

Champion®

Operation, Cleaning, and Maintenance Manual

64 PRO Series Two Tank Rack Conveyor Dishwasher

OPTIONS:

- VHR - Ventless Heat Recovery
- HR - Heat Recovery

Standard Models

64 PRO	86 PRO
90FF PRO	
100HD PRO	

VHR Models

64 PRO-VHR	86 PRO-VHR
90FF PRO-VHR	
100HD PRO-VHR	

HR Models

64 PRO-HR	86 PRO-HR
90FF PRO-HR	
100HD PRO-HR	



www.championindustries.com

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For machines beginning with S/N RP20102891 and above

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Printed in the USA



The Spirit of Excellence

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ATTENTION

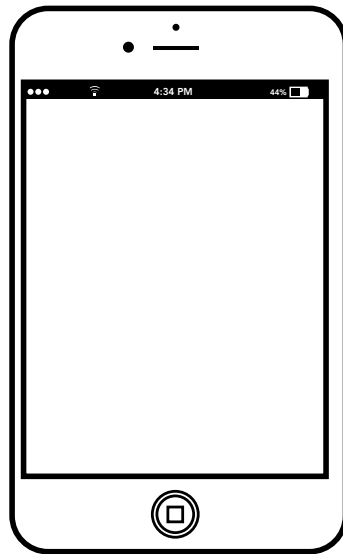
The model no., serial no., voltage, Hz and phase are needed to identify your machine and to answer questions.

The machine data plate
is located on the side of 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 phone and scan the QR code on the front of the control cabinet to access the URL <http://www.champdw.us/PRO> and register your product.
- Go to our website at <http://www.championindustries.com/warranty-registration> and register your product.
- 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

Specifications are subject to change based on continual product improvement. Dishwasher owners may a request a manual by calling 1(800) 858-4477 in the USA and 1(800) 263-5798 in Canada.

<i>Revision Date</i>	<i>Revised Pages</i>	<i>Serial Number Effectivity</i>	<i>Description</i>
12.11.20	All	RP20102891	Released First Edition

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 at Champion Industries website (<http://www.championindustries.com/warranty-registration>) or by the fax form 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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Standard Model Sizes

64 PRO	64" Two Tank Rack Conveyor
86 PRO	64" Two Tank Rack Conveyor with 22" Prewash
90FF PRO	64" Two Tank Rack Conveyor with 26" Front Feed Prewash
100HD PRO	64" Two Tank Rack Conveyor with 36" Prewash

Table 1

Minimum Operating Temperatures

MODEL	PREWASH TANK	WASH TANK	POWER RINSE TANK	FINAL RINSE
64 PRO	N/A	150°F/66°C	160°F/71°C	180-195°F/82-91°C

Table 2

**SET
UP****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:

- Drain valves are electrically operated and automatically open and close.
- Valve closes when dishwasher power switch is turned on.
- Valve opens when power switch is turned off.
- Turning the power on and immediately off will open the valve for an additional 10 minutes.

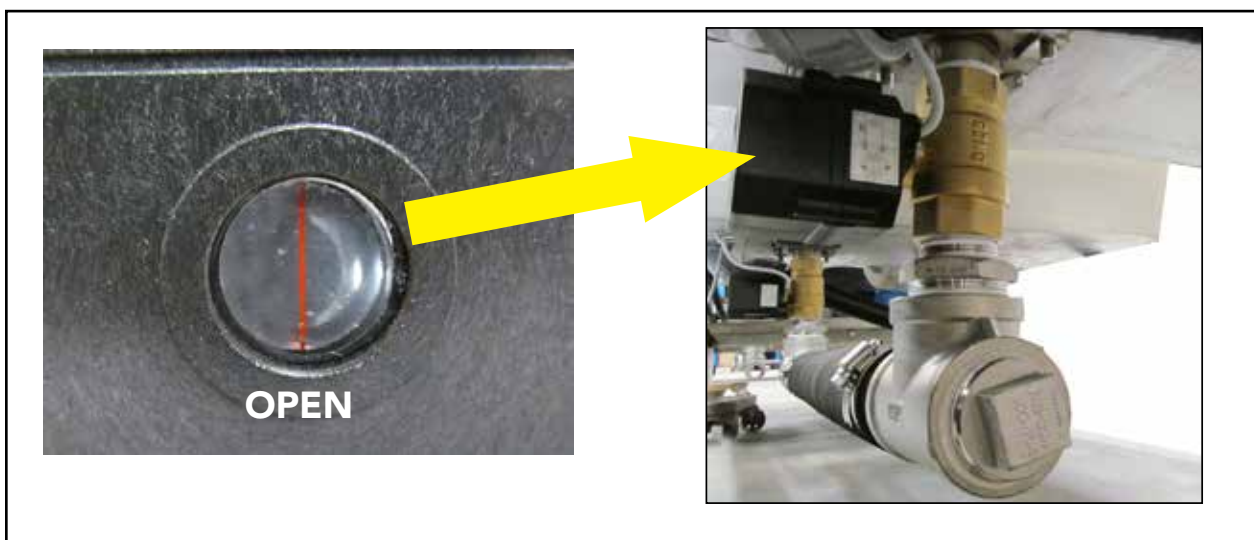


Fig. 1 - Drain valves are electrically operated.

SET UP

INSTALL SCRAP SCREENS AND BASKETS

1 INSTALL THE SCRAP BASKET.



Fig. 2

2 INSTALL THE SCRAP SCREENS.

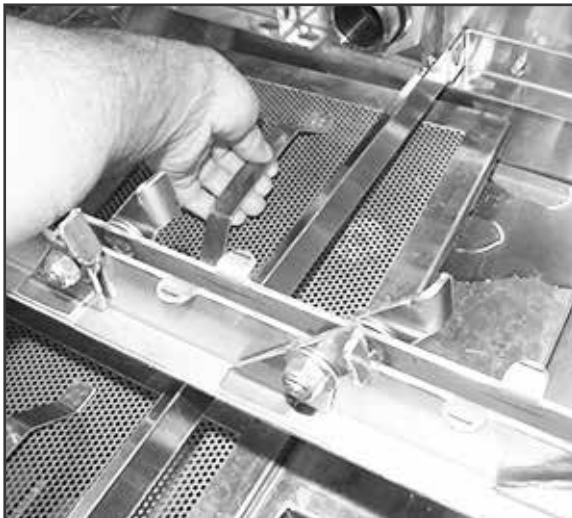


Fig. 3

INSTALL PREWASH SCREENS

1 INSTALL THE SCRAP BASKET.



Fig. 4

2 INSTALL THE SCRAP SCREEN.



Fig. 5

INSTALL WASH ARMS

- 1** SLIDE UPPER WASH ARM ION TRACKS UNTIL IT ENGAGES THE WASH MANIFOLD. PUSH WASH ARM UP UNTIL THE LATCHES LOCK IT IN PLACE.

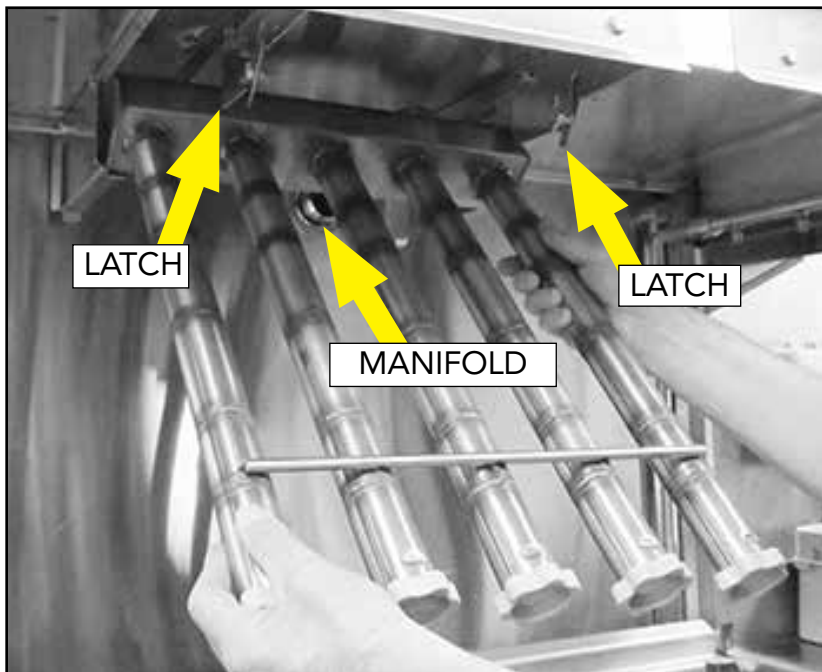


Fig. 6

- 2** SLIDE LOWER WASH ARM ON TRACKS UNTIL IT ENGAGES THE WASH MANIFOLD. PUSH THE END OF THE WASH ARM DOWN TO LOCK IT IN PLACE.

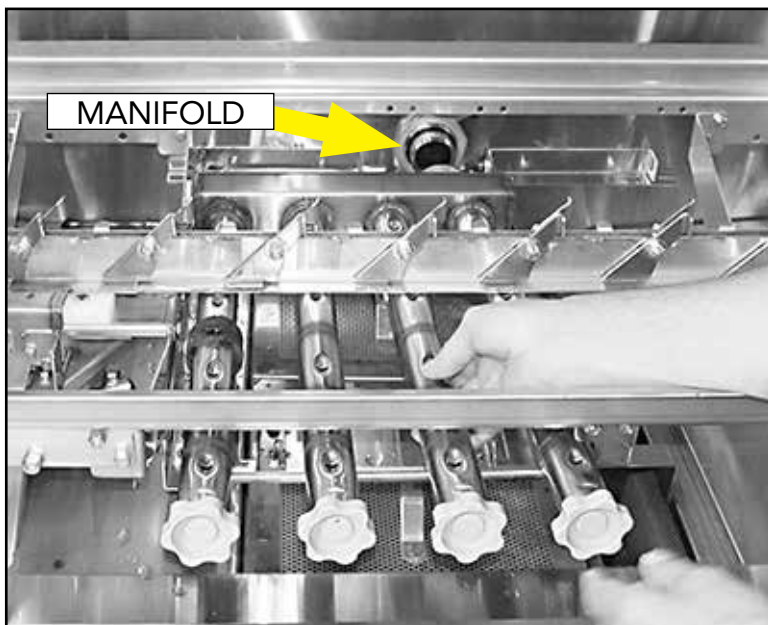


Fig. 7

SET UP

INSTALL PREWASH SPRAY ARMS

- 1 SLIDE UPPER WASH ARM ON TRACKS UNTIL IT ENGAGES THE WASH MANIFOLD. PUSH WASH ARM UP UNTIL THE LATCHES LOCK IT IN PLACE.



Fig. 8



Fig. 9

INSTALL PREWASH SPRAY ARMS - continued

- 2** SLIDE LOWER PREWASH SPRAY ARM ON TRACKS UNTIL IT FITS WITH MANIFOLD O-RING.



Fig. 10

SET UP

CURTAIN LOCATIONS

Standard Curtain Sizes

LONG	CURTAIN, 24" 20-1/4"	P/N 113720
	ROD, 5/16" X 24-5/8"	P/N 108250
HR LONG	CURTAIN, 24" 17-1/8"	P/N 116965
	ROD, 5/16" X 23-1/2"	P/N 114012
MEDIUM	CURTAIN, 24" 13-1/4"	P/N 108043
	ROD, 5/16" X 23-1/2"	P/N 114012

NOTE: See service replacement manual for high hood curtain part numbers.

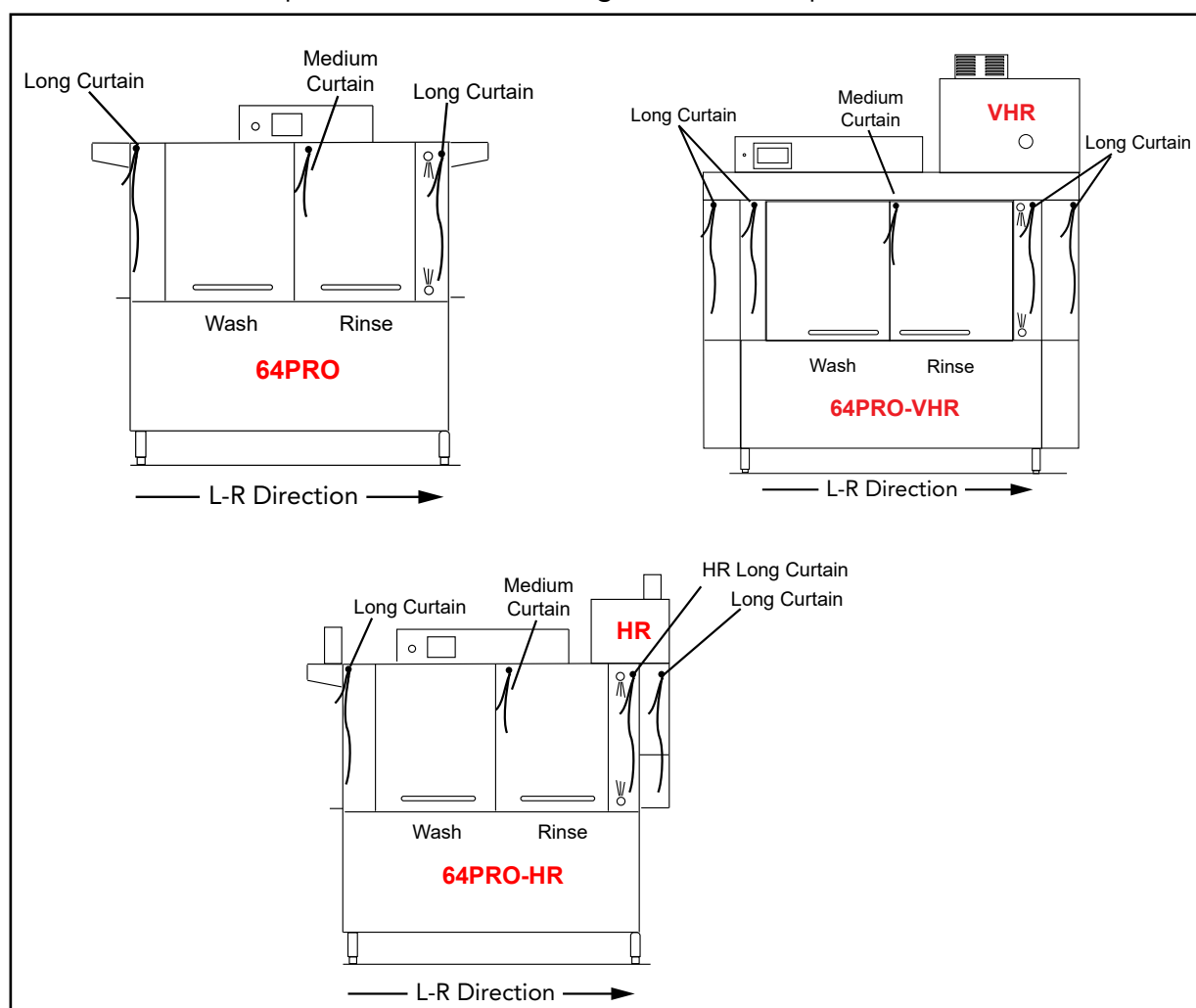


Fig. 11



NOTE:

If the dishwasher is equipped with prewash tank, then install a medium curtain and rod between the wash and prewash. Place a long curtain and rod at the entrance of the prewash.

CURTAIN INSTALLATION

**CAUTION:**

Failure to properly install a curtain may prevent proper heating of the machine.

- 1** LABELS ON THE FRONT OF THE MACHINE INDICATE THE CURTAIN LOCATIONS.
- 2** HANG THE CURTAINS ON THE HOOKS LOCATED ON EACH SIDE OF THE HOOD.
- 3** MAKE SURE THE CURTAIN SHORT FLAPS FACE THE LOAD END OF THE MACHINE.

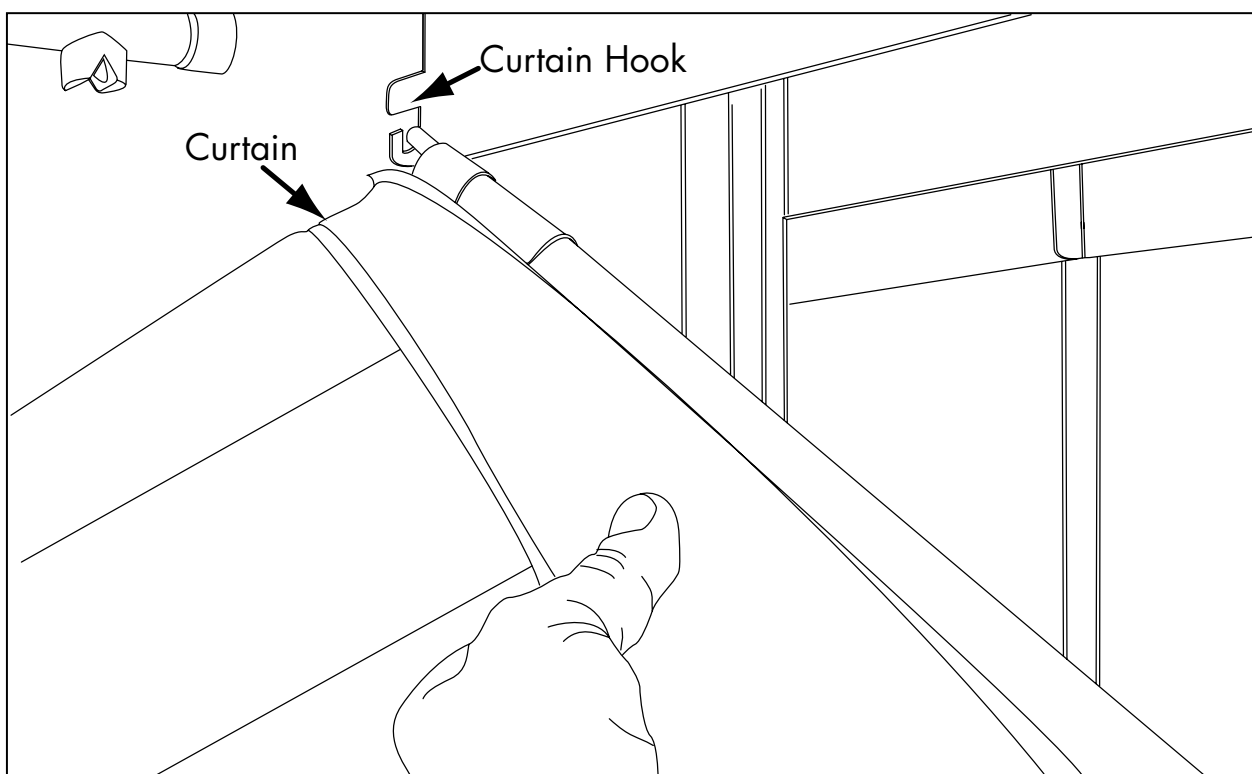


Fig. 12

LOADING DISH RACKS

1 REMOVE FOOD REMNANTS FROM THE WARES BEFORE LOADING THEM INTO DISH RACKS.

2 LOAD PLATES IN A PEG RACK, BOWLS AND GLASSES IN A FLAT-BOTTOM 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

3 DO NOT OVERLOAD RACKS. SPACE WARES EVENLY IN THE DISH RACK.

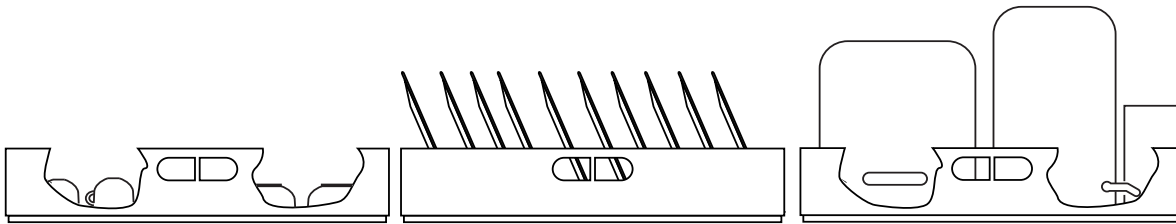


Fig. 13

OPERATION SUMMARY

Power up Procedure:

1. Touch the Green Power button. The drain valves will close and the dishwasher will begin the automatic fill. The display screen will illuminate and FILLING displays in the status bar.
2. The incoming wash temperature displays in the Wash °F box. The final rinse temperature displays in the Rinse °F box during the final rinse, the final rinse temperature display is blank at all other times.

Cleaning Wares:

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 150°F/66°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.



CAUTION: Take care as dish racks exiting the machine may be hot.

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 moves 4 secs., stops for 10 secs., moves 4 secs., stops 10 secs., moves 4 secs., stops 10 secs. then resumes normal washing. The dwell button must be touched for each rack that requires extra washing. Do not run racks back to back.

CONTROL PANEL DESCRIPTION

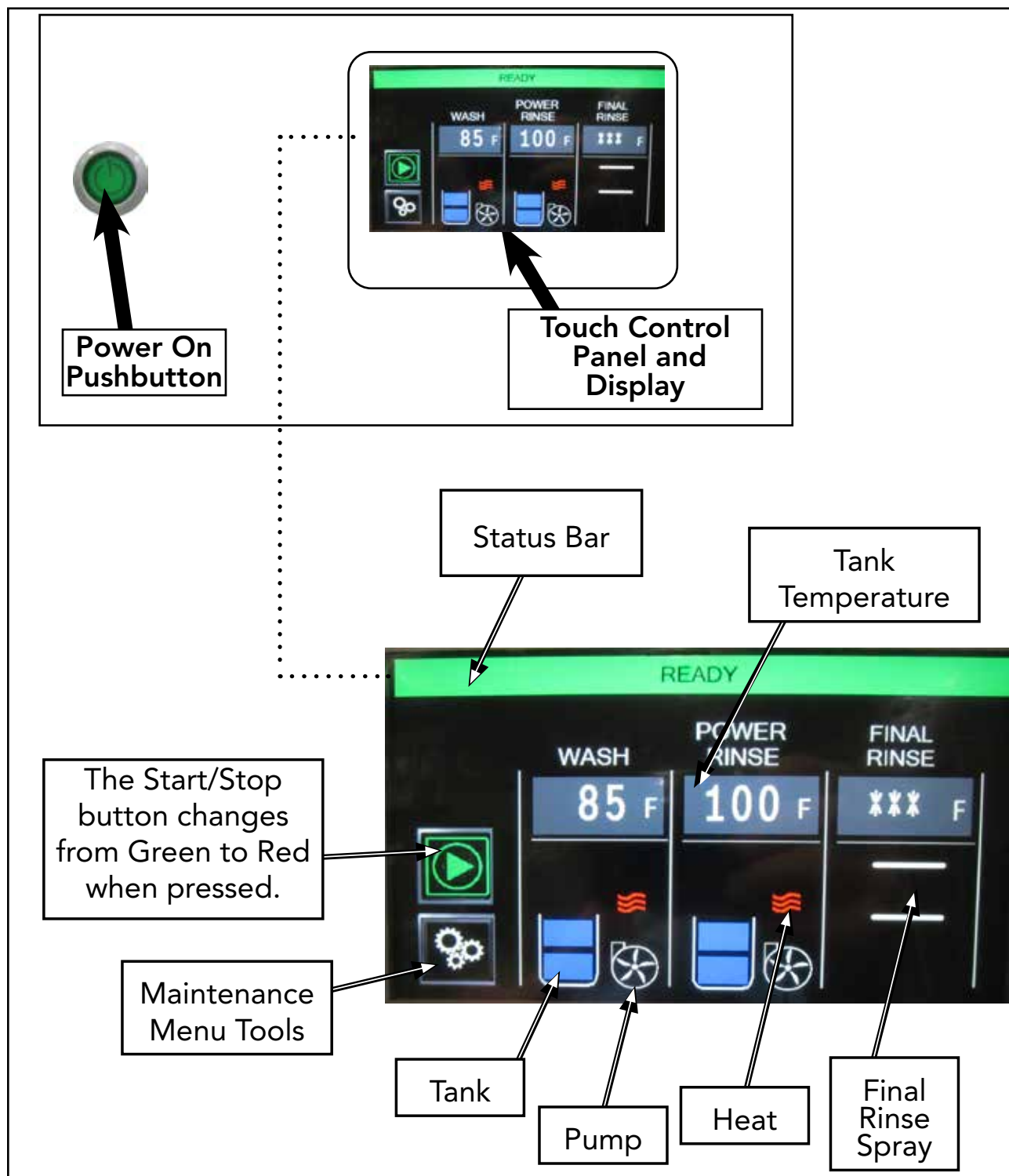


Fig. 14

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

- 1** PUSH THE GREEN POWER BUTTON ON. THE DISPLAY ILLUMINATES. 'FILLING' APPEARS IN THE STATUS BAR.
- 2** THE WASH AND POWER RINSE TEMPERATURES DISPLAY. FINAL RINSE TEMPERATURE DISPLAYS DURING THE FINAL RINSE.
- 3** THE TANKS DISPLAY RISING BLUE LEVELS AS THE TANKS FILL WITH WATER. 'FILLING' DISPLAYS OVER THE TANKS.



Fig. 15

WASH/FINAL RINSE— Machine washes and performs a final rinse.

- 1** THE GREEN START BUTTON APPEARS WHEN THE MACHINE IS READY TO WASH. PRESS THE GREEN START BUTTON.
- 2** THE GREEN START BUTTON CHANGES TO A RED STOP BUTTON ONCE THE GREEN BUTTON IS PRESSED. THE PUMP SYMBOLS WILL SPIN.
- 3** INSERT A DISH RACK. DWELL APPEARS ON THE SCREEN AND THE PUMPS AND CONVEYOR START. THE MINIMUM WASH TEMPERATURE IS 150°F, THE POWER RINSE TEMPERATURE IS 160°F.
- 4** THE MINIMUM FINAL RINSE TEMPERATURE IS 180-195°F WHEN THE RACK ENTERS THE FINAL RINSE ZONE. THE FINAL RINSE TEMPERATURE APPEARS AND THE SPRAY SYMBOL IS DISPLAYED.
- 5** SLIDE THE DISH RACK OUT OF THE MACHINE. THE MACHINE WILL STOP AUTOMATICALLY AFTER 2 MINUTES UNLESS ADDITIONAL RACKS ARE INSERTED INTO THE MACHINE.

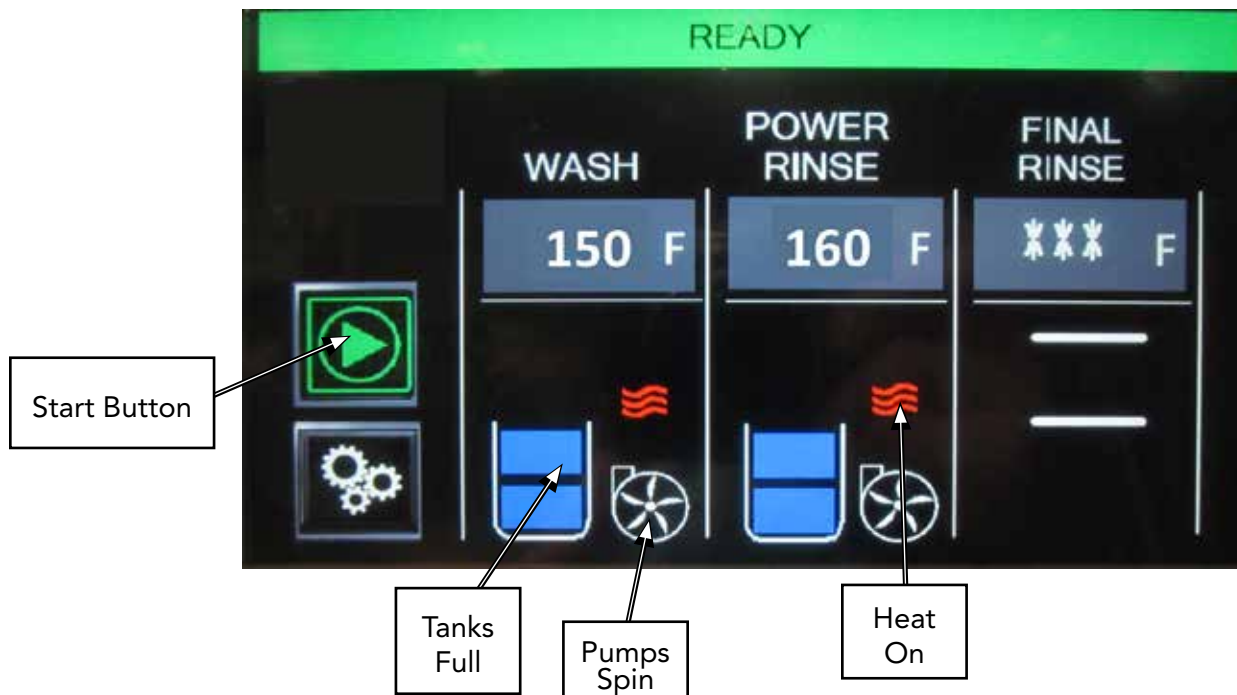


Fig. 16

WASH/FINAL RINSE- continued

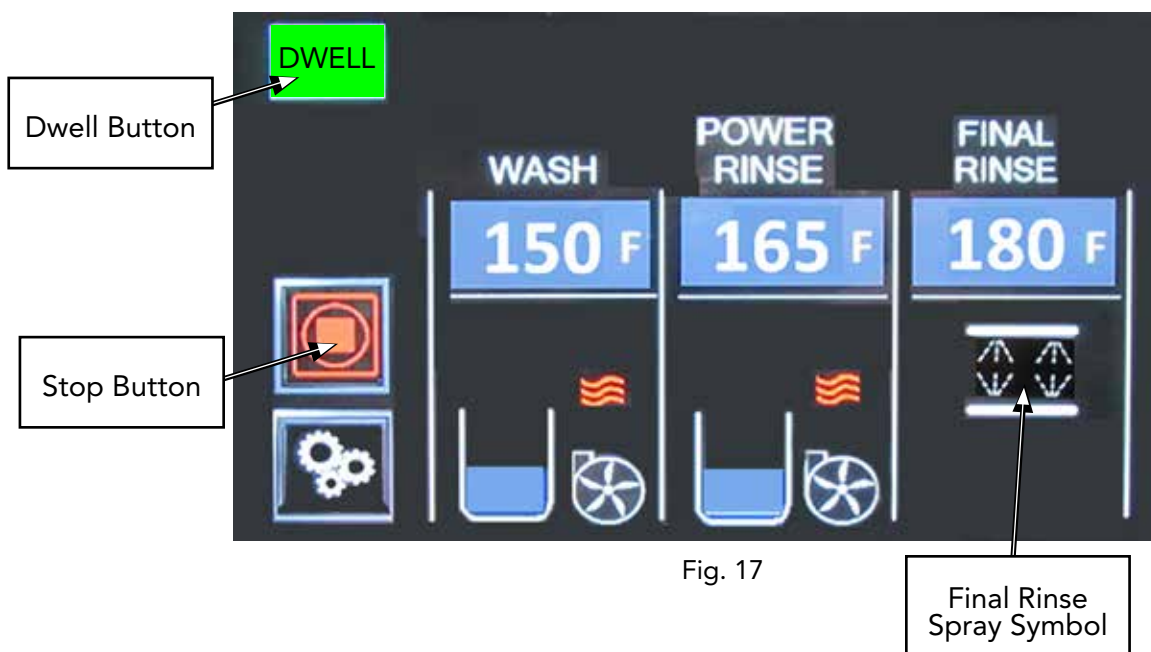


Fig. 17

DWELL— Dwell pauses the dish rack in the wash zone to clean heavily soiled wares.

- 1** INSERT A DISH RACK OF HEAVILY SOILED DISHES INTO THE MACHINE. 'DWELL' APPEARS ON THE DISPLAY.
- 2** Immediately touch the 'DWELL' button when it appears. It will turn red when touched indicating dwell is activated. The rack moves 4 secs., stops for 10 secs., moves 4 secs., stops 10 secs., moves 4 secs., stops 10 secs. then resumes normal washing and then a final rinse.
- 3** THE DWELL FUNCTION ENDS WHEN THE DISH RACK EXITS THE MACHINE.

TO WASH MULTIPLE DISH RACKS USING THE 'DWELL' FEATURE:

- 1** INSERT THE FIRST RACK AND TOUCH THE 'DWELL' BUTTON TO BEGIN.
- 2** WAIT FOR THE FIRST RACK TO PAUSE IN APPROXIMATELY 15 SECS. THEN INSERT ANOTHER RACK INTO THE MACHINE AND IMMEDIATELY TOUCH THE 'DWELL' BUTTON.
- 3** REPEAT THIS PROCESS UNTIL THE LAST DISH RACK OF HEAVILY SOILED WARES IS INSERTED INTO THE MACHINE. THE DWELL OPERATION WILL STOP AFTER THE LAST RACK EXITS THE MACHINE.

CLEANING

WASH ARMS — The upper and lower wash arms should be removed to clean. The upper wash arms have five pipes, the lower wash arms have four pipes.

- 1** THE UPPER WASH ARM ASSEMBLY HAS FIVE ARMS, THE LOWER HAS FOUR. THEY ARE NOT INTERCHANGEABLE. REMOVE THE ASSEMBLIES TO CLEAN.
- 2** ROTATE THE WASH ARM END PLUGS 1/4 TURN AND PULL OUT TO REMOVE. FLUSH THE PLUGS IN A SINK WITH FRESH WATER.
- 3** INSPECT THE WASH ARM O-RING. DAMAGE SIGNIFICANTLY REDUCES WASH PERFORMANCE.
- 4** FLUSH THE WASH ARMS AND INSPECT THE WASH ARM NOZZLES TO ENSURE THEY ARE CLEAN.
- 5** INSPECT THE WASH MANIFOLD O-RING. REPLACE IF DAMAGED OR MISSING.

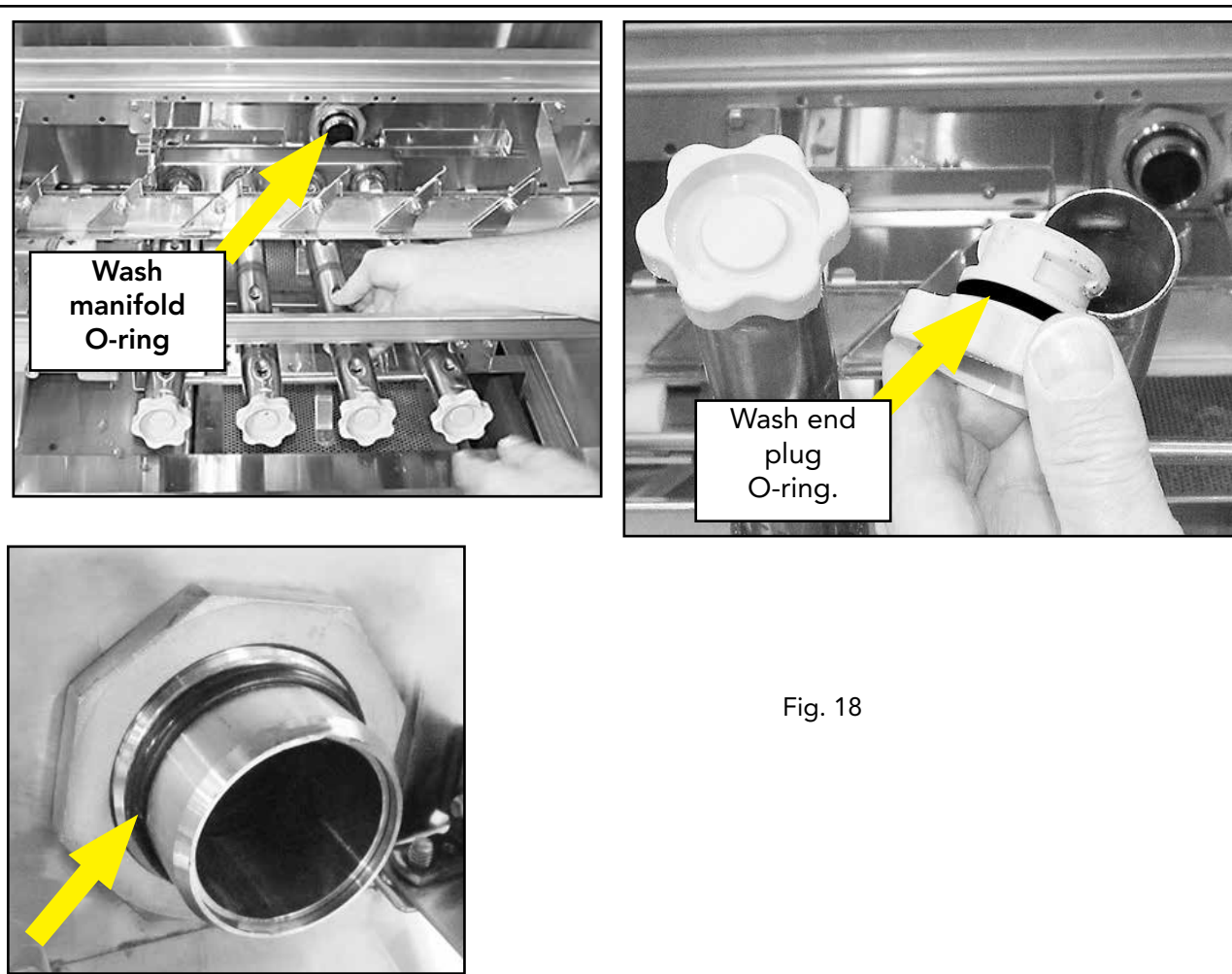


Fig. 18

PREWASH ARMS (continued)

1 REMOVE PREWASH UPPER SPRAY ARMS AND CLEAN.

2 REMOVE THE ARM END PLUGS AND FLUSH WITH CLEAN WATER. CHECK THE O-RING AND REPLACE AS REQUIRED.

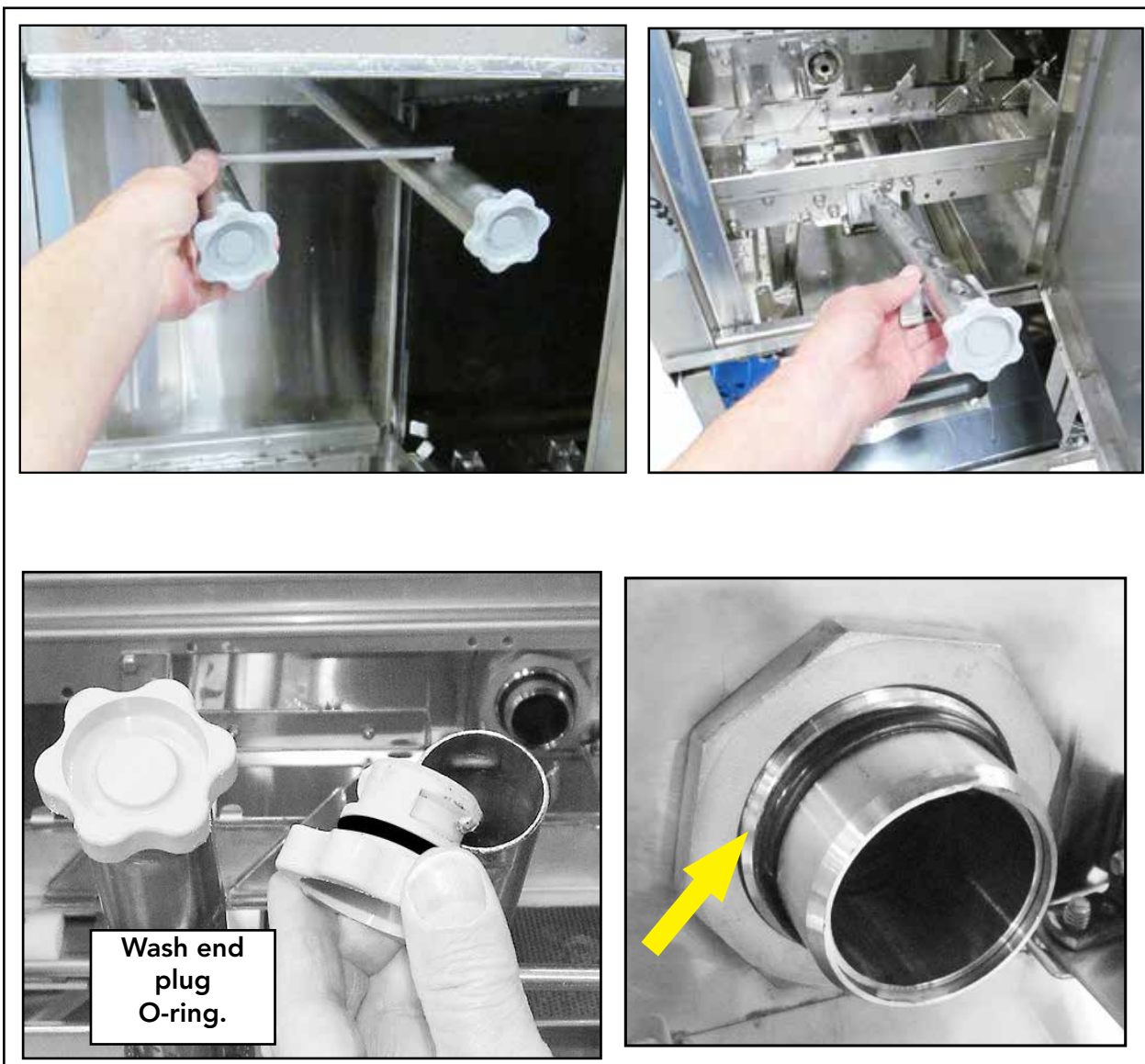


Fig. 19

CLEANING (continued)

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

1 ROTATE RINSE ARM 1/4 TURN AND PULL TO REMOVE.

2 REMOVE END PLUG AND FLUSH ARM WITH CLEAN WATER. INSPECT O-RING FOR DAMAGE AND REPLACE IF NEEDED.

3 CLEAN THE SPRAY NOZZLES WITH A SMALL WIRE OR STAPLE.



Fig. 20

SCRAP SCREENS AND SCRAP BASKETS

**CAUTION:**

Spray and wipe down the interior of the machine to remove debris before removing scrap screens and baskets. DO NOT CLEAN INTERIOR WITH METAL PADS.

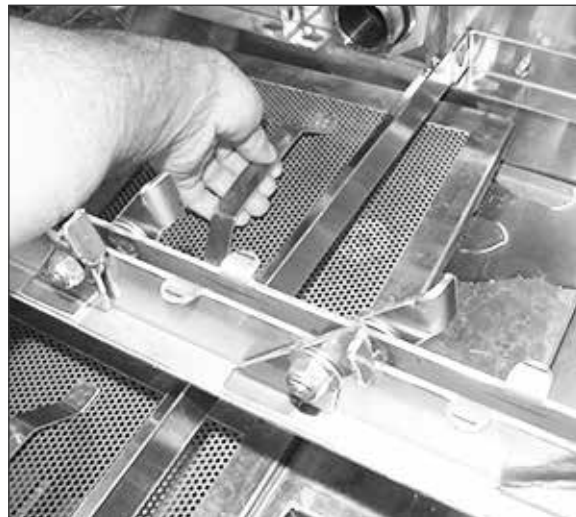
1 REMOVE THE SCRAP BASKET.**2** REMOVE THE SCRAP SCREENS.**3** REMOVE PREWASH SCREENS.**4** REMOVE PREWASH BASKET.

Fig. 21

5 FLUSH BOTH SIDES OF THE SCREENS AND BASKETS IN A REMOTE SINK. DO NOT STRIKE SCREENS ON HARD SURFACES.

PUMP SUCTION STRAINER AND DRAIN



CAUTION:

Failure to clean the pump suction strainer reduces wash results.

1 TURN THE MACHINE POWER SWITCH OFF AND ON TO OPEN THE ELECTRIC DRAIN VALVES FOR 10 MINUTES. FLUSH TANK WITH FRESH WATER. CLEAN DRAIN SCREEN.

2 PULL THE PUMP STRAINER HANDLE UP TO REMOVE.

3 CLEAN STRAINER AS SHOWN.

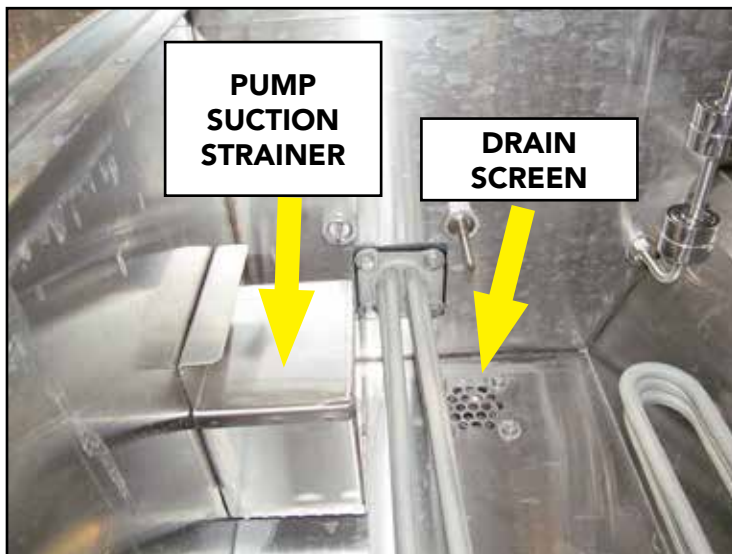


Fig. 22



Fig. 23



Fig. 24

EXTERIOR

1 USE SOFT CLOTH AND MILD DETERGENT.

2 DO NOT SPRAY EXTERIOR WITH WATER.

3 LEAVE DOORS OPEN TO AIR DRY MACHINE.

CLEANING INTERVALS

Cleaning your dishwasher is the best maintenance you can do. The cleaning intervals below are the minimum requirements for most dishwashers. You may need to clean your dishwasher more often when washing heavily soiled wares or during long periods of continuous operation.

Every 8 hours of Continuous Operation

1. Turn power switch OFF.
2. Drain valves open automatically. Remove scrap screens and scrap baskets. Clean inside of the tanks and flush with clean water. Back flush the scrap screens until clean.



CAUTION:
DO NOT STRIKE SCREENS OR BASKETS AGAINST SOLID OBJECTS

3. Remove the spray arm assemblies. Remove the end cap from each spray arm.
4. Flush the spray arms and nozzles to remove any debris.
5. Replace the end caps. Check the condition of the manifold O-ring.
6. Reinstall the spray arms.
7. Remove and clean the curtains. Allow them to air dry at the end of the day.
8. Leave the doors open at night to air dry the machine.
9. Make sure the final rinse nozzles are clear of mineral deposits.
10. Straighten a metal wire to clean the nozzles.
11. Clean the exterior of the machine with a soft cloth and mild detergent.
12. Check machine for leaks.
13. Check the chemical supplies and refill as necessary.

At the End of the Day

1. Perform Steps 1-13 above.
2. Remove the curtains and clean with fresh water in a remote sink.



CAUTION:
DO NOT USE STEEL WOOL TO CLEAN THE INTERIOR OF THE MACHINE.

3. Wipe the interior and exterior of the machine with a soft cloth and a mild detergent. **DO NOT HOSE THE EXTERIOR OF THE MACHINE WITH WATER.**
4. Reassemble the dishwasher and leave the doors open to air dry.
5. Refill chemicals if required.



Deliming



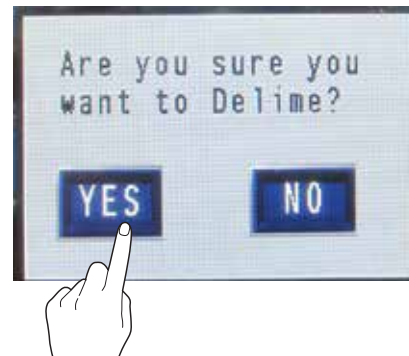
WARNING:

Consult the chemical representative's recommendations for the use of deliming chemicals. Wear protective clothing, goggles and face shield when handling chemicals.

Deliming intervals are determined by the amount of lime build-up in the dishwasher. A password protected delime time interval is adjustable at the factory or by the supervisor.

Delime Alarm

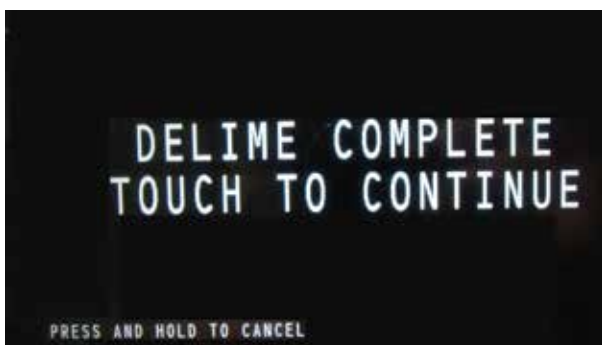
- A yellow "DELIME REQUIRED" message will appear when deliming is due.
- Press the 'GEARS' button.
- The message box 'Are you sure...' appears.
- Press "YES" to begin deliming, "NO" to pause.
- The yellow "Delime Required" message will reappear.



Step 1: Deliming begins when "DELIME DRAINING" is displayed.



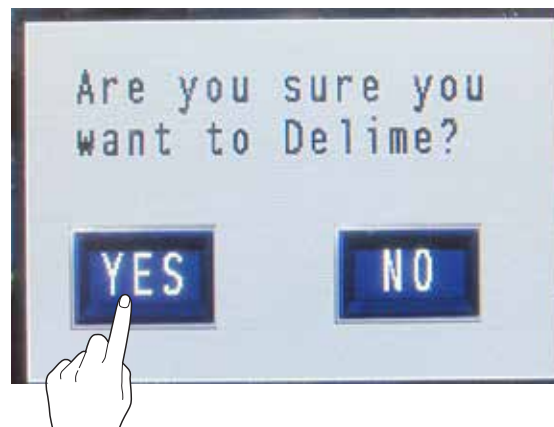
Step 2: The operation can be stopped by pressing and holding the words "PRESS AND HOLD TO CANCEL".



Step 3: The display returns to the main screen and displays "DELIME REQUIRED". Pressing "TOUCH TO RESET" will bypass the delime function but the prompt will return until a deliming operation is performed.

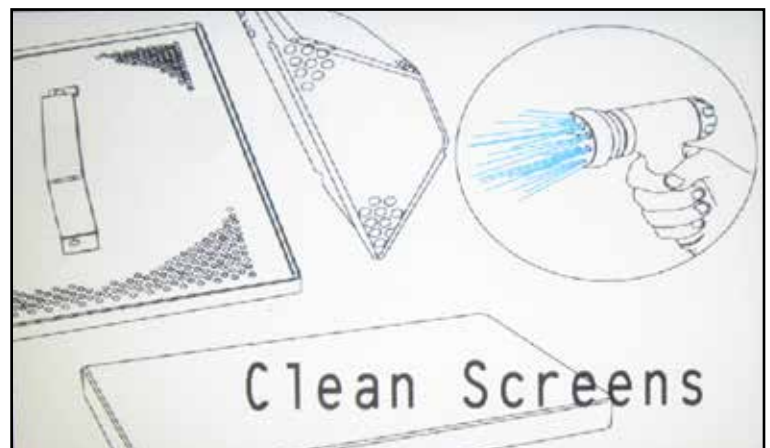


Step 4: Press "YES" to begin the deliming process.



Step 5: "CLEAN SCREENS" picture displayed.

- Remove scrap screens.
- Clean food soils.
- Reinstall screens.



Deliming

Step 6: "CLOSE DOOR TO START" is displayed.



Step 7: Close doors and machine fills.

- "DELIME DRAINING" then "DELIME FILLING" are displayed.



Step 8: "ADD CHEMICAL" displayed.

- Open the doors and add the delime chemical according to the chemical representative's instructions.
- The wash and Power Rinse tank capacity = 17 US gals. each.
- **DELIMING OPERATION CAN NOT BE STOPPED ONCE DELIMER IS ADDED.**



Step 9: "CLOSE DOOR TO START" is displayed.



Step 10: "PUMPS ON" is displayed. Pumps will run.



Step 11: "DELIME DRAINING" "DELIME FILLING" are displayed.



Step 12: "DELIME RINSE" displays. The machine may rinse and drain multiple times according to the pre-programmed setting.



Deliming

Step 13: "DELIME COMPLETE" is displayed when deliming is complete.

- Touch the display and return to the main screen.
- Machine will begin a normal fill.



MAINTENANCE

Schedules

Weekly

1. Inspect all water lines for leaks and tighten joints if required.
2. Clean any detergent residue from the exterior of the machine.
3. Clean any accumulated scale from the heating element.
4. Inspect the spray arms for damage or missing parts.
5. Inspect the final rinse arm nozzles and clean with a wire if required.
6. Inspect the pawl bar and drive assembly for damage or missing parts.
7. Check that float switches move freely.
8. Check the idle pump actuator and the final rinse actuator move freely.
9. Remove and clean the pump suction strainer.

Monthly

1. Inspect interior of machine for lime deposits and clean. Delime if desired.
2. Check o-rings on spray arm piping connections.
3. Clean any accumulated scale from the heating element.
4. Inspect the spray arms o-rings and ensure all plugs are installed.
5. Inspect the final rinse arms for missing o-rings.
6. Inspect the pawl bar and drive assembly for damage or missing parts.
7. Check that float switches move freely.
8. Check the idle pump actuator and the final rinse actuator move freely.
9. Check the condition of Touchscreen display and pressure gauge.
10. Perform complete operation check.

Yearly

1. Contact authorized service agent to perform complete maintenance review of machine.
2. Correct any abnormal situations as recommended.

TROUBLESHOOTING CHART

Before calling for service check the following:

1. Dishwasher power and water are on.
2. Machine is assembled correctly.
3. Conveyor is clear of obstructions.
4. Screens and pump intakes are clear.
5. Doors are closed and secure.



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 into machine.
Low or no water.	Main water supply off. PRV setting incorrect Solenoid strainer clogged. Solenoid valve defective.	Open supply valve. Adjust the PRV setting Clean strainer. Contact Service Agent.
Poor wash results.	Detergent not added to tank. Wares incorrectly loaded. in dishrack. Clogged screens. Clogged spray arms. Thermostat defective. End plugs missing. Water temperature low.	Check detergent supply. Reposition wares or reduce amount of wares. Clean screens. Clean spray arms. Contact Service Agent. Replace plugs and o-rings. Check incoming water temperature.
Dishwasher conveyor stops for 10 seconds.	'DWELL' feature in action.	DO not touch 'DWELL' button when loading rack.
Dishwasher conveyor will not run.	Conveyor jammed or table limit switch has stopped conveyor.	Check conveyor for jams Remove racks from load end of table.

FAULTS

- A 'RED STATUS' indicates a problem that must be fixed to resume normal operation.
- The operator can fix some problems, others require a service technician.
- If a fault icon is visible at start up, then press the fault icon to identify and fix the problem.
- Troubleshooting instructions are displayed to guide the operator in fixing a problem.
- Some faults can be bypassed then a service agent should be called.
- Fatal faults will prevent the machine from operating until a service agent resolves the issue.

FAULT ICON LEGEND

Icon	Description	Function
1 	Status Bar - Located at top of screen.	Red = Fault condition alerting operator that a problem has occurred.
2 	DOOR OPEN - 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 where 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 	Acknowledge Fault - located in the troubleshooting menu.	Press the icon to confirm the fault has occurred. Home screen will reappear. The service phone number may appear if the problem requires service.
5 	Call for Service - located in the troubleshooting menus.	Press the icon to access the service agent phone number.
6 	"Screen Forward or Backward" located in the lower right corner of fault menus.	Press the button to go forward or backward one page in the instructions.
7 	"Main Screen" - located in the lower right corner of fault menus and other information sections.	Press the button to return to the main operating screen.

Table 3

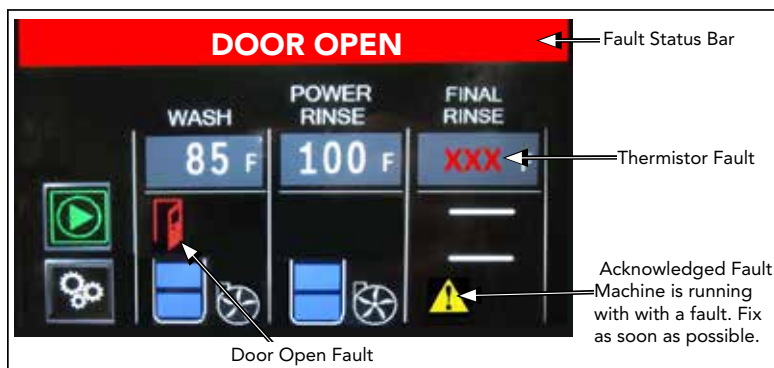


Fig. 24 - Fault icons.

FAULTS - continued

The following faults are usually handled by the operator:

DOOR OPEN A door is open. Check the section where the door icon appears. Inspect the door magnet and switch. Make sure door is fully closed. The door icon should disappear and the machine continue operation once the door is closed.

CONVEYOR FULL TOUCH TO RESET The unload table is full. Remove dish racks at the end of the table, then 'TOUCH TO RESET' on the status bar to clear the fault. Return to normal operation.

CONVEYOR JAM TOUCH TO RESET Something has jammed the conveyor and it has stopped. Open the doors and clear the jam, then 'TOUCH TO RESET' on the status bar to clear the fault. Return the machine to normal operation.

WASH TANK FLOAT FAULT TOUCH TO RESET There is a problem with a wash tank float indicated by a yellow triangle in the affected tank section. Check the float and correct the problem. Then 'TOUCH TO RESET' to return the machine to normal operation.



The phone icon will access the service technician phone number so the operator can call for assistance to fix a problem.

FAULT TROUBLESHOOTING

The following faults may require troubleshooting guidance and/or service agent help:



Call the service agent to fix a problem as soon as possible.



The operator should push the yellow triangle to access the troubleshooting guide.



Pressing the acknowledge icon will allow the machine to operator after troubleshooting.



Call a service agent as soon as possible to fix the problem.

(See next page)

FAULT TROUBLESHOOTING - continued



The operator should push the yellow triangle to access the troubleshooting guide.



Pressing the acknowledge icon will allow the machine to operator after troubleshooting.



Call a service agent as soon as possible to fix the problem.

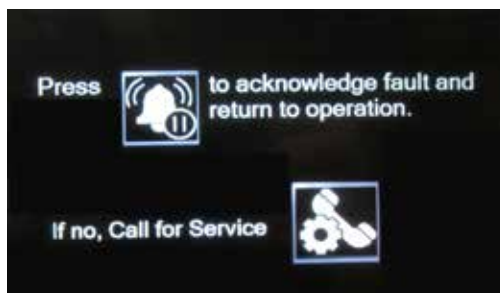
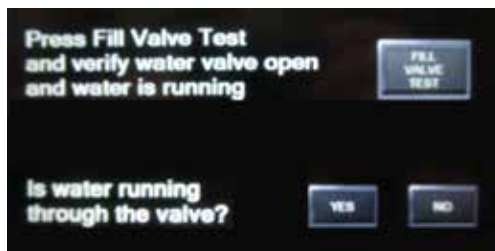
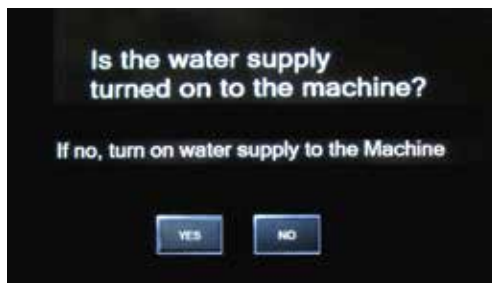


NOTE: On start-up, the triangle will indicate the machine is operating in an acknowledged fault condition.

The operator should call the service agent and have the fault fixed as soon as possible.

Troubleshooting Guide Examples -

The screen examples below illustrate how the system provides troubleshooting instructions.



Supervisor Mode

The supervisor mode enables a supervisor to monitor and set parameters for the operation of the machine. The supervisor screen is shown below (see Fig. 25).

- Press the 'GEARS' button on the main screen to access the supervisor menu.



Fig. 24 - Main screen.

- The menu contains: Machine Data, Drain, Set-up Options, and (Maint = Maintenance).
- Set-up Options requires the entry of a 7777 password.
- MAINT is restricted to service technicians and has a separate password for access.



Fig. 25 - Supervisor main screen.

Supervisor Mode

Machine Data:

- Machine Data screen includes: Inputs, Outputs, Temps, and the software revision number.

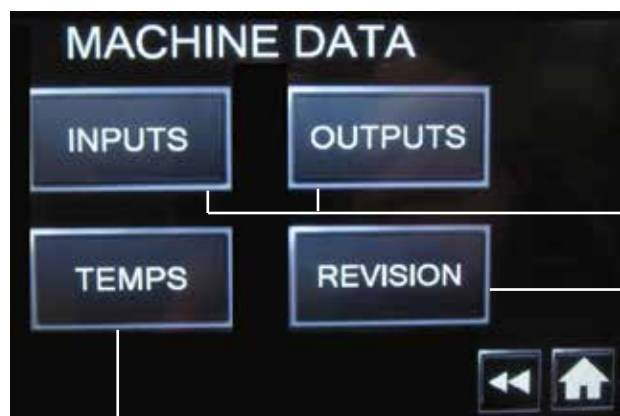


Fig. 26 - Supervisor Machine data screen.



Fig. 28 - Machine temps

- The machine temps screen provides the real-time operating tank temperatures of the machine.
- VHR data is included if the machine is built as a Heat Pump (VHR) machine.

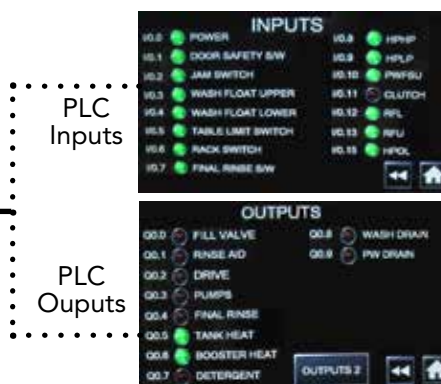


Fig. 27 - PLC Inputs/Outputs.

- The PLC inputs and outputs are green when ON.
- The data is a quick guide in determining if the PLC is working properly in context with machine operation.



Fig. 29 - PLC software version number.

- The software version information gives the service technician important information about the the design and capabilities of the machine.

Supervisor Mode - continued

Drain:



Fig. 30 - Drain valve screen.

- Pressing a PW, Wash, or PR, (Power Rinse), drain button manually opens the drain valve to verify the respective valve is operating correctly.
- The button changes color to red when pushed and changes back to blue when released.
- The operator can listen to the valve when it is cycling.

Setup Options - Password Protected

- Pressing the setup options button enables a password screen.
- The supervisor must perform the following actions to enter a 7777 password.

1. Press the setup button. A keypad is displayed.
2. Press "7777"
3. Press ENT.
4. The Machine Settings screen is displayed (Fig. 32).

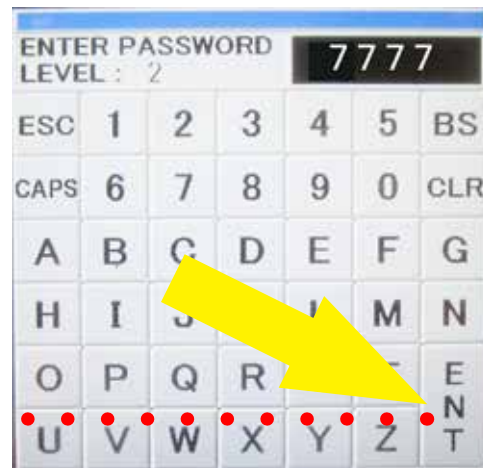


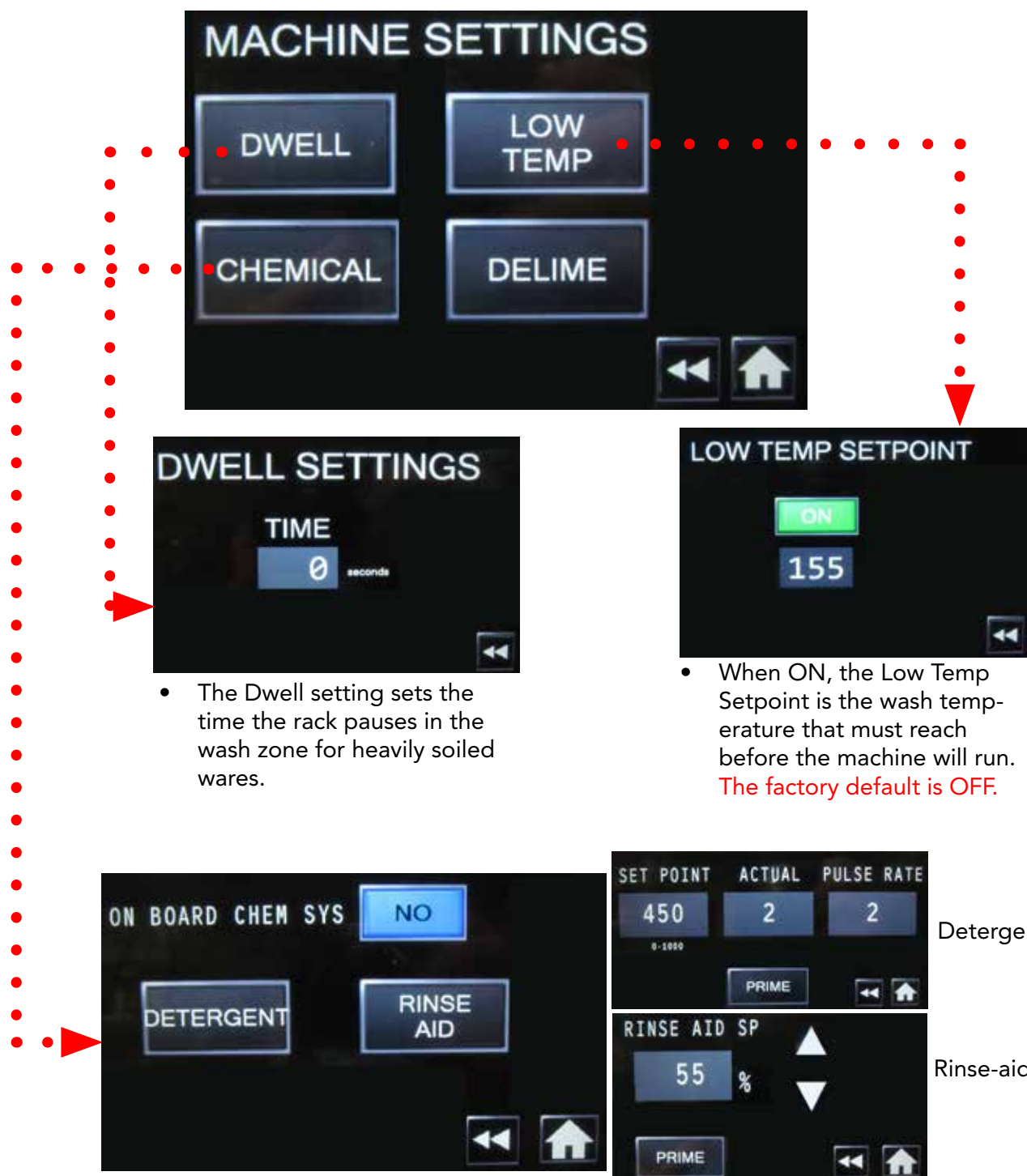
Fig. 31 - Password entry screen.



Fig. 32 - Setup options screen.

Setup Options - Password Protected (continued)

- The machine settings screen enables the supervisor to change the operating parameters for DWELL, LOW TEMP, CHEMICAL, and DELIME.



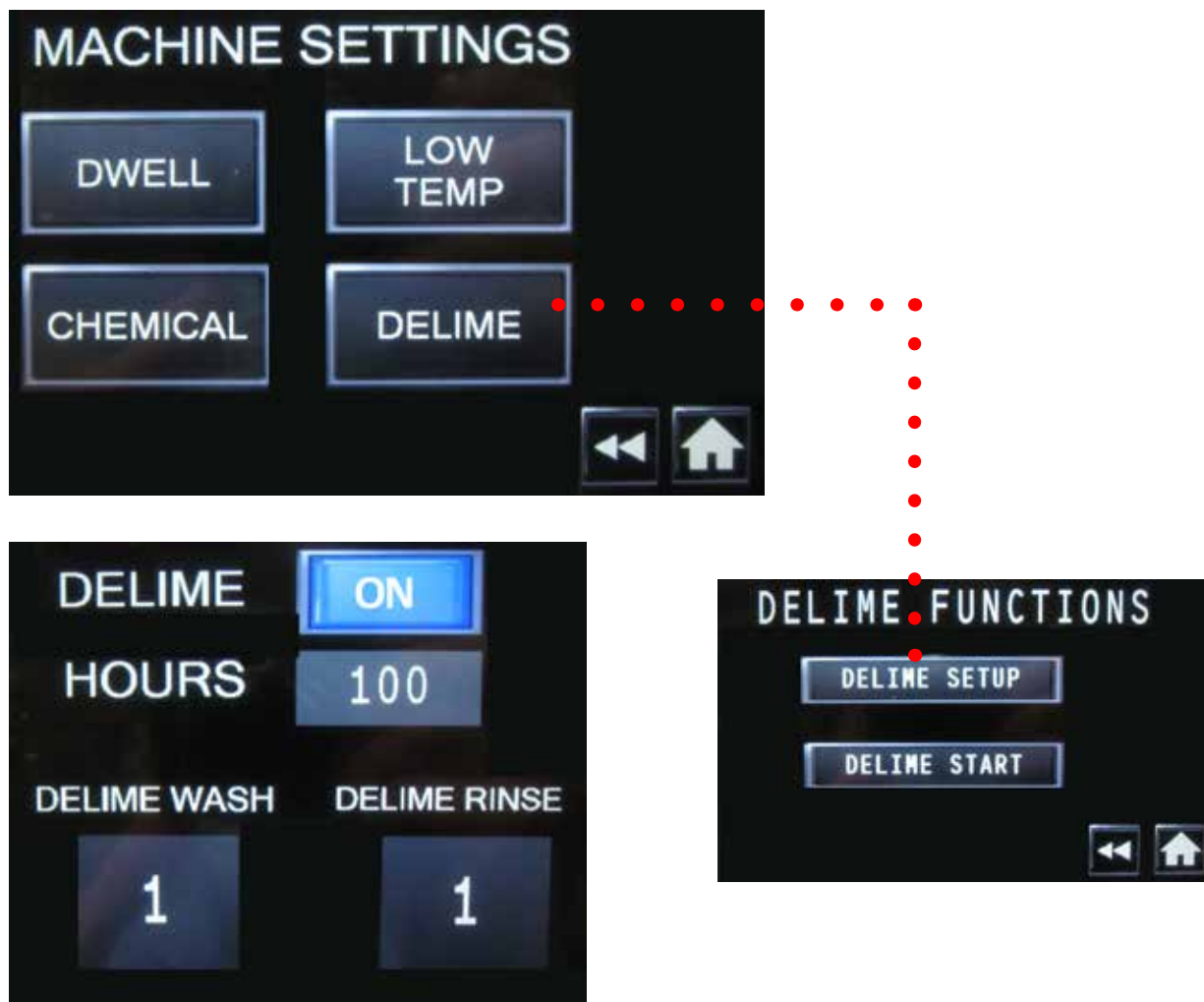
- The Dwell setting sets the time the rack pauses in the wash zone for heavily soiled wares.

- When ON, the Low Temp Setpoint is the wash temperature that must reach before the machine will run. The factory default is OFF.

- The Chemical Setup determines the operation of the factory on-board chemical system for detergent and rinse-aid (if equipped). The values are factory set. NO indicates there is not an on-board system installed. YES means the system is installed. The detergent and rinse-aid pumps can be primed from this screen.

Setup Options - Password Protected (continued)

- The DELIME button sets the parameters for the deliming system
- A manual delime may be performed from this screen (see page 20).



- Press DELIME SETUP to access the delime operating parameters.
- Automatic deliming is enabled when the DELIME is ON.
- HOURS sets the time interval between the 'DELIME REQUIRED' prompt.
- The DELIME WASH value sets the number of times the machine will perform wash cycles during the delime cycle.
- The DELIME RINSE value sets the number of times the machine will perform rinse cycles during the delime cycle.
- Pressing DELIME START begins a delime operation .

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