P/N 117594 rev. A**

For machines beginning with S/N RP23014148 and above

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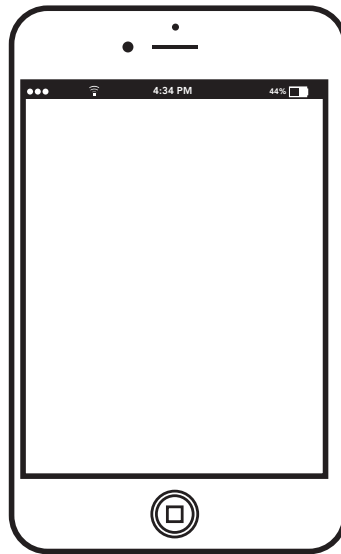
## ATTENTION

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

**The machine data plate  
is located on the top-mounted  
control cabinet.**

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

# Three ways to **REGISTER YOUR PRODUCT and ACTIVATE YOUR WARRANTY.**



- Use your mobile device or computer and go to the website to register your product there.
- or
- Scan the QR code (<http://champdw.us/PRO> located near the data plate).
- or
- Use the fax form on the next page.

# PRODUCT REGISTRATION BY FAX

COMPLETE THIS FORM AND FAX TO:

(336) 661-1660 in the USA

1-(800) 204-0109 in Canada

## PRODUCT REGISTRATION CARD

Model

Serial #

Date of Installation: \_\_\_/\_\_\_/\_\_\_

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_  
(Street) State/Province Zip/Postal Code

Telephone #: ( ) \_\_\_\_\_ --- \_\_\_\_\_

Contact: \_\_\_\_\_

Installation Company: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone #: \_\_\_\_\_

Contact: \_\_\_\_\_

**FAILURE TO REGISTER YOUR PRODUCT MAY VOID YOUR WARRANTY**

**IMPORTANT IMPORTANT**

# Revision History

Due to an ongoing value analysis program at Champion Industries, specifications contained in this manual are subject to change without notice.

<b>Revision Date</b>	<b>Revised Pages</b>	<b>Serial Number Effectivity</b>	<b>Description</b>
1.20.23	All	RP23014148	Released first edition
7.1.23	All		Added 54PRO Series

## Limited Warranty

# LIMITED WARRANTY

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

**Warranty of Machines:** The Company 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 The Company, whichever occurs first. [See below for special provisions relating to glasswashers.] Warranty registration must be submitted to The Company within ten (10) days after installation either online on the Champion Industries website (<http://www.championindustries.com>, in the USA or <http://www.championindustries.com/canada> in Canada or by the fax form provided at the front of this manual. 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 part 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 Champion authorized service technician. Defective parts become the property of The 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 the 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 The Company will replace the defective part without charge.

**DISCLAIMER OF WARRANTIES AND LIMITATIONS OF LIABILITY. THE COMPANY'S WARRANTY IS ONLY TO THE EXTENT REFLECTED ABOVE. THE COMPANY'S MAKE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED, TO ANY WARRANTY OF MERCHANTABILITY, OR FITNESS OF PURPOSE. THE COMPANY 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 THE COMPANY'S' DISHWASHING MACHINES AND THE COMPANY'S 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 Champion dishwashing machines to change this warranty or create any other obligation in connection with Champion dishwashing machines.

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## SET UP



### CAUTION:

There may be more than one power source.

### Machine Checks:

- Check chemical supplies and make sure containers are full.
- Make sure all panels are properly installed.
- Remove protective plastic film from the machine exterior.
- Open doors and ensure they operate smoothly.
- Check the interior of the machine and remove foreign material.
- Make sure the pump strainers, scrap screens, and scrap baskets are installed.
- Make sure vent stack adjustment handles face the front of the machine.
- Open water supply and steam valves (if equipped). Check for leaks.
- Make sure the building drains are unobstructed.
- Make sure dishwasher area is clean, especially underneath the machine.



Use a commercial grade NON-CHLORINATED detergent in this dishwasher. Consult the chemical supplier for the rinse-aid requirements.

### Drain Valve Operation:

- Electric drain valves open and close automatically.
- Valve is closed when dishwasher power switch is ON.
- Valve opens for 10 minutes, then closes when dishwasher power switch is turned OFF.
- Turning the power switch ON and OFF again will open the valve for an additional 10 minutes.
- Valve closes at the end of 10 minutes.
- **Refer to Appendix A: Electric Drain Valve Manual Operation, page 38.**

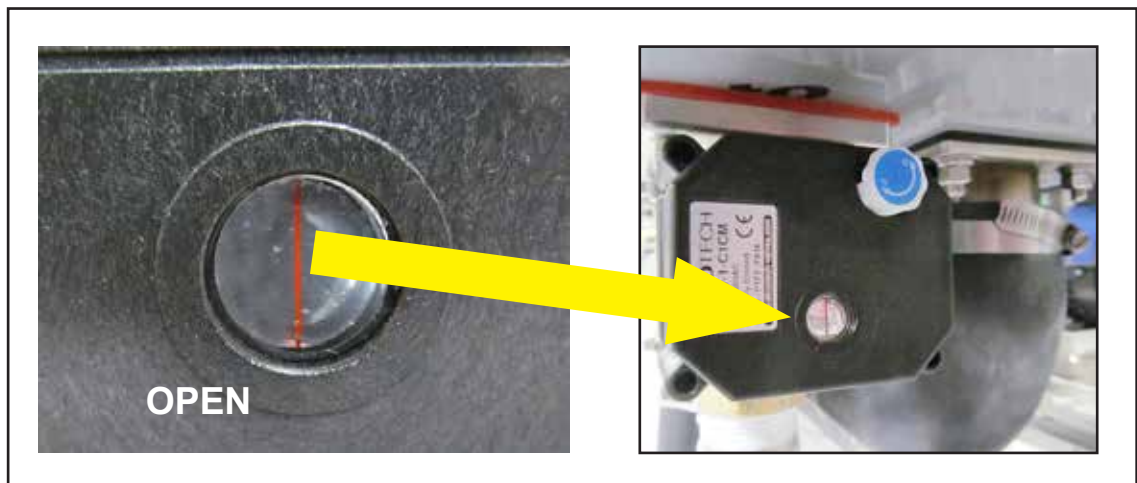


Fig. 1 - Drain valves are electrically operated.

# SET UP

## INSTALL WASH SCRAP SCREENS

**1** Install the scrap basket.

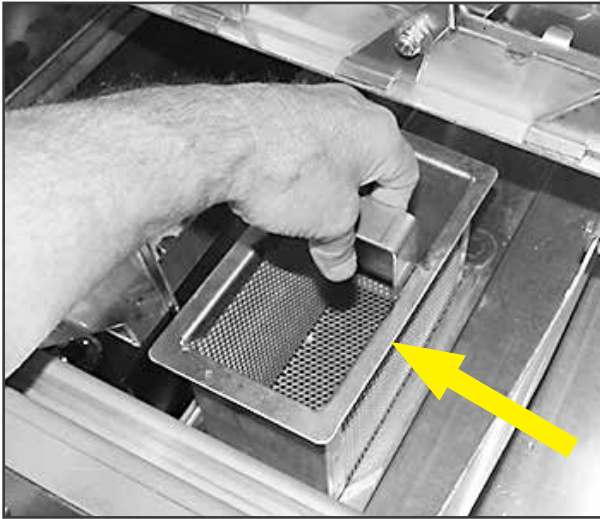


Fig. 2

**2** Install the scrap screens.

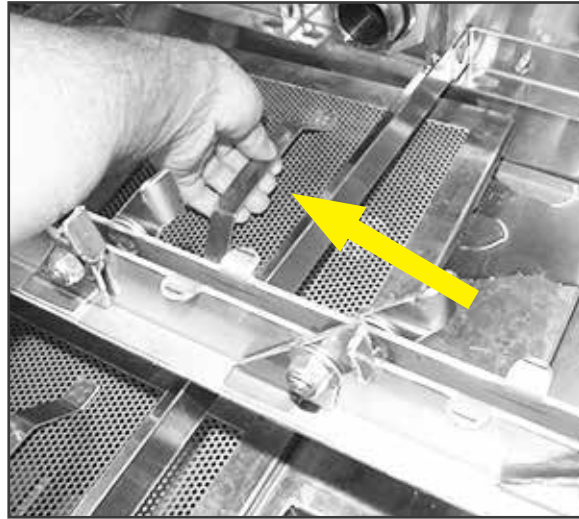


Fig. 3

## INSTALL PREWASH SCRAP SCREENS

**1** Install the scrap basket.

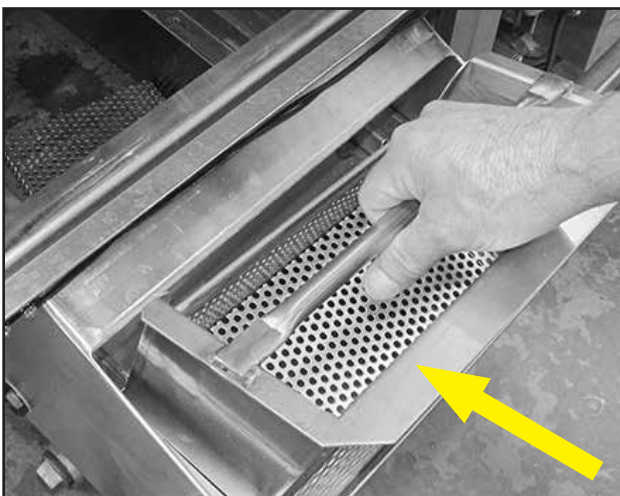


Fig. 4

**2** Install the scrap screen.

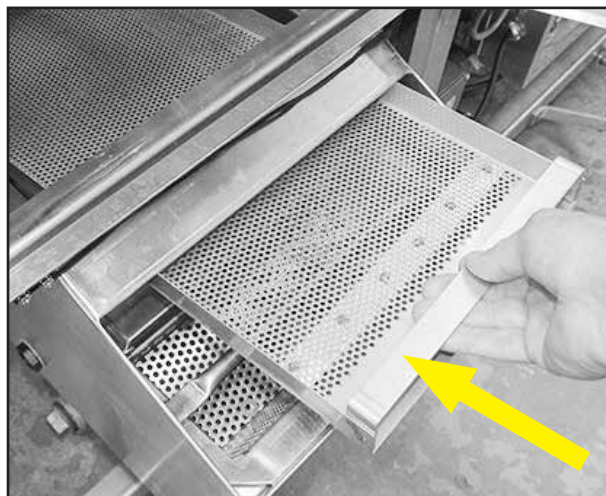


Fig. 5

## INSTALL UPPER SPRAY ARMS

- 1** Slide upper spray arm on the tracks until it seats into the standpipe manifold, then push spray arm up until it latches in place, Fig. 6.

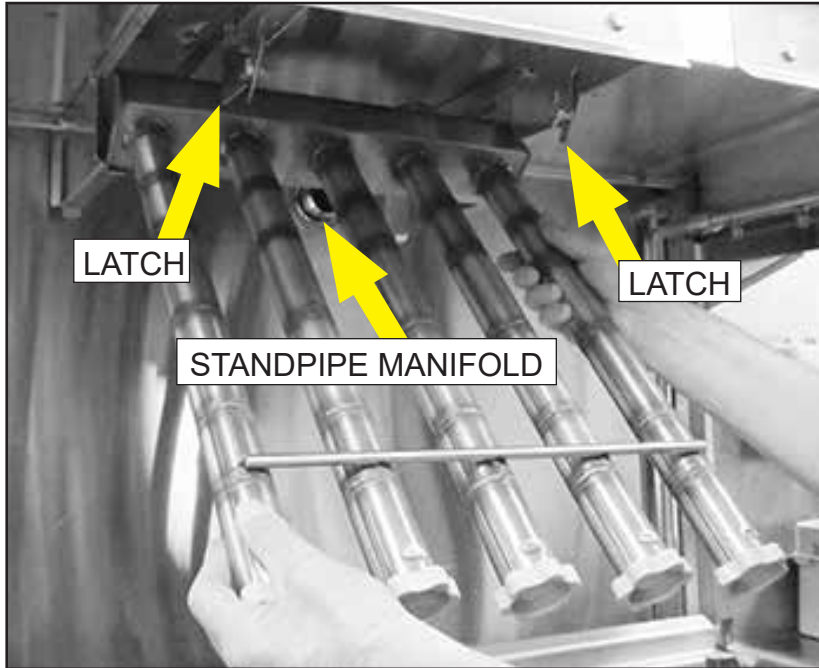


Fig. 6

- 2** Slide the lower spray arm on the tracks until it seats in the standpipe manifold. Push the assembly down to lock in place, Fig. 7.

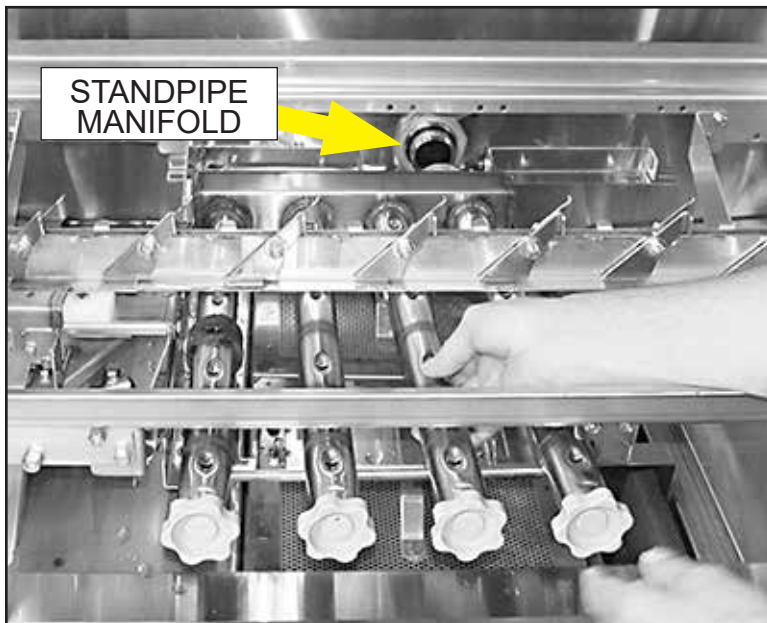


Fig. 7

# SET UP

## INSTALL PREWASH SPRAY ARMS

- 1 Slide upper spray arm on tracks until it seats in the standpipe manifold. Push spray arm up until it latches in place, Figs. 8-9.



Fig. 8

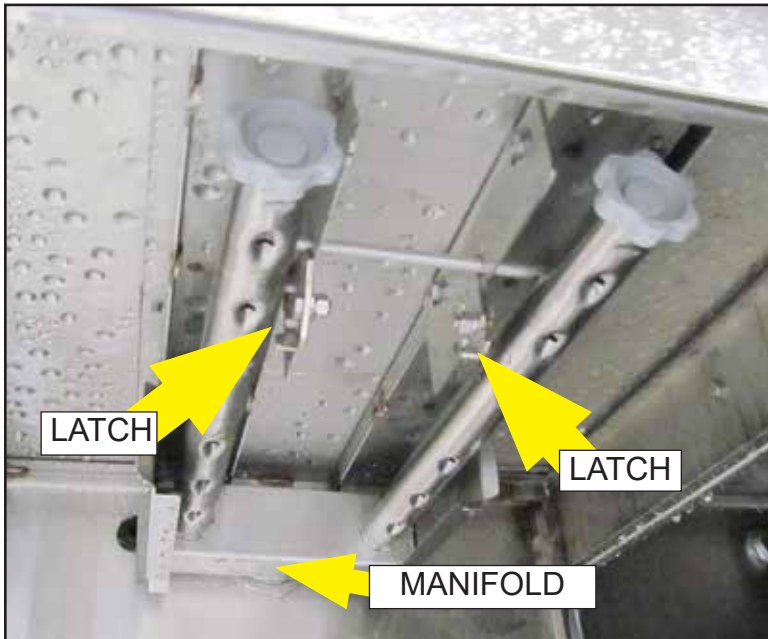


Fig. 9

## INSTALL PREWASH SPRAY ARMS (continued)

Slide lower prewash spray arm on tracks until it seats in the standpipe manifold.

- 2** Slide lower prewash spray arm on tracks until it seats in the standpipe manifold. Push down to lock in place, Fig. 10.

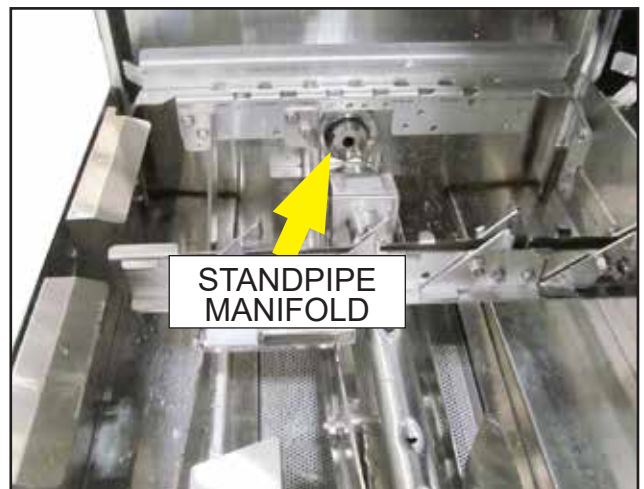


Fig. 10

# STANDARD CURTAIN LOCATIONS

Curtain Size

<b>LONG</b>	24" x 20-1/4" [610mm x 514mm]	P/N <a href="#">113720</a>
	ROD, 5/16" x 24-5/8"	P/N <a href="#">108250</a>

<b>SHORT</b>	24" x 6-1/4" [610mm x 159mm]	P/N <a href="#">109723</a>
	ROD, 5/16" x 23-1/2"	P/N <a href="#">1113012</a>

**NOTE:** Short flaps of curtains face the load end of the machine.

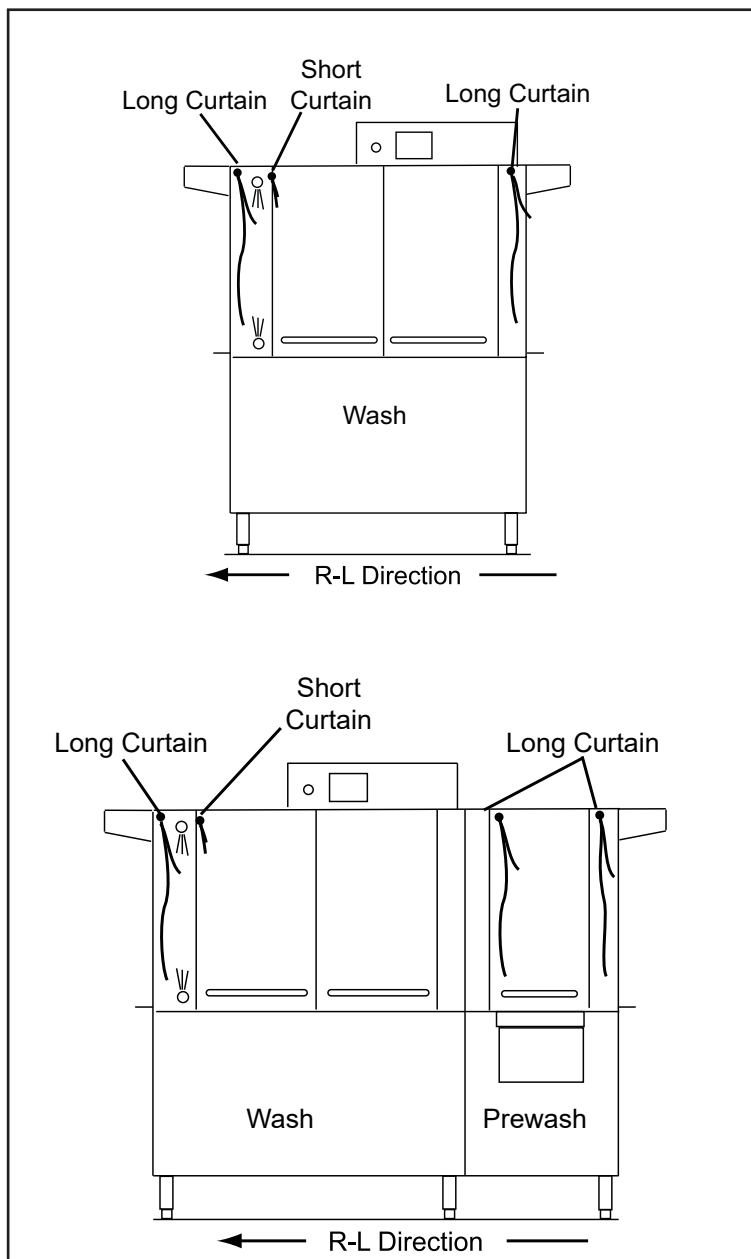


Fig. 11

## CURTAIN INSTALLATION



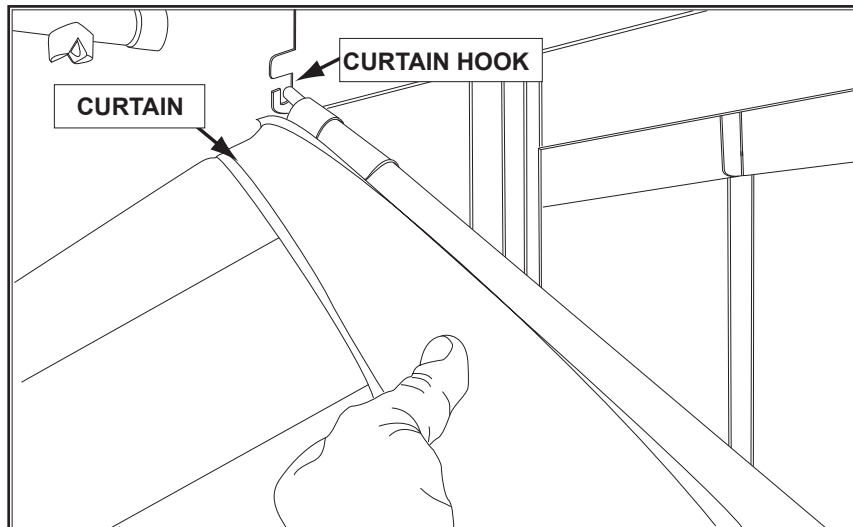
### CAUTION:

Failure to install the curtains will prevent proper operation of the machine.

**1** Labels on the front of the machine indicate the curtain locations.

**2** Hang the curtains on hooks located on the sides of the hood.

**3** Make sure the curtain short flaps face the load end of the machine.



Make sure the curtain s

Fig. 12

## LOAD DISHES

- Rinse heavy food soils from wares before loading into dish racks.
- Load plates, bowls and glasses in peg rack,.
- Load silverware in a single layer in a flat-bottom rack.
- Load pots, pans, and utensils upside down in a flat-bottom rack.
- Load bake sheets and trays long-side up in a sheet pan rack.
- Space wares evenly, do not overload the dish rack.

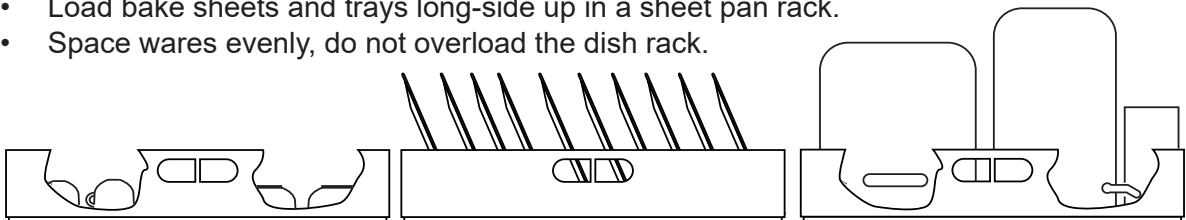


Fig. 13

# OPERATION SUMMARY

## Power up Procedure:

1. Touch the Green Power button. The drain valves close and the dishwasher begins the automatic fill. The display screen illuminates and "FILLING" appears in the status bar.
2. The incoming wash temperature displays in the Wash box. The final rinse temperature displays in the Final Rinse box during the final rinse, the final rinse temperature display is blank at all other times.

## Cleaning Wares:



Use a commercial grade NON-CHLORINATED detergent in this dishwasher. Consult the chemical supplier for the rinse-aid requirements.

1. **READY:**  
The status bar indicates 'READY' when the machine is full of water. WAIT FOR THE WASH TEMPERATURE to read 160°F/71°C before inserting a dish rack into the machine.
2. Slide a dish rack into the machine until the wash pumps start. The conveyor will catch the rack and move it through the machine. Minimum wash temperature is 160°F/71°C. Minimum power rinse temperature is 160°F/71°C. The final rinse temperature displayed when the dish rack is in the final rinse zone must be 180-195°F/82-90°C. The dishwasher runs 90 seconds for one rack, inserting additional racks continues the automatic operation until the last rack exits the machine.
3. **DWELL:**  
Dwell allows the operator to pause heavily soiled wares in the wash zone for 10 seconds. **To activate DWELL:** Slide a dish rack into the machine until the conveyor catches the rack, then immediately touch the 'DWELL' button on the Touch Panel/Display. The rack pauses in the wash zone for 15 secs. then resumes washing. The dwell button must be touched for each rack that requires extra washing. Do not run racks back to back.

## MINIMUM OPERATING TEMPERATURES

MODEL	PREWASH TANK	WASH TANK	FINAL RINSE
44 PRO — 44"	N/A	160°F/71°C	180-195°F/82-91°C
66 PRO — 44" + 22" PW 66FF PRO — 44" + 26" FF 80HD PRO — 44" + 36" PW	Not to exceed 140°F/60°C	160°F/71°C	180-195°F/82-91°C

Table 1

# CONTROL PANEL DESCRIPTION

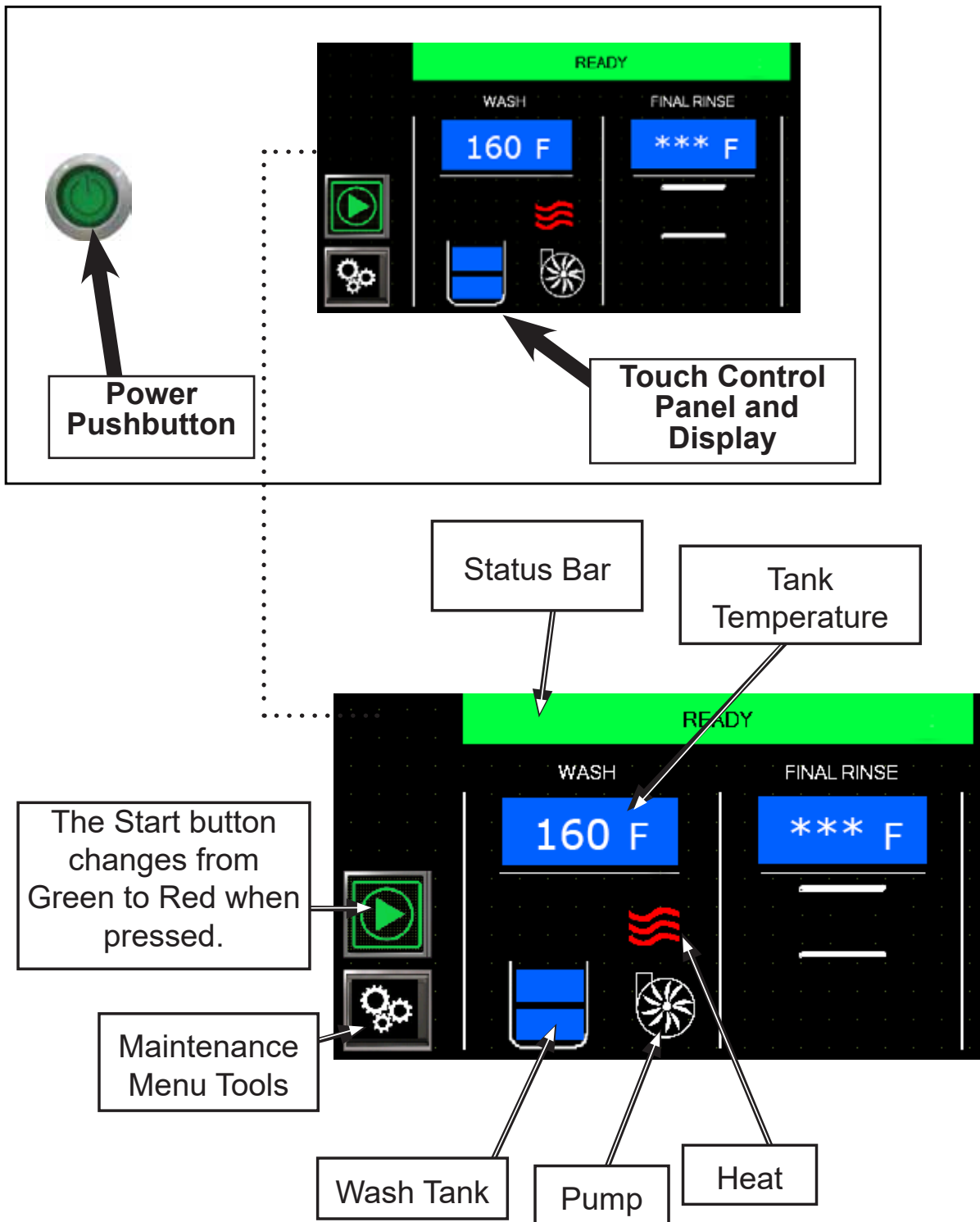




Fig. 14

# INITIAL FILL

— With doors closed, the machine automatically fills when powered up

- 1** Push the Green Power button. The display illuminates and "Filling" appears in the status bar.
- 2** The wash temperature displays. Final rinse temperature displays, \*\*\* and a spray icon,  appears while machine fills. The icon disappears when tank is full.
- 3** Rising water level in the wash tank is indicated by flashing blue blocks. The word, "Filling" appears above the wash tank, Fig.15.
- 4** The tank heat  icon appears when the water level reaches the lower float. The icon disappears when the temperature setting is satisfied.
- 5** Filling is complete when two blue blocks appear in tank. The word "Filling" and the final rinse spray icon disappear, Fig.16.

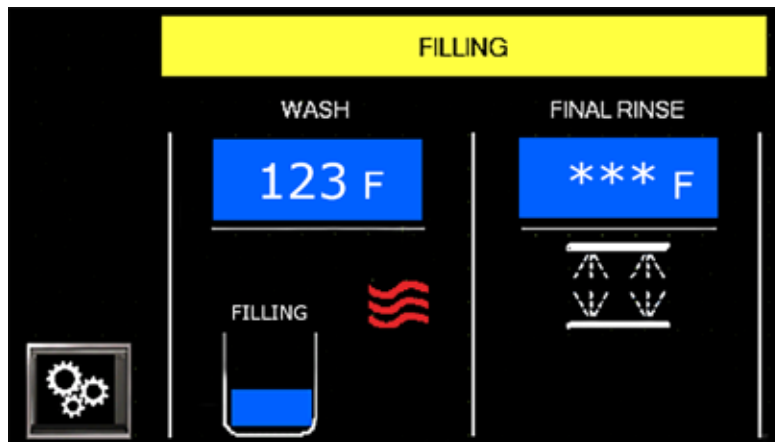


Fig. 15 - Filling

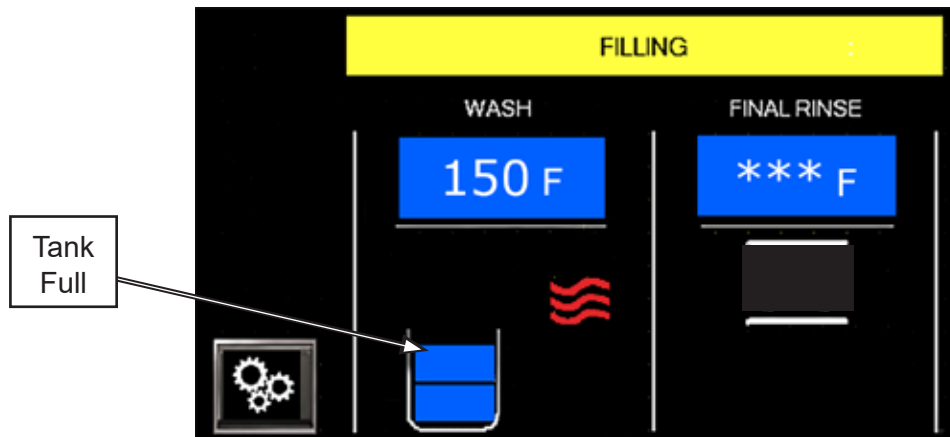


Fig. 16 - Tank full when two blue blocks appear

# WASH —

- 1** Machine is ready to wash when "READY" appears in the status bar and the green start button appears, Fig.17. Wait until the wash temperature reaches 160°F/71°C.
- 2** Press the green start button. It changes to a red stop button and the DWELL button appears, Fig.18.
- 3** Insert rack into machine. The status bar disappears and a Pump icon appears, Fig.18. The pump and conveyor will run for 90 seconds unless another rack is inserted into the machine.



Fig. 17

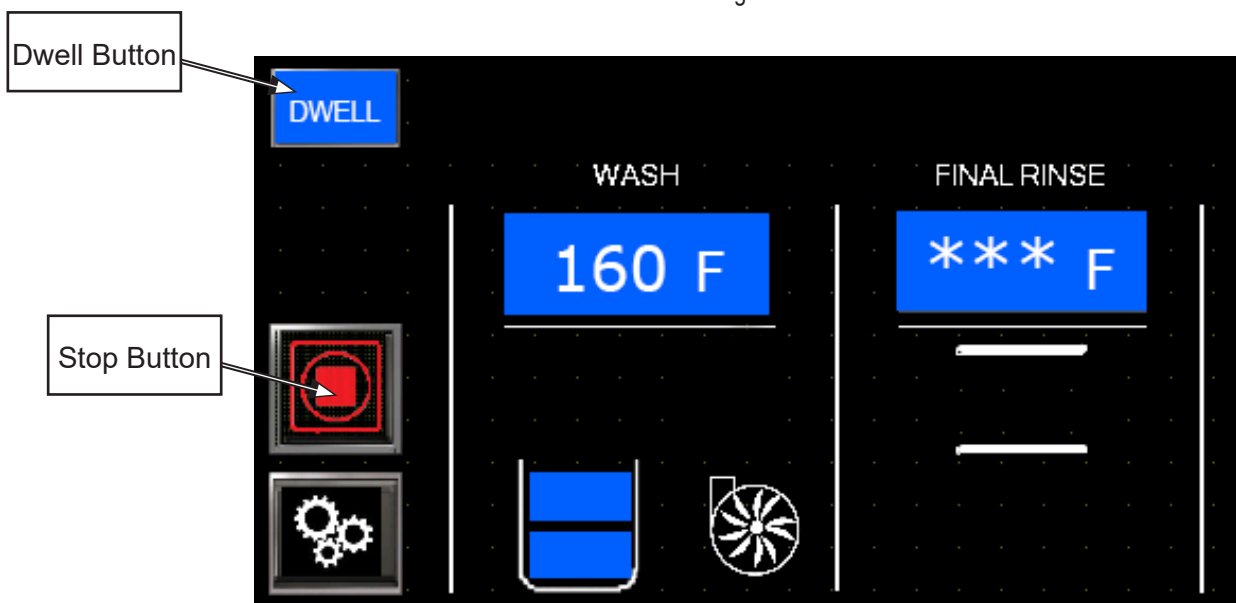


Fig. 18

## DWELL —

- 1 Heavily soiled wares may require more cleaning time in the wash zone. This is accomplished by pressing the DWELL button BEFORE inserting a rack. Press the gray DWELL button, Fig. 20a. The DWELL button turns green, Fig. 20b.

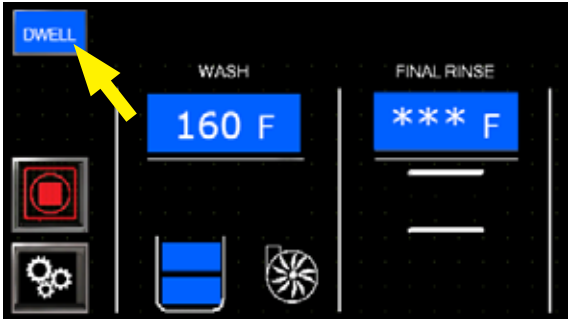


Fig. 20a

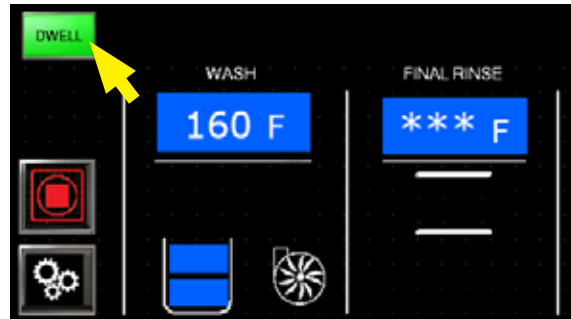


Fig. 20b

- 2 Insert the rack, dish rack pauses in the wash zone for 15 seconds and then resume. The button turns gray at the end of the 15 second pause. **NOTE:** The DWELL button must be pressed before inserting each rack to initiate the dwell. Do not insert racks back to back if using the dwell feature for each rack.

## FINAL RINSE —

- 1 The final rinse sanitizes wares and must be between 180-195°F/82-91°C. The dish rack exits the wash zone and enters the final rinse zone where upper and lower pipes spray the wares for sanitization.
- 2 The final rinse spray icon and final rinse temperature appear on the display when the final rinse runs, Fig. 21.

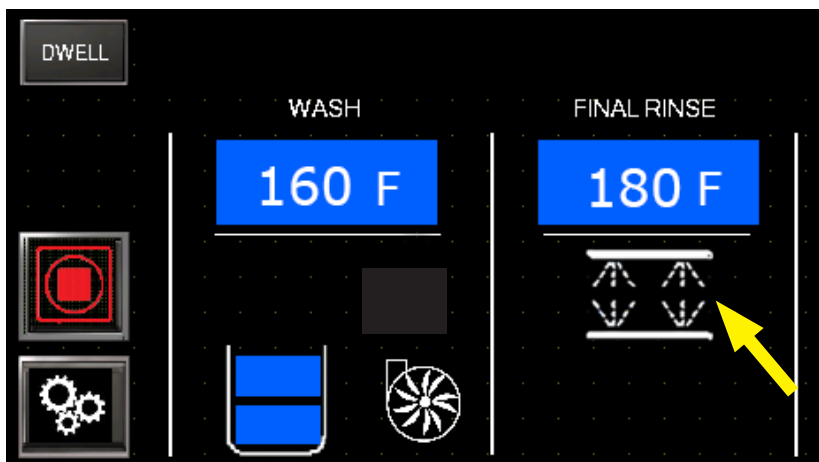


Fig. 21- Final rinse spray icon



Make sure the final rinse pressure gauge indicates flowing pressure of 20 PSI during the final rinse.

Standard pressure gauge located on rinse piping.

VHR pressure gauge located on front of VHR hood.

## FAULTS — FAULT ICON LEGEND








Icon	Description	Function
1 	<b>Status Bar</b> - Located at top of screen.	<b>Red</b> = Fault condition alerting operator that a problem has occurred.
2 	<b>DOOR OPEN</b> - located in the machine section where the fault has occurred.	Prevents operation if not resolved. Close the door and/or fix defective components.
3 	Yellow triangle in machine section shows that a fault has occurred. Press triangle to access troubleshooting menu.	Perform the steps in the troubleshooting instructions. In some cases, the problem can be bypassed or a service company must be called.
4 	<b>Acknowledge Fault</b> - located in the troubleshooting menu.	Press the icon to confirm the fault has occurred. Home screen will reappear. A Yellow triangle appears indicating machine is running with fault condition. Call service.
5 	<b>Call for Service</b> - located in the troubleshooting menus.	Press the icon to access the service agent phone number.
6 	<b>"Screen Forward or Backward"</b> located in the lower right corner of fault menus.	Press the button to go forward or backward one page in the instructions.
7 	<b>"Main Screen"</b> - located in the lower right corner of fault menus and other information sections.	Press the button to return to the main operating screen.

Table 2

**DOOR OPEN** A door is open. Close the door. If Fault does not clear, then inspect the door magnet. Make sure door is fully closed. The door icon disappears and ready status bar appears. Press green start button to resume normal operation, Fig. 22.

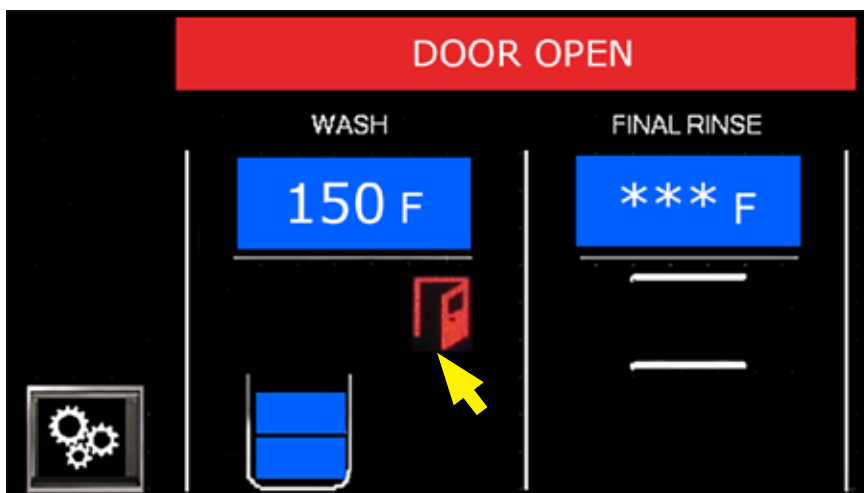


Fig. 22 - Door Open Fault

## FAULTS - continued

**TABLE FULL** The unload table is full of dish racks. Remove dish racks at the end of the table. Ready appears. Press the green start button to resume normal operation, Fig. 23.

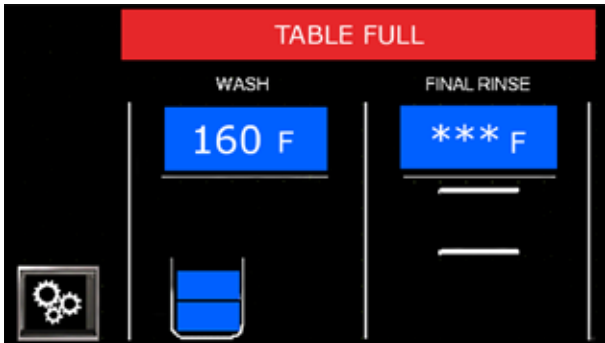


Fig. 23 - Table Full Fault

**CONVEYOR JAM TOUCH TO RESET** Object has jammed the conveyor. Open doors and remove jam, then 'TOUCH TO RESET' on the status bar to clear the fault. Remove racks for rewashing. Status bar says 'READY'. Press green start button to resume normal operation, Fig. 24.

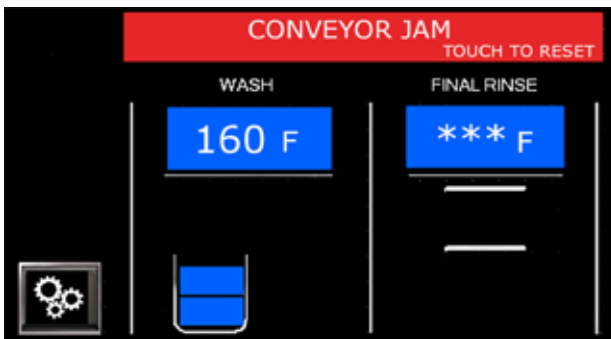


Fig. 24 -Conveyor Jam Fault

**WASH TANK LEVEL FAULT- PRESS YELLOW ICON** Problem with filling. Yellow triangle appears. Press the triangle for troubleshooting instructions. Clean and check the float. The triangle will disappear when the fault is fixed. Remove racks left in the machine for rewashing. Press green start button to resume operation. Triangle disappears, Fig. 25.



Fig. 25 -Wash Tank Level Fault

**NOTE:** The status bar may read "prewash tank" if the fault is in the prewash tank.

**WASH TANK FLOAT FAULT** Problem with wash tank float. Yellow triangle appears. Press the triangle for instructions. Clean and check the movement of the float. Remove racks for rewashing, and press the green start button to resume operation. Triangle disappears, Fig. 26.

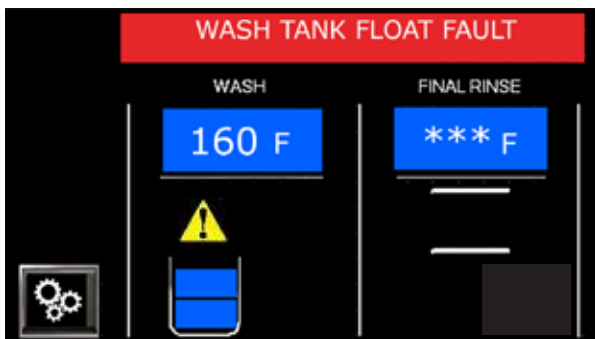



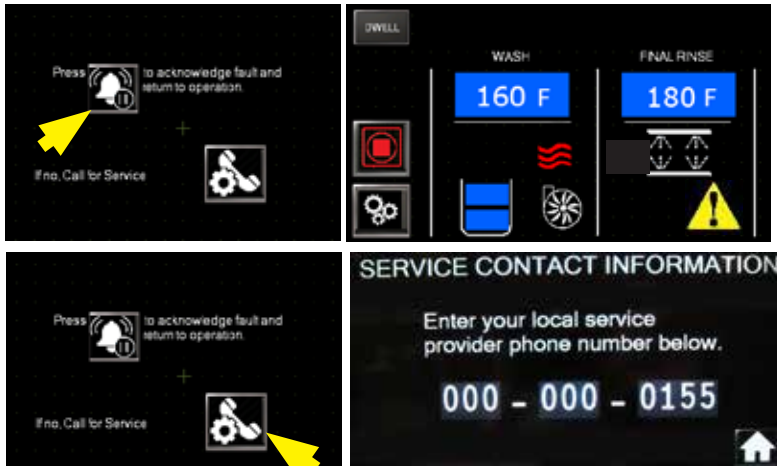


Fig. 26 -Wash Tank Float Fault

 **FAULT ACKNOWLEDGE**

 **CALL FOR SERVICE**


 **FAULT BYPASS**



Some faults can be acknowledged by pressing a "BELL" icon. A yellow triangle appears on the display reminding the operator the machine is running with a fault.

Fig. 27 -Fault Actions

Other faults require immediate action. Pressing the "PHONE" icon displays a contact screen. The operator must immediately call for service to fix the problem.

 Dishwashers with a Champion built-in detergent system will get a "CHECK DET" button on the display. Press the button to recharge the system. If this does not fix the issue then "CHECK DETERGENT" appears in the status bar. Inspect the detergent system to ensure the chemical container is full. Machine continues to run.

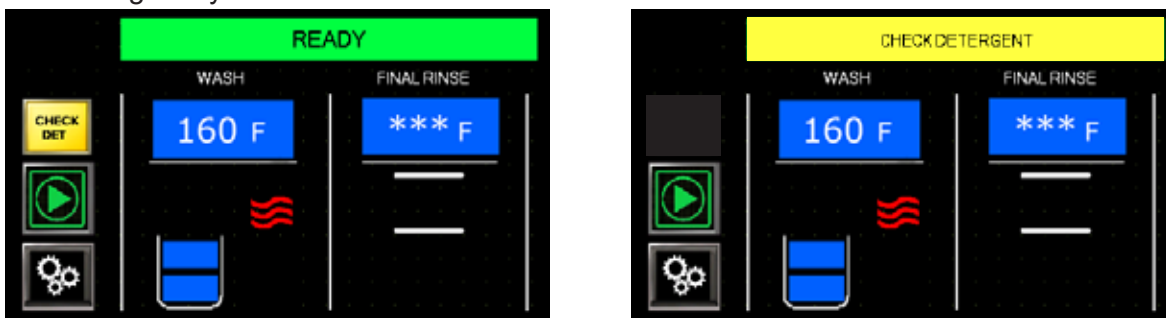


Fig. 28 -Check Detergent

## SUPERVISOR MODE

The Supervisor Mode enables monitoring and changes to machine operation parameters.

- The **GEARS** button appears on the main screen and accesses the supervisor mode, Fig. 29.
- It can be pressed at any time to enter Supervisor Mode.
- The Mode accesses: MACHINE DATA, SETUP OPTIONS, DELIME, DRAIN, and MAINT, Fig. 30.
- Password: 7777 must be entered to access SETUP OPTIONS.
- MAINT is reserved for service technicians and uses a different password.

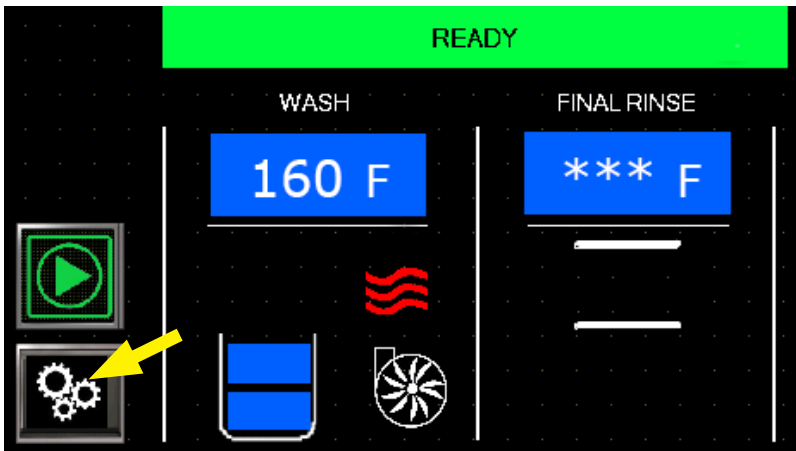


Fig. 29 -GEARS button

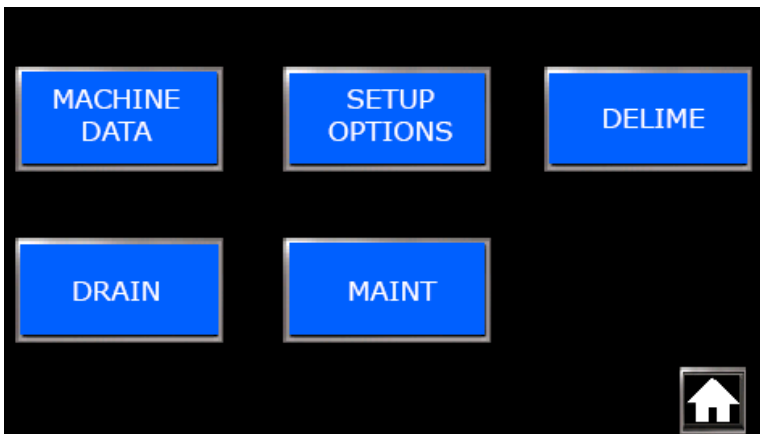


Fig. 30 - Supervisor menu



House button returns to the main screen.



Arrow button goes back one screen.

# SUPERVISOR MODE

## MACHINE DATA

- Press MACHINE DATA to access the following data:

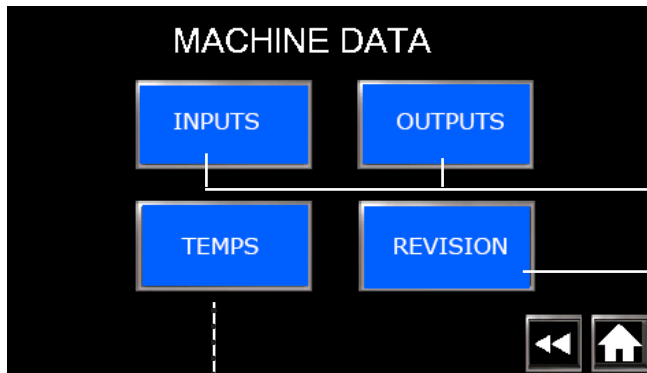


Fig. 31 - Supervisor Machine data screen.



PLC Inputs



PLC Outputs

Fig. 32 - Inputs and Outputs.

- The PLC inputs and outputs are green when On; red when Off.
- They help determine the operation of the machine.

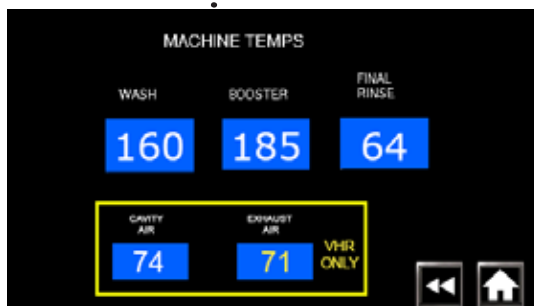


Fig. 33 - Machine temps

- The machine temps screen displays the real-time temperatures.

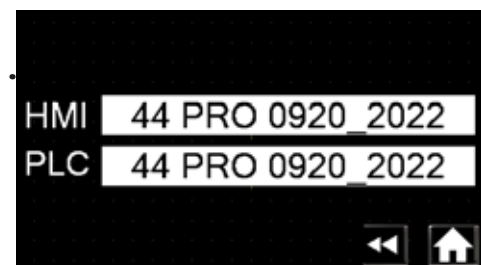


Fig. 34 - PLC software version number.

- The Revision screen displays the current version of software controlling machine.

## SUPERVISOR MODE - continued

### DRAIN

- Press the DRAIN button to test drain valve function.
- The PW DRAIN and WASH DRAIN button turn read when pressed.
- The valves open when pressed and close when the button is released.

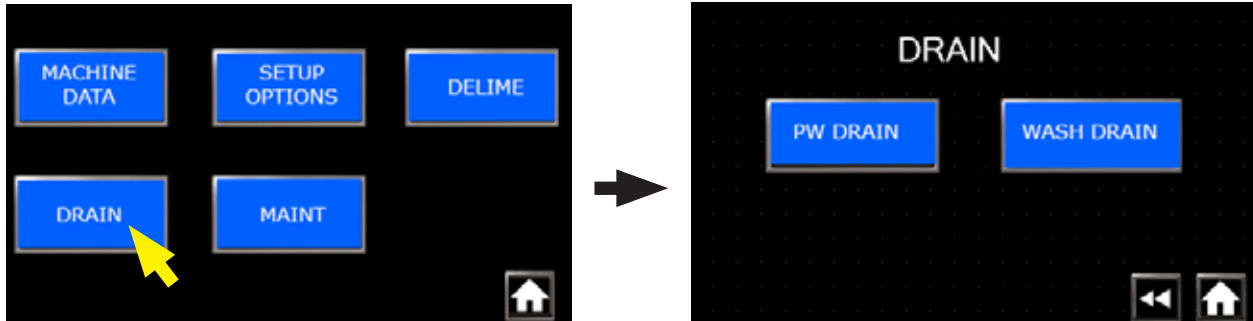


Fig. 35 - Drain Test

### SETUP OPTIONS

- The SETUP OPTIONS menu gives the supervisor access to several machine settings.
- Press setup options button. An enter password screen appears.
- Press the zero on the screen to access a keypad. Press EXIT to return to previous screen.
- Enter 7777 and ENT to advance to the MACHINE SETTINGS menu.

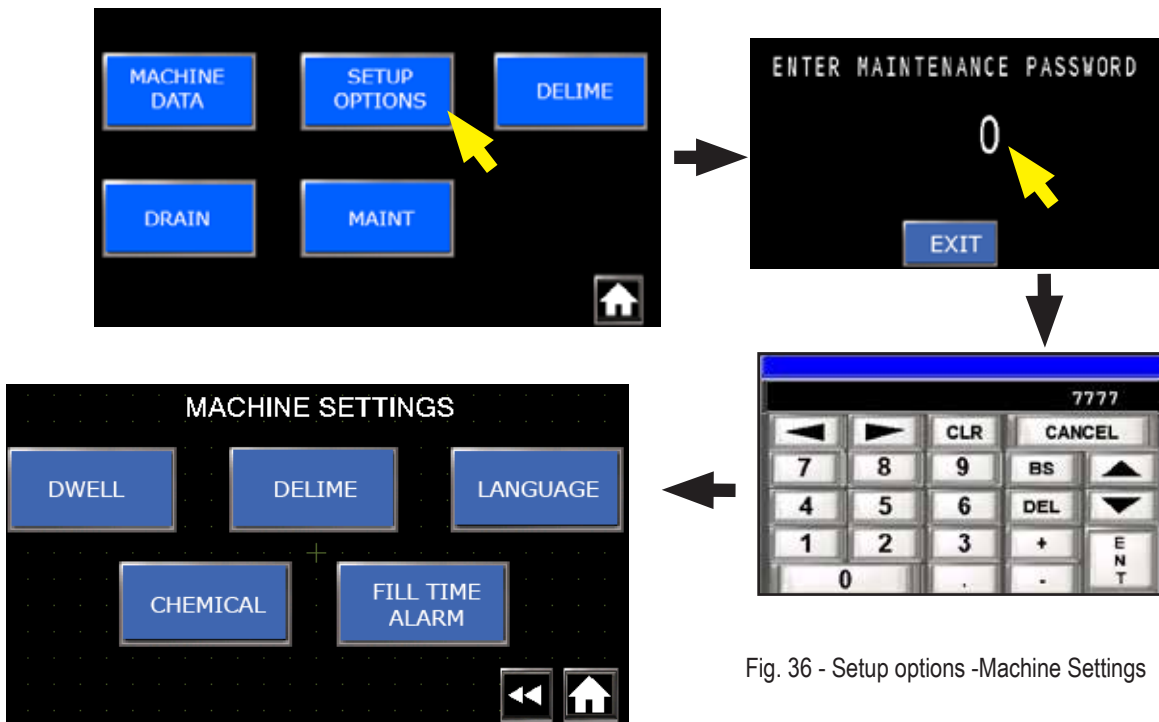


Fig. 36 - Setup options -Machine Settings



The Supervisor Mode will time out in 5 minutes if left idle. The 7777 password must be re-entered to continue with settings.

# SUPERVISOR MODE

## MACHINE SETTINGS



### CAUTION:

Machine settings should not be changed without the approval of authorized service.

### Dwell Settings:

- Press DWELL button to set dwell settings.
- Range is 1-999 seconds.
- The factory default setting is 15 seconds.

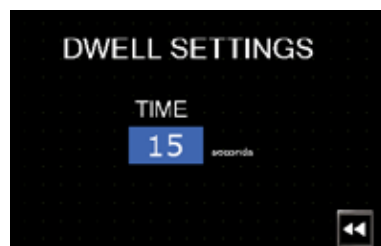


Fig. 38 - Dwell Settings

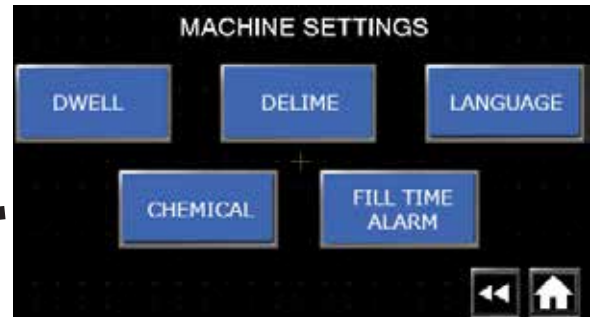


Fig. 37 - Machine Settings

### Delime Settings:

- Press DELIME button ON or OFF.
- Factory setting is 100 hours between deliming.
- Factory setting is a 10 minutes delime wash.
- Factory setting is a 10 minutes delime rinse.
- Press the number to change the setting.



Fig. 39 - Delime Settings

### Language Settings:

- Factory default setting is ENGLISH.
- Press ENGLISH to change to Canadian FRENCH.



Fig. 40 - Language Settings

Continued on next page.

## SUPERVISOR MODE: continued



**CAUTION:**

Chemical settings should only be changed by an authorized chemical supplier. Settings are affected by variations in water, temperature and type of chemicals. Wash water temperature must be 150°F/65.5°C and the machine must have run one cycle before performing chemical testing.

### Chemical Settings:

- The Champion built-in chemical system is an option.
- The option is not installed if NO appears in the upper right corner of the display and there are no settings available.



**NOTE:**

Detergent pump output is 3ml/sec.  
Wash tank capacity is 10 US Gal.

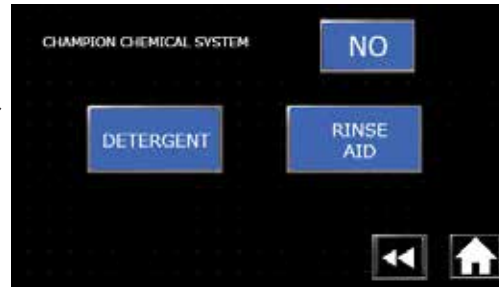


Fig. 41 -

Optional factory chemical system not installed

### DETERGENT

- "YES" in the upper right corner of the display means the Optional Champion Chemical System is installed.

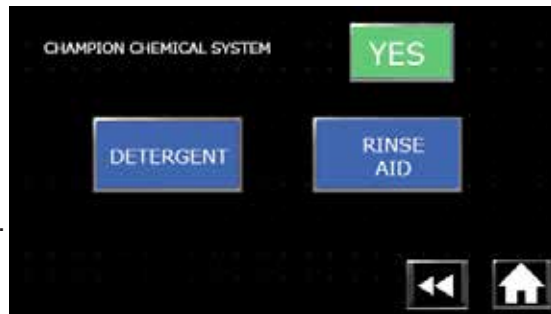
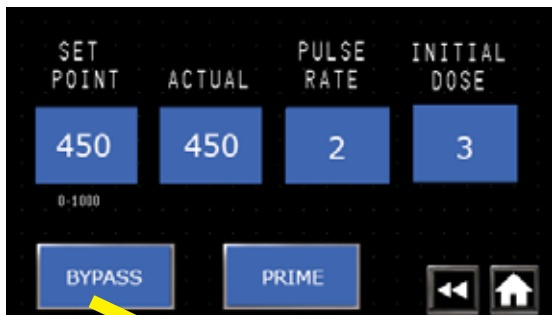


Fig. 42 -

"YES" optional factory chemical system installed



- Press DETERGENT button to display settings.
- 450 the concentration volts ~ PPM.
- Pulse rate is how amount of detergent injected.
- Initial dose are the detergent pump run in seconds.
- BYPASS button disables the detergent system.  
*Press the Bypass button and select yes or no.*
- PRIME button manually runs the detergent pump.

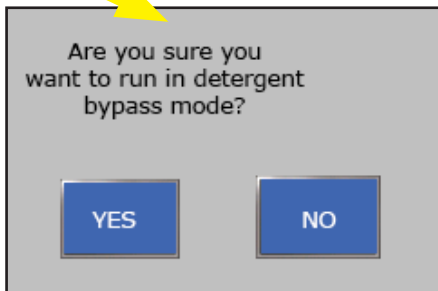


Fig. 43 - Detergent Settings

## SUPERVISOR MODE

### Chemical Settings: (continued)

#### RINSE AID

- Press Rinse Aid, Fig. 42, button to display settings.
- Factory default setting for pump speed is 55%.
- Press PRIME to manually run the rinse aid pump.

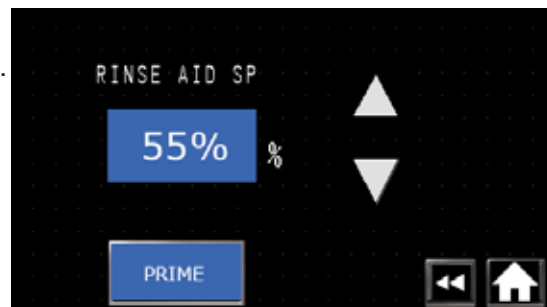


Fig. 44 - Rinse aid settings

#### Fill Time Alarm Settings:

- The alarm setting works in conjunction with the FLOAT FAULT conditions explained on pages 24-25.
- The FILL TIME EXCEEDED ALARM setting determines the length of time the machine will try to fill before a fault.
- Press FILL TIME ALARM on the machine settings screen.
- The factory default setting is 10 minutes.
- Press the blue box to change the time and press ENT.

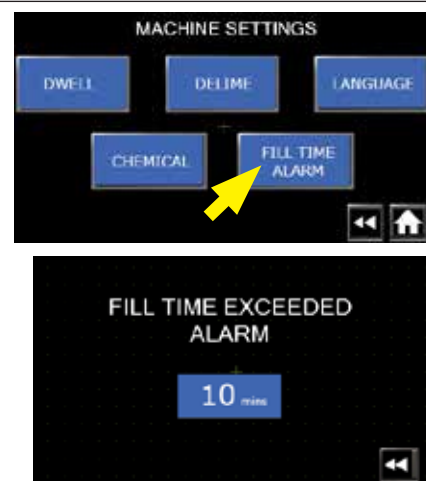


Fig. 45 - Fill time alarm setting

### (THIS CONCLUDES THE SUPERVISOR SETUP OPTIONS SECTION)

#### DELIME

- A delime operation can be started from the supervisor mode.
- Press the DELIME button to start the delime.
- Press DELIME START.
- Refer to pages 22-24 for the operator delime operation.

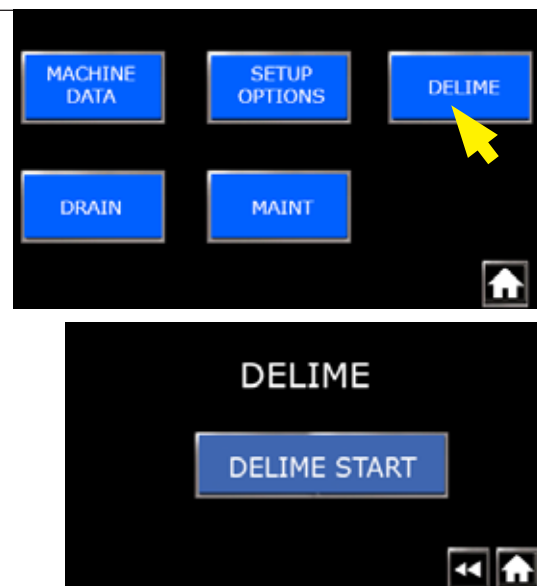


Fig. 46 - Supervisor delime option

# CLEANING

## DELIME

1. Status bar displays "DELIME REQUIRED" when machine reaches the programmed time interval, Fig. 47.
2. Press "TOUCH TO DELIME" to start a delime operation.
3. Press "DELIME START", Fig. 48.
4. A confirmation box appears, Fig. 49. If NO is pressed, the machine will return to normal operation. The delime alarm will continue to appear until the delime process is performed.
5. Press YES to begin the delime process, Fig. 49.
6. "DELIME DRAINING" appears and machine drains. **Delime process will stop and the machine will return to normal operation if "PRESS AND HOLD TO CANCEL" is pressed.**
7. Open doors, remove and clean screens, Fig.51.

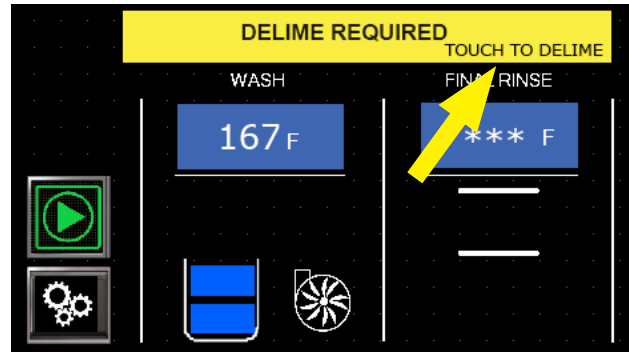


Fig. 47 - Delime required alarm



Fig. 48 - Press DELIME START

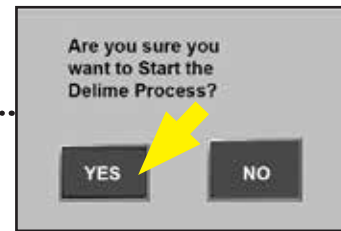


Fig. 49 - Confirmation box

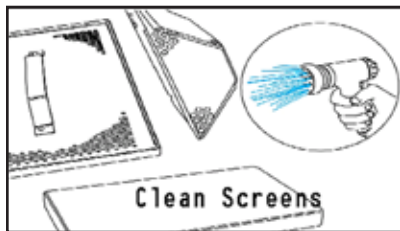


Fig. 51 - Remove/Clean screens

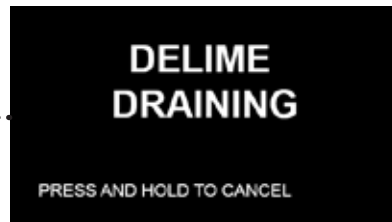


Fig. 50 - Machine drains

8. Close door to fill, Fig. 52.
9. First delime fill, Fig. 53.
10. Open doors and add delime chemical according to chemical supplier's instructions, Fig. 54.

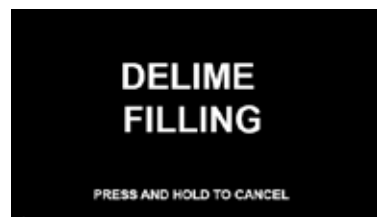


Fig. 53 - First delime fill.

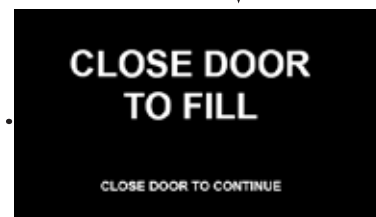


Fig. 52 - Close door to fill

11. The delime process may be canceled before the chemical is added. Press and hold to cancel. "DELIME COMPLETE TOUCH TO CONTINUE" appears. Touch the screen and the display returns to the main screen.

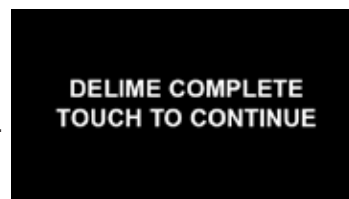


Fig. 55 - Cancel before adding chemical



Fig. 54 - Add chemical

**CAUTION:** Doors must not be opened after chemical is added.

# CLEANING

## DELIME (continued)

12. Close the doors after adding chemicals "DELIME PUMPS ON" appears and the pumps run, Fig. 56.

"TIME REMAINING" at the top of the screen counts down the delime wash time. Factory setting for the delime wash is 10 minutes.

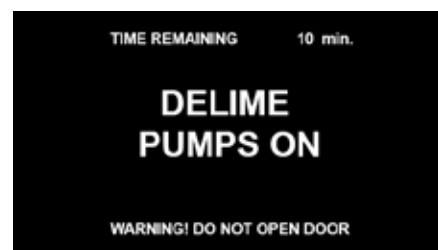


Fig. 56 - DELIME PUMPS ON

13. Machine drains, Fig. 57. Machine fills, Fig. 58.

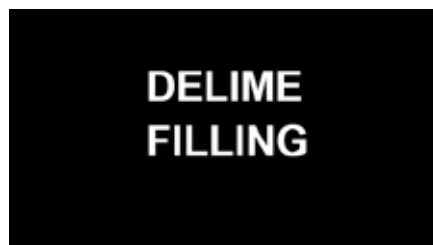


Fig. 58 - DELIME FILLING

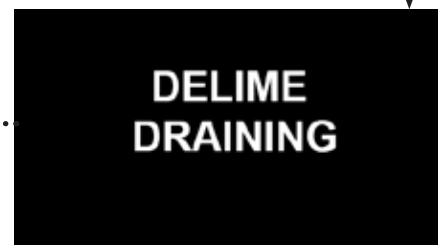


Fig. 57 - DELIME DRAINING

14. Machine rinses. Factory setting for the delime rinse is 5 minutes.

15. Machine drains and fills for a second time, Fig. 60.

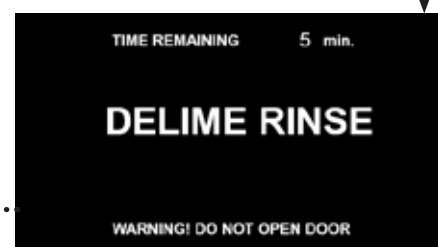


Fig. 59 - DELIME RINSE

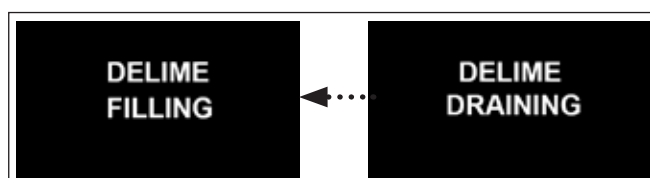


Fig. 60 - Second drain and fill

16. Last delime rinse and drain, Fig. 61.

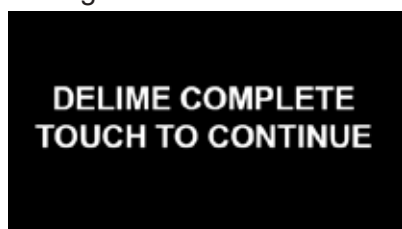


Fig. 62 - DELIME COMPLETE

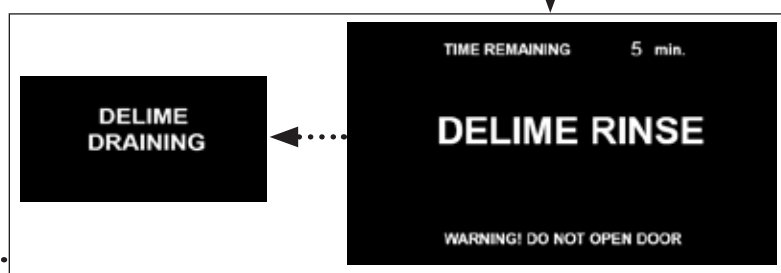
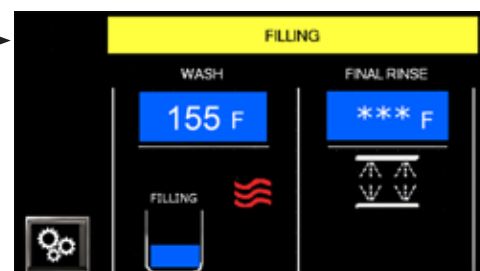


Fig. 61 - Last delime rinse and drain.

17. DELIME COMPLETE is displayed. Touch the display screen, Fig. 62.

18. Main screen appears. Machine fills and returns to normal operation.

19. The "Delime Required" interval resets.



## CLEANING

### WASH AND PREWASH SPRAY ARMS —

- 1 Remove the upper and lower wash/prewash spray arms.  
Lift the lower arms and pull forward to remove, Fig.63.  
Upper arms have latches, Fig. 64. Press the latch and pull arm forward, Fig. 65.



Fig. 63 - Lift and pull forward to remove lower spray arms.



Fig. 64 - Press latches to release upper spray arm.



Fig. 65 - Pull forward and down to remove upper spray arms.

## CLEANING

### WASH AND PREWASH SPRAY ARMS (continued) —

- 2** Turn the wash arm end plugs 1/4 turn and pull to remove, Fig. 66. Inspect the o-rings and replace if damaged or missing. O-ring damage significantly reduces wash performance.



Fig. 66 -

Turn plugs 1/4 turn CCW and pull to remove. Check o-rings.

- 4** Inspect the spray arm standpipe o-rings, Fig.67. Replace if damage or missing. O-ring damage significantly reduces wash performance.

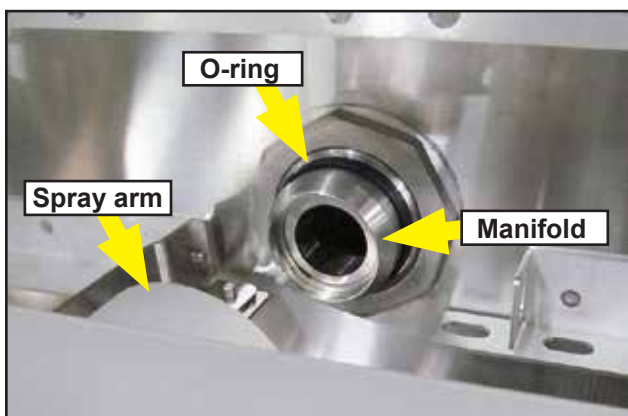


Fig. 67 - Inspect O-rings..



Fig. 68 - Make sure spray arm nozzles are clear.

- 3** Flush the spray arms with clean fresh water in a remote sink. Make sure the spray arm nozzles are clear of debris, Fig.68.

## CLEANING

**PUMP SUCTION STRAINER** — The wash pump suction strainer is located on the side of the tank the prewash strainer at the bottom.



**CAUTION:** A clogged strainer reduces spray arm pressure and significantly reduces wash performance.

- 1** The Wash tank strainer has a handle at the top and a strainer on the bottom. Pull the handle straight up to remove. Flush strainer clean in a remote sink and re-install, Fig. 69.

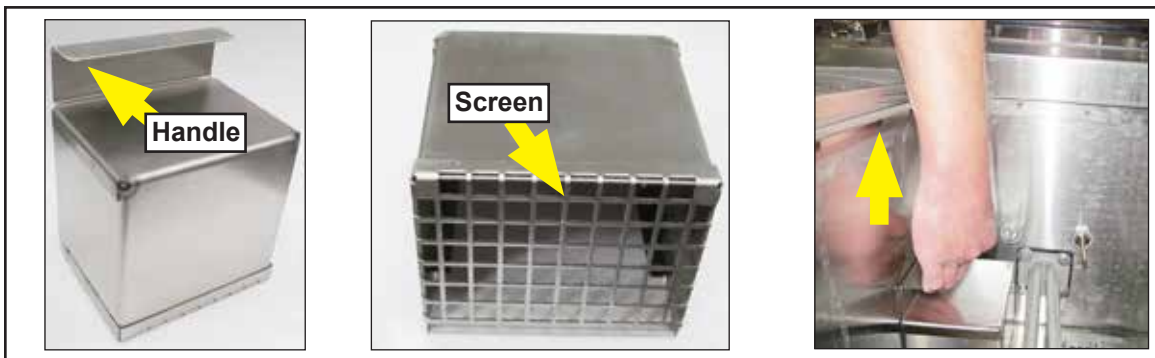


Fig. 69 - Wash tank pump suction strainer

- 2** The prewash strainer is located at the bottom of the tank. Grasp the strainer by its sides and lift up to remove. Note the retaining clips on the bottom of the strainer. Flush the strainer clean in a remote tank inspect the drain and re-install.

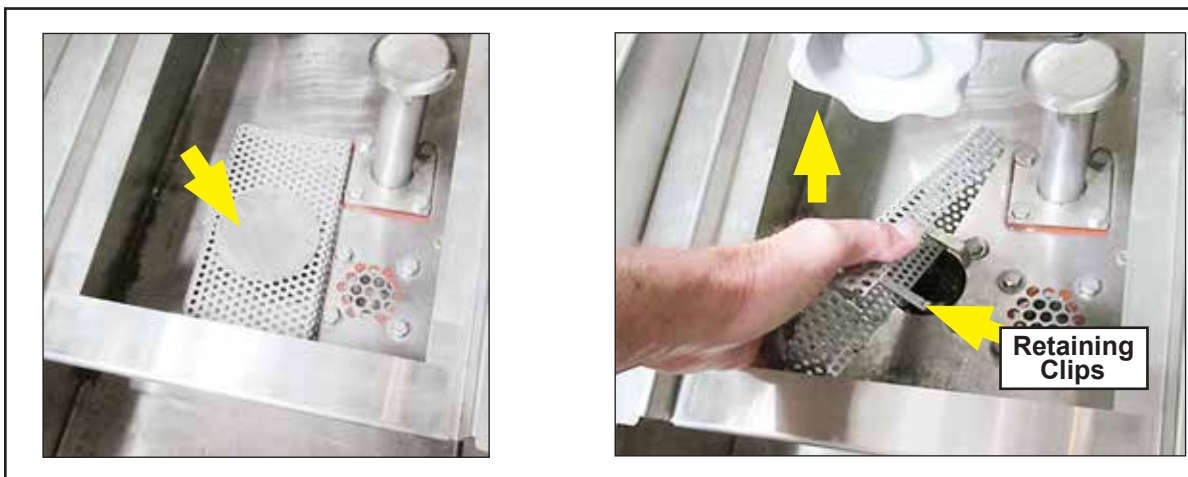


Fig. 70 - Prewash pump suction strainer

## CLEANING

**FLOAT SWITCHES AND PROBES** — The float switches and probes are mounted in the tank sides.

- 1 Wipe the float switches and probes with a soft cloth and mild detergent to remove food soils and lime build-up. Gently move the float switches to ensure they move freely, Fig. 70.

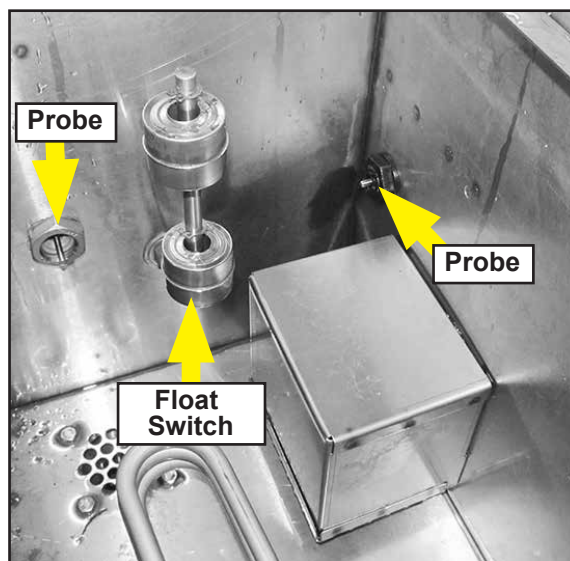


Fig. 71 - Float switch and probes

**TANK DRAIN AND PREWASH OVERFLOW** — All tanks have a drain in the bottom of the tank. Prewash tanks have an additional overflow.

- 1 Clean debris from the drain screen and inspect the top of the prewash overflow tube to ensure it is clean.



Fig. 72 - Tank drain prewash overflow

# CLEANING

**RINSE ARMS** — The upper and lower rinse arm nozzles should be cleaned regularly to prevent scale build-up.

- 1** Rotate the rinse arm 1/4 turn and pull to remove from the rinse manifold, Fig. 73.  
Inspect the red o-rings and replace if damaged, Fig. 74

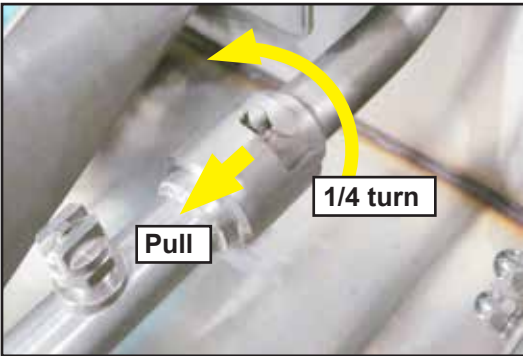


Fig. 73 -  
Rotate rinse arm 1/4 turn and pull to remove.

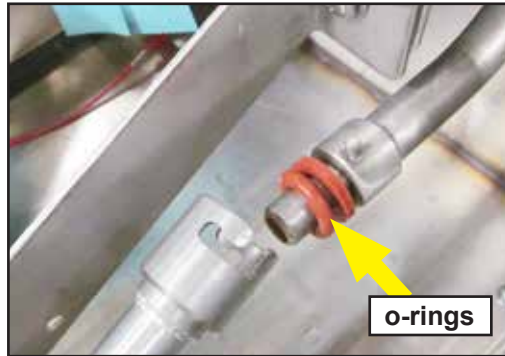


Fig. 74 -  
Inspect o-rings and replace if damaged.

- 2** Rotate the rinse arm 1/4 turn and pull to remove from the rinse manifold, Fig. 73.  
Inspect the red o-rings and replace if damaged, Fig. 74

- 3** Use fine piece of wire and clean the rinse spray nozzles to ensure they are not clogged with scale build-up, Fig. 75.

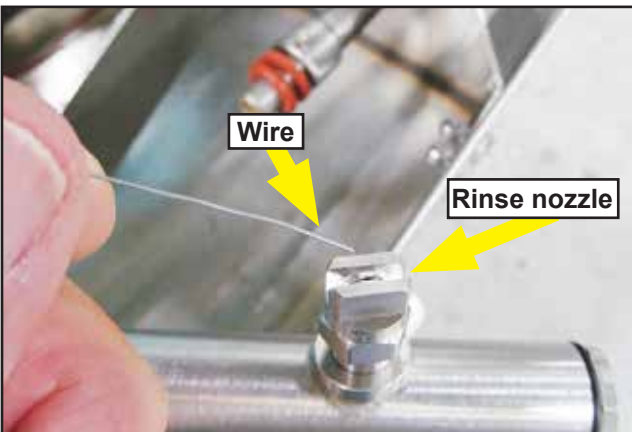


Fig. 75 -  
Inspect o-rings and replace if damaged.

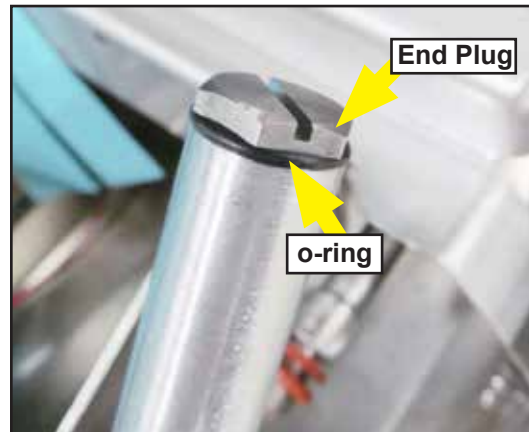


Fig. 76 -  
Inspect o-rings and replace if damaged.

- 4** Use a flat blade screw driver to remove the rinse arm end plugs. FLush the rinse arm.  
Inspect the end plug o-ring and replace if damaged, Fig. 76.

## MACHINE EXTERIOR —



**CAUTION:** Never hose the exterior of the machine with water. Never scrub the machine with a ferrous scrub pad.

**1** Flush curtains with fresh water and place outside the machine to air dry.

**2** Wipe the exterior of the machine with a soft cloth and mild detergent.

**3** Leave machine doors open to aid in overnight drying.

## CLEANING INTERVALS —

The machine should be cleaned every eight hours of continuous operation and at the end of the day.

It is highly recommended that the machine be drained and refilled after an extremely busy shift.

## **BASIC MAINTENANCE —**

### **Monthly**

1. Inspect all water lines for leaks and tighten if required.
2. Clean detergent residue from the exterior of the machine.
3. Make sure drain screens are clean.
4. Clean accumulated scale from the heating elements with a non-abrasive pad.
5. Inspect the spray arms for any damage or missing parts.
6. Inspect the final rinse arms for missing parts.
7. Inspect the pawl bar and drive assembly for damaged or missing parts.
8. Make sure float switches move freely.
9. Make sure the idle pump actuator and the final rinse actuator move freely.
10. Inspect conveyor pawls move freely.
11. Run the machine with an empty rack to check correct operation.

### **Yearly**

1. Contact an authorized service agent to perform an inspection and preventive maintenance.



# TROUBLESHOOTING CHART —

Before calling for service check the following conditions.

1. Dishwasher main power and water supply is on.
2. Machine has been assembled correctly.
3. Conveyor is clear of any obstructions.
4. Automatic drains are closed.
5. Screens and pump intake screens are clear.
6. Doors are closed and secure.



Fig. 77 -  
Electric valve is closed when red line is horizontal in the valve site window

Condition	Cause	Solution
Dishwasher will not run.	Door not closed. Main power OFF. Dishwasher OFF. Dish rack not inserted.	Close door completely. Check breaker on panel. Turn dishwasher ON. Insert dishrack.
Low or no water.	Main water supply off. PRV setting incorrect Solenoid strainer clogged. Solenoid valve defective.	Open supply valve. Set PRV to 20 PSI Flow Clean strainer. Contact Service Agent.
Poor wash results.	Detergent low. Wares overloaded  Clogged screens . Clogged spray arms. End plugs missing. Water temperature low.	Check detergent supply. Reposition wares or reduce amount of wares. Clean screens. Clean spray arms. Check spray arms. Check incoming water temperature.
Dishwasher conveyor stops.	Dwell feature was enabled.  Conveyor jammed or table limit switch has stopped conveyor.	DO not touch 'DWELL' button when loading rack.  Check conveyor. Remove racks from unload end of machine.
Dishwasher conveyor stops.	'Conveyor jammed.	Check conveyor for jams. Remove racks from load end of table.
 Door symbol appears on display.	Door is open.	Close all doors.
 Triangle appears on display.	Fault condition has occurred.	Touch triangle to access trouble shooting guide.

## OPTIONAL FRONT FEED —

- The front feed option allows dish racks to be loaded into the front of the machine, Fig. 78.



Fig. 78 -  
Front feed machines receive dish racks into the front of the machine.

## SET UP

## CHECK CONVEYOR ARM AND RACK SWITCHES —

- 1 Make sure the rack switch and idle pump switch, and conveyor pawls move freely, Fig.79.

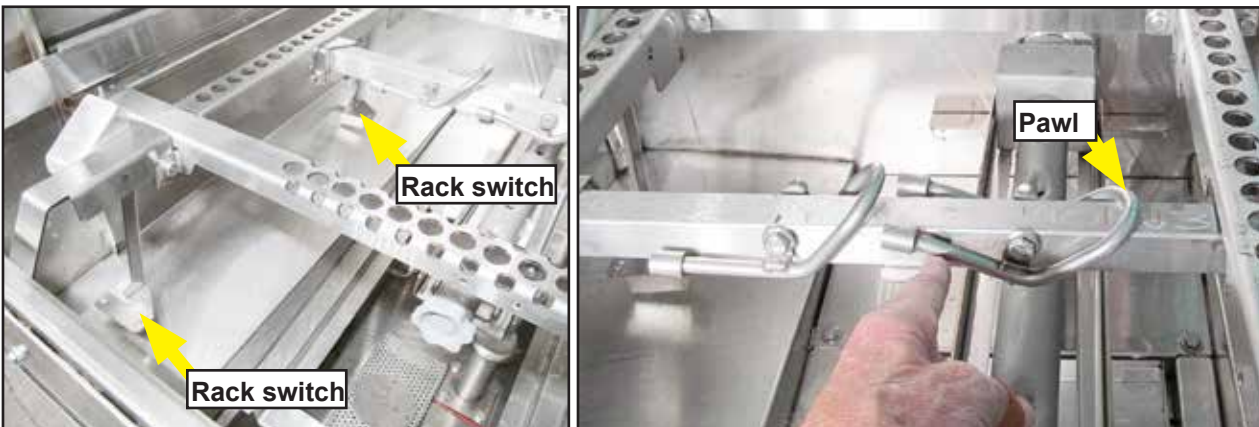


Fig. 79 -  
Switches and pawls must move freely.

**SET  
UP**

**INSTALL UPPER SPRAY ARMS —**

- 1 Slide upper spray arm on tracks until it seats in standpipe manifold. Push spray arm up to latch in place, Figs. 80-82.



Fig. 80- Slide spray arm on tracks toward standpipe manifold.



Fig. 81- Standpipe manifold

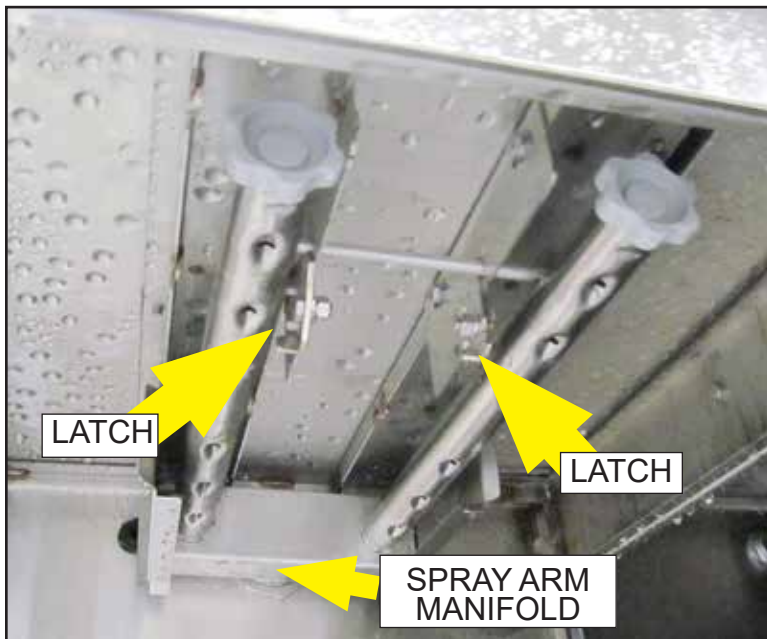


Fig. 82 - Lift spray arm until it latches in place.

# SET UP

## INSTALL PUMP SUCTION STRAINER —

- 1 Make sure pump suction strainer is installed in bottom of tank. The strainer has retaining clips to secure it in place Fig. 83.

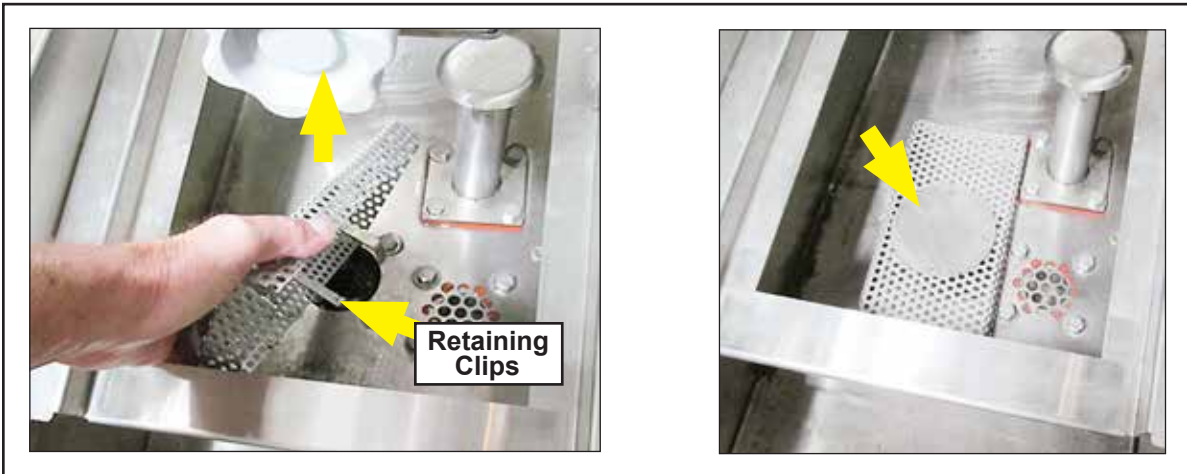


Fig. 83 -  
Front feed pump suction strainer

## INSTALL SCRAP BASKET AND SCREEN —

- 1 Install scrap basket at the front of the tank, then slide scrap screen to the tank rear and lower down. Make sure edge of screen is positioned over lip of basket, Fig. 84.

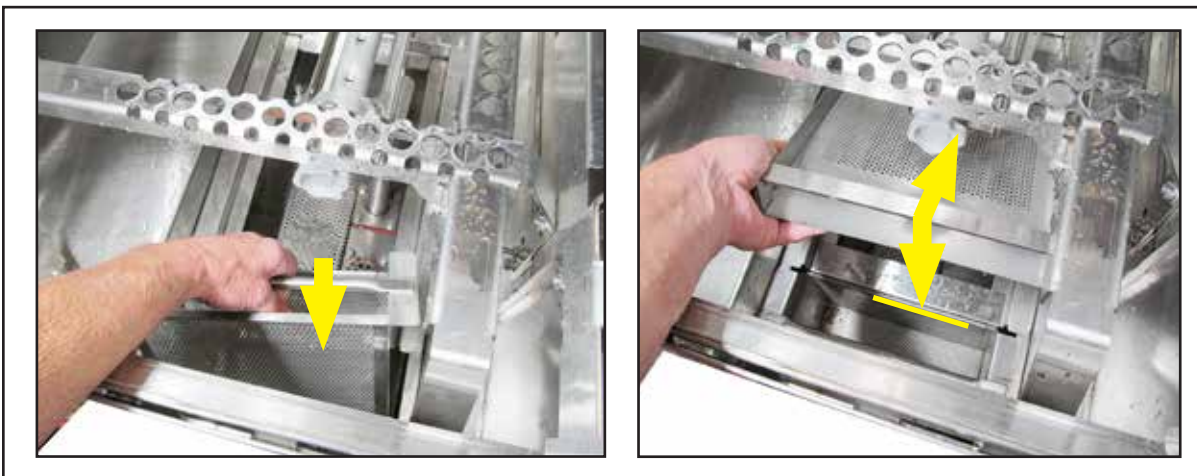


Fig. 84 -  
Scrap basket and scrap screen

# SET UP

## INSTALL LOWER SPRAY ARM —

- 1 Slide lower spray arm until it seats in the standpipe manifold. Push spray arm down to lock in place, Fig. 85.

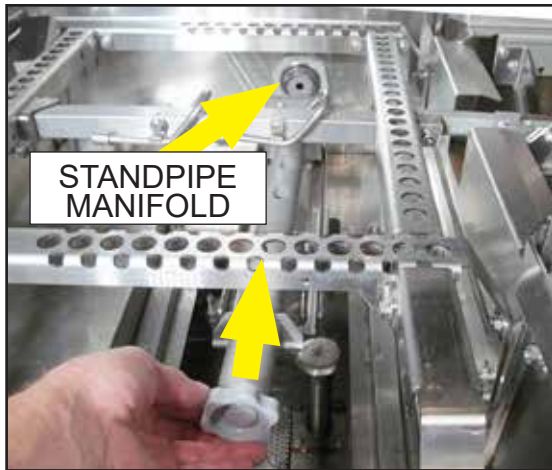


Fig. 85 - Install lower spray arm.

## INSTALL CURTAINS —

- 1 Curtain rods hang on built-in hooks. Hang one long curtain at the entrance of the front feed section and another long curtain at the exit end of the front feed section, Fig. 86. **MAKE SURE THE SHORT FLAPS FACE THE LOAD END.**

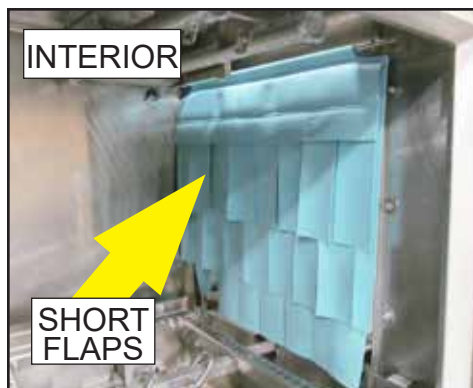


Fig. 86 -

Make sure short flaps face the load end of machine.

## OPTIONAL FRONT FEED OPERATION —



**NOTE:**  
Refer to pages 10-11 for the dishwasher start-up procedure.

### Loading Dish racks —

**1**

With power on and green run button pressed, fully insert dish rack into the load end of machine making sure the dish rack is against the rear track. The conveyor will not run until the dish rack is against the rear track.

An instruction tag is located above the front feed opening, Fig. 87.

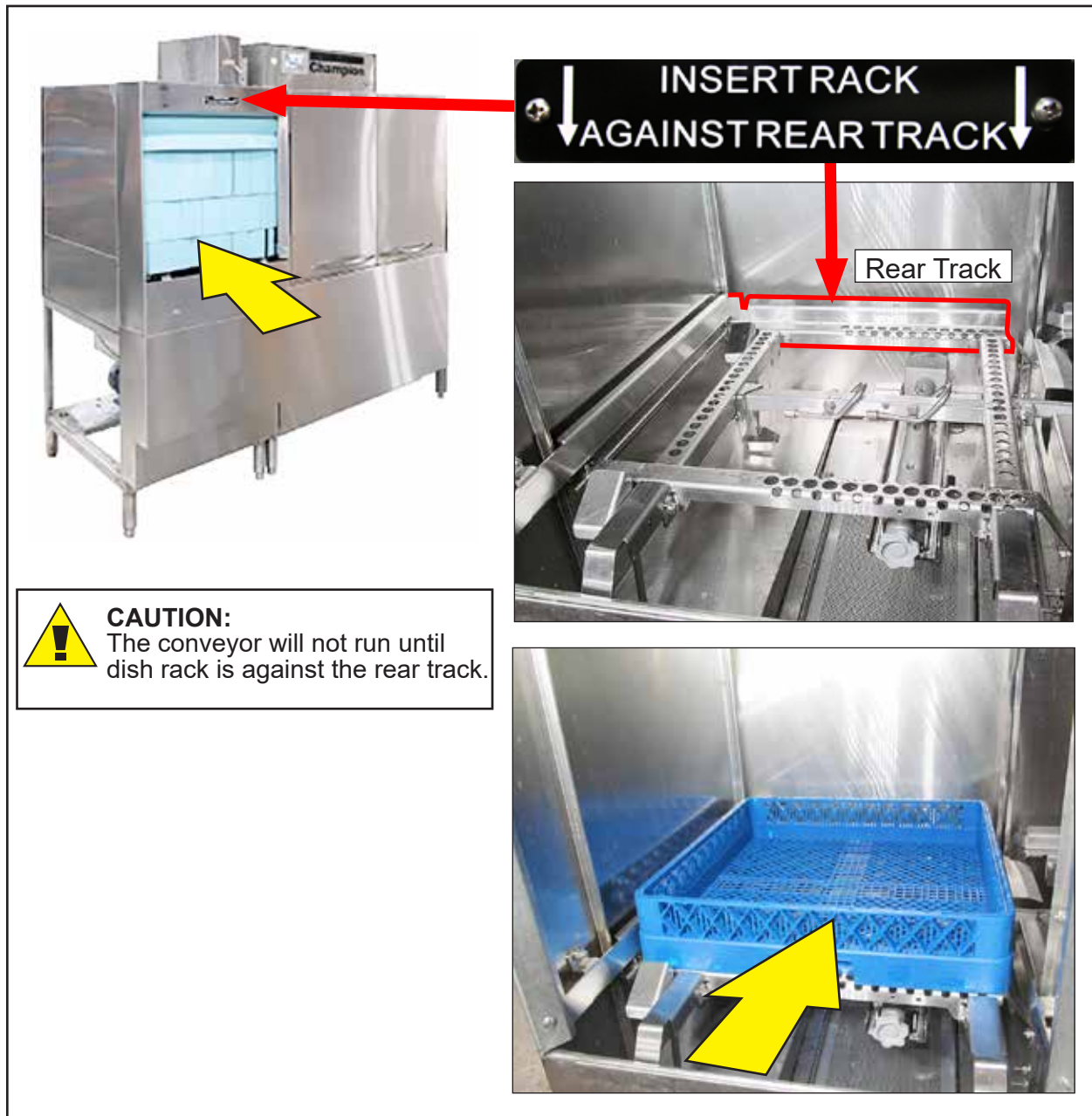


Fig. 87 -

Fully Insert dish rack until it is against the rear track.

## Touchscreen Displays —

- 1 Press the green start button. It changes to a red stop button, Fig. 88.

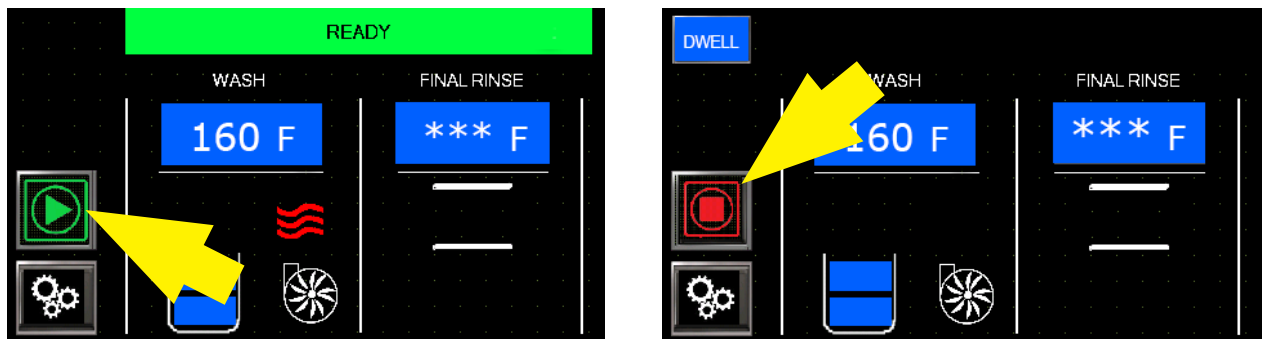


Fig. 88 - Press the green start button.

- 2 Load dish rack into machine. The status bar displays "TABLE FULL" as the rack is loaded, Fig. 89. The status bar disappears as soon as the dish rack is against the rear track. The pumps and conveyor run.

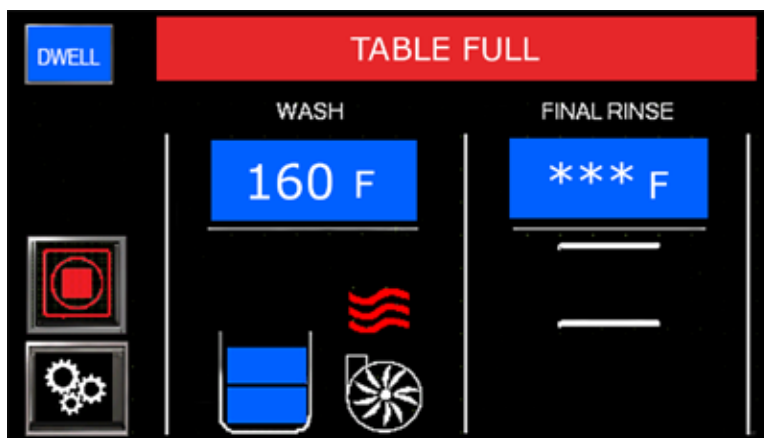


Fig. 89 - Status bar displays "TABLE FULL" as rack is loaded.

- 3 "TABLE FULL" is displayed again when the next rack is loaded. The conveyor stops as the dish rack is loaded and restarts when it is against the rear track. Continue processing racks.

- 4 The pumps and conveyor stop after the last dish rack exits the machine.

 **NOTE:** Refer to pages 24-25 for cleaning instructions.

## P/N 117014 ELECTRIC DRAIN VALVE MANUAL OPERATION



Type 1 - Without adjusting knob

Valve Position Sight Window



Valve Closed



Valve Open



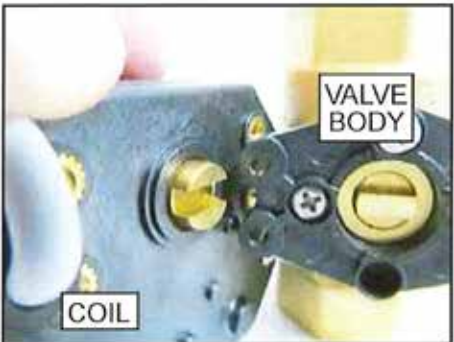
Type 2 - With adjusting knob



**1**  
Remove four 2.5mm allen screws & remove coil from valve body.



**1**  
Pull adjusting knob out.



**2**  
Note valve position is shown closed.



**2**  
Rotate knob to open or close the valve.



**3**  
Turn valve body to adjust valve.



OPEN



CLOSED

**4** Reassemble in reverse order.



**3**  
Make sure the sight glass indicates the desired position.

Push the knob in.

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