OPERATION

FT900 SERIES DISHWASHERS

	R-L OPERATION	L-R OPERATION
LOAD		
5'	ML-110672	ML-110673
6'	ML-110870	ML-110871
7'	ML-110674	ML-110675
8'	ML-110876	ML-110877
9'	ML-110881	ML-110882
CENTER		
8' FT900	ML-110676	ML-110677
11' FT900W	ML-110883	ML-110884
4' FT900S	ML-110705	ML-110706

	R-L OPERATION	L-R OPERATION
UNLOAD WITHOUT BLOWER-DRYER		
5'	ML-110680	ML-110681
6'	ML-110805	ML-110806
7'	ML-110682	ML-110683
8'	ML-110807	ML-110808
9'	ML-110684	ML-110685
9'split	ML-110809	ML-110810
10'	ML-110813	ML-110814
10'split	ML-110817	ML-110818
11'	ML-110686	ML-110687
11'split	ML-110821	ML-110822
12'	ML-110825	ML-110826
12'split	ML-110829	ML-110830
13'	ML-110833	ML-110834
13'split	ML-110837	ML-110838
14'split	ML-110841	ML-110842
15'split	ML-110845	ML-110846
16'split	ML-110849	ML-110850
17'split	ML-110853	ML-110854

	R-L OPERATION	L-R OPERATION
UNLOAD WITH BLOWER-DRYER		
9'	ML-110688	ML-110689
9'split	ML-110811	ML-110812
10'	ML-110815	ML-110816
10'split	ML-110819	ML-110820
11'	ML-110690	ML-110691
11'split	ML-110823	ML-110824
12'	ML-110827	ML-110828
12'split	ML-110831	ML-110832
13'	ML-110835	ML-110836
13'split	ML-110839	ML-110840
14'split	ML-110843	ML-110844
15'split	ML-110847	ML-110848
16'split	ML-110851	ML-110852
17'split	ML-110855	ML-110856

HOBART CORPORATION

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FORM 33906 Rev. C (Mar. 2000)

Operation and Care of FT900 SERIES DISHWASHERS

SAVE THESE INSTRUCTIONS

OPERATION

MACHINE PREPARATION — Check before beginning operation.

Raise the machine doors and make sure all components are in their proper operating positions.

Pump Intake Screens must be put on holders at each pump intake (Fig. 1).

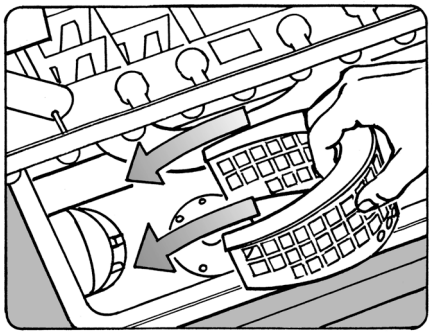


Fig. 1

Strainer Pans must be in place on top of each tank (Fig. 2).

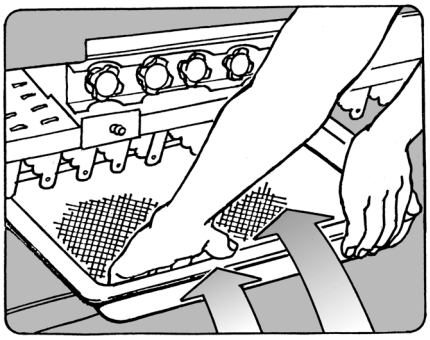


Fig. 2

Strainer Baskets must be in place in Strainer Pans (Fig. 3).

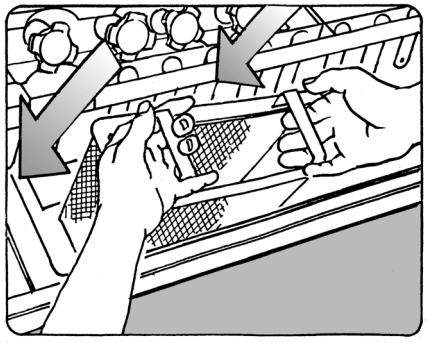


Fig. 3

End Caps must be correctly installed at ends of all Wash Arms (Fig. 4).

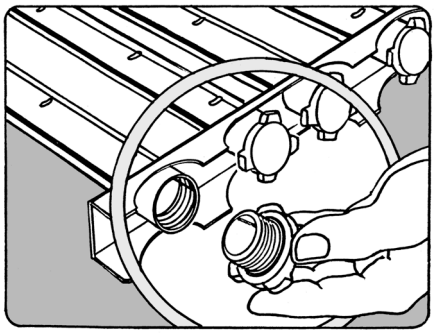


Fig. 4

Wash Arms must be properly installed and latched in place (Fig. 5).

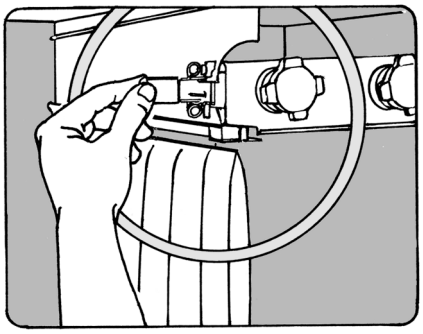


Fig. 5

The Flush Arm at load end must be properly installed (Fig. 6).

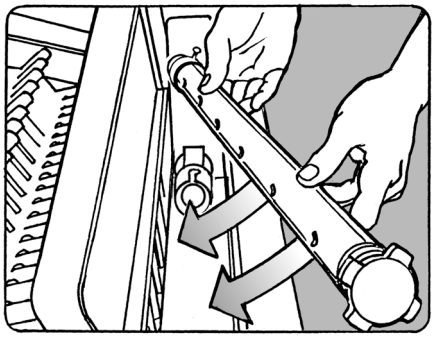


Fig. 6

The Final Rinse Arm must be properly installed (Fig. 7).

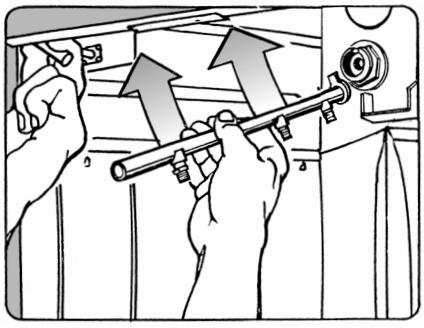


Fig. 7

Final Rinse Actuators must move freely, if so equipped (Fig. 8).

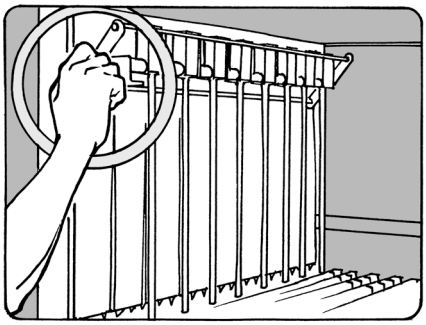


Fig. 8

Curtains must be in their proper places (Fig. 30, pages 9-11) . . .

A Short Curtain on the unload side of each upper Prewash, Wash, and Power Rinse Arm,

Long Curtains on both sides of every section divider,

Two Long Curtains at the Load End.

© HOBART CORPORATION, 1998

FILL

Assure proper water hardness. Recommended range is 4 – 6 grains per gallon.

All water (and steam, if equipped) supply valves must be opened and the electric supply turned on before the machine will function.

Close the drains and doors. Push the POWER ON / OFF switch (Fig. 9-a). The DOORS CLOSED indicator light (blue) will be lit when all doors are closed. All tanks will fill (for 10 – 15 minutes).

When all tanks are filled, the water will automatically shut off and the green INITIAL FILL light will be lit. The proper water level will be maintained throughout operation by the full-time auto-fill feature.

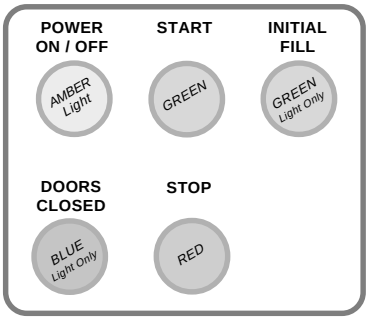


Fig. 9-a

On machines equipped with Electric Blower-Dryer option, some were equipped with a lighted BLOWER ON / OFF switch which controls power to the Blower-Dryer (Fig. 9-b) and indicates when the Blower-Dryer is running. **NOTE**: A RED light (Fig. 9-b) is provided on Blower-Dryers equipped with electric heat to alert the operator to TURN MACHINE OFF, DISCONNECT ELECTRIC POWER, AND HAVE UNIT SERVICED BY A QUALIFIED TECHNICIAN if the blower over-temperature thermostat has been activated.

On machines equipped with Steam Blower-Dryer option, some were equipped with a lighted BLOWER ON switch which controls power to the Blower-Dryer (Fig. 9-c) and indicates when the Blower-Dryer is running. When the combination Blower-Dryer switch and indicator light is not provided, the steam Blower-Dryer is on when the pumps are on.

Push the green START switch at either end of the machine or at the control box — to start the conveyor and pumps. Push the red STOP switch at either end of the machine or at the control box to stop the conveyor and pumps. Tanks will continue to heat if the POWER ON / OFF switch remains ON. If a separate switch is provided for a Blower-Dryer, push once for On and a second time for OFF. If no separate Blower-Dryer switch is present, the Blower-Dryer should be ON when the pumps are on.

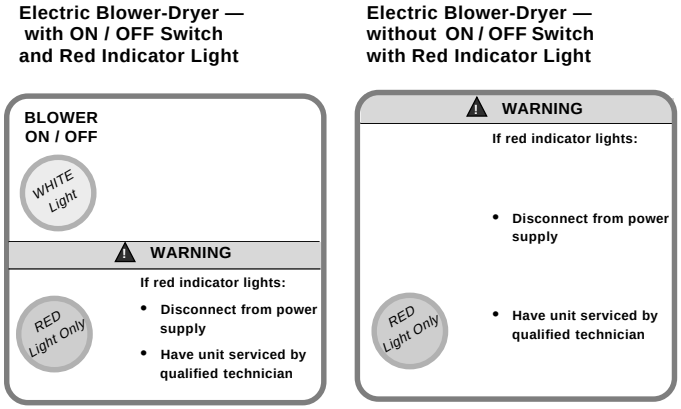


Fig. 9-b

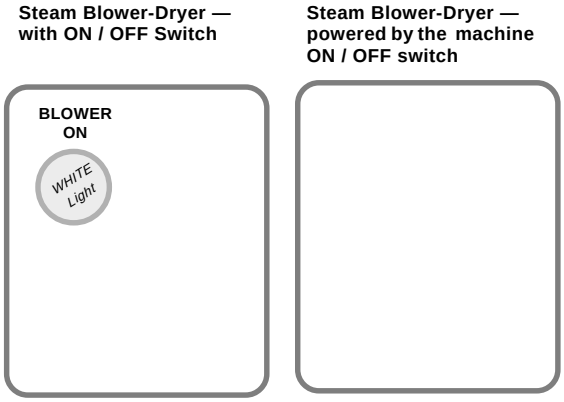


Fig. 9-c

DISHWASHING

To start the conveyor, pumps, and blower-dryer (if not switched separately), press the green START switch at either end of the machine or at the control box. The conveyor will operate only when all machine doors are closed and the tanks are filled to the proper level. When equipped with Blower-Dryer, the Blower-Dryer will operate with the conveyor and pumps. Press the red STOP switch at either end of the machine or at the control box to stop the conveyor and pumps. The Auto-Timer will automatically stop the machine if no ware is washed for a preset length of time. The Auto-Timer shut-off setting can be changed by your Hobart service technician (range is 2 – 8 minutes).

Empty Strainer Baskets During Operation as Necessary

The Strainer Baskets must be emptied periodically during operation to prevent them from becoming clogged, which would adversely affect dishwasher operation. STOP the machine and open the side access doors; Strainer Baskets are immediately inside at the front of the tanks.

Loading

Pre-scrap dishes thoroughly to remove large food particles and debris. Never use steel wool on ware to be loaded into the dishwashing machine.

All plates, saucers, trays, etc. should be loaded on the conveyor in an inclined position. Bowls should be loaded upside down. Cups, glasses, and silverware should be washed in racks, although cups and glasses may be loaded directly on the conveyor.

DO NOT attempt to wash large items (pots, pans, trays, etc.) without first checking to make sure they will fit through the machine opening. Such items must not be washed in this dishwasher unless they will easily pass through it.

Do not allow foreign objects to enter the unit, especially metallic contaminants.

Unloading

Remove dishes from the conveyor and stack similar items together.

If an item is left on the conveyor, it will strike the conveyor trip assembly (Fig. 10) and stop the conveyor. Pumps run for 1 minute — then shut off.

First, unload all other ware on the unload conveyor. Remove dish in trip arm last. Machine automatically restarts.

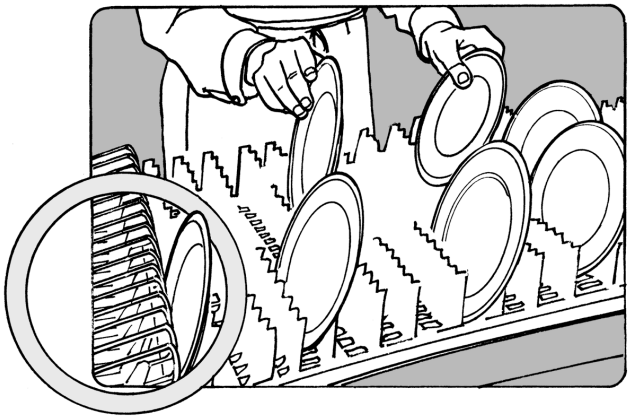


Fig. 10

Recommended Minimum Temperatures

Thermometers monitor water temperatures and should be checked occasionally to assure that proper temperatures are being maintained.

Recommended minimum temperatures are posted on the machine control box (Fig. 11).

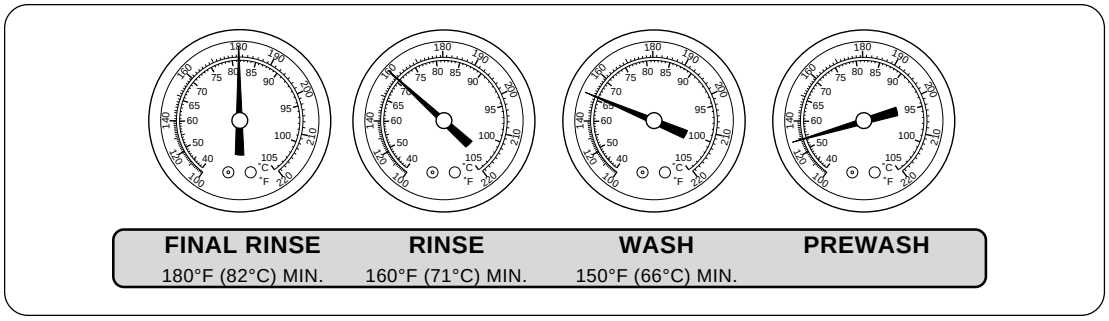


Fig. 11

CLEANING

The dishwasher MUST be thoroughly cleaned at the end of each working shift.

Drain the machine by lowering the drain levers to a horizontal position. Drain levers are located near the floor at the front of each tank. Draining the tanks requires approximately 5 – 10 minutes.

Push POWER switch OFF. DISCONNECT ELECTRICAL POWER BEFORE CLEANING. Open all front access doors.

Remove the curtains. Clean the curtains. Using a good hose with spray nozzle, clean the load shelf and unload shelf by spraying debris into the machine (Fig. 12). Thoroughly cleanse and flush the dishwasher interior (Figs. 13 & 14).

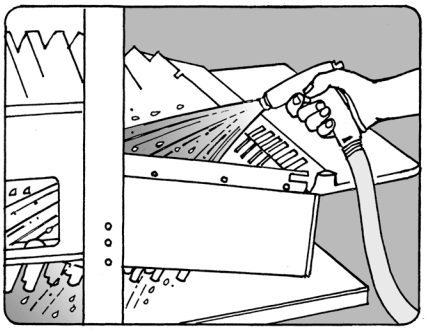


Fig. 12

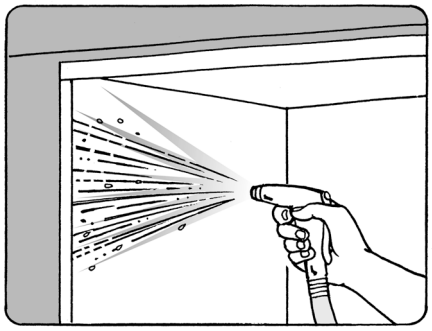


Fig. 13

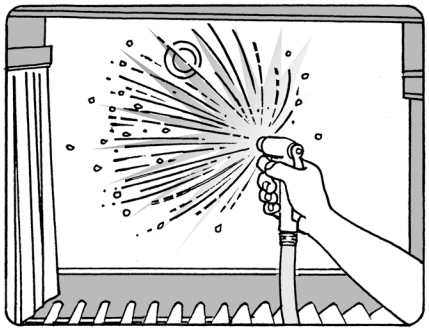


Fig. 14

Remove the wash arms by first releasing the latches (Fig. 15). Slide upper arms forward, swinging front of arm down (Fig. 16). Remove the end caps (Fig. 17). Clean wash arms in a sink.

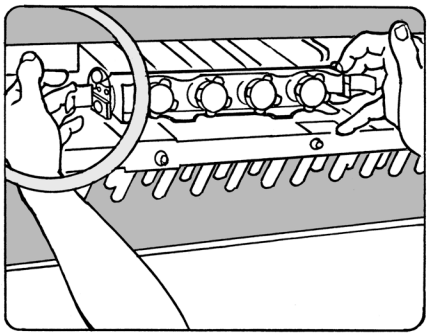


Fig. 15

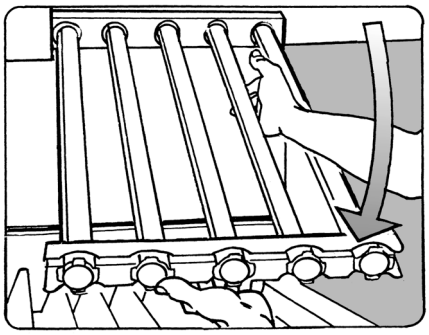


Fig. 16

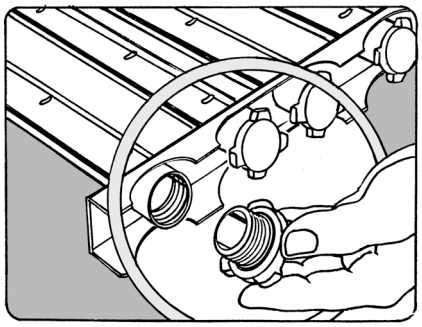


Fig. 17

Remove the flush arm at the load end of the machine (Fig. 18). Clean flush arm and nozzles in sink. Remove the strainer baskets (Fig. 19) and strainer pans (Fig. 20). Empty strainers in trash receptacle or food waste disposer. DO NOT STRIKE STRAINER PANS OR STRAINER BASKETS ON SOLID OBJECT TO DISLODGE DEBRIS. Scrub strainer pans and strainer baskets in a sink.

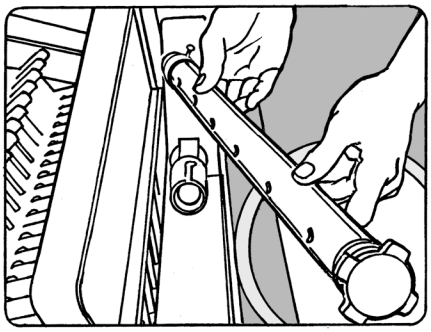


Fig. 18

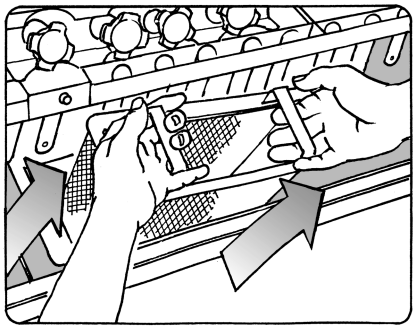


Fig. 19

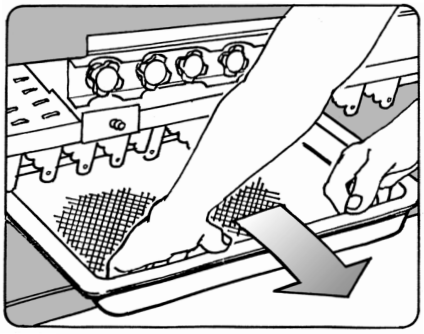


Fig. 20

When tanks are empty, remove pump intake screens (Fig. 21) and clean them in a sink.

Remove the final rinse arms (Fig. 22).

Clean debris from nozzles and arms using a straightened paper clip (Fig. 23).

Never use steel wool to clean warewasher surfaces.

Use only products formulated to be safe on stainless steel.

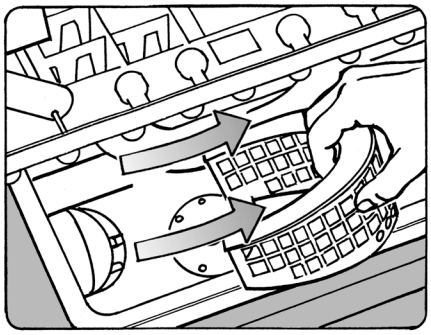


Fig. 21

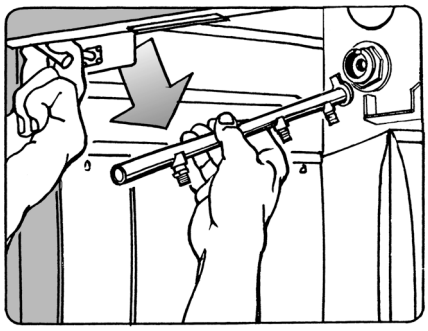


Fig. 22

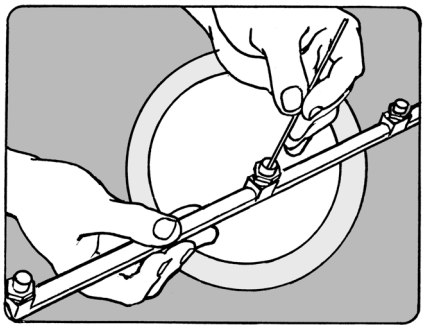


Fig. 23

Reinstall wash arm end caps; do not overtighten. Reinstall wash / rinse arms in their proper location. Orient arms so upper nozzles point down and lower nozzles point up. Arms in the prewash section each have two tubes (the slightly longer arm goes below). The wash / rinse arms with five tubes fit in the upper brackets. Arms with four tubes fit in the lower brackets.

To install the arms, rest the rear wash arm manifold on the track (open end of the box is at the rear so it can connect to the O-ring assembly in the rear). Push wash arms to rear (Fig. 24). Latch wash arms in place (Fig. 25).

Rinse the tank bottom, removing any accumulation of food soil (Fig. 26).

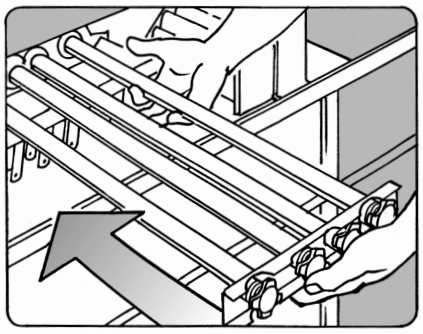


Fig. 24

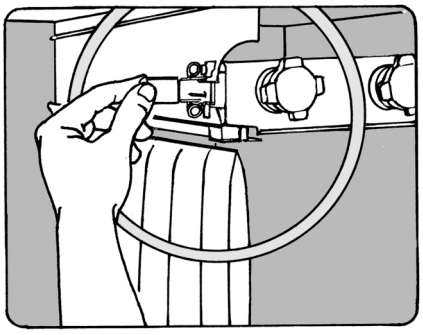


Fig. 25

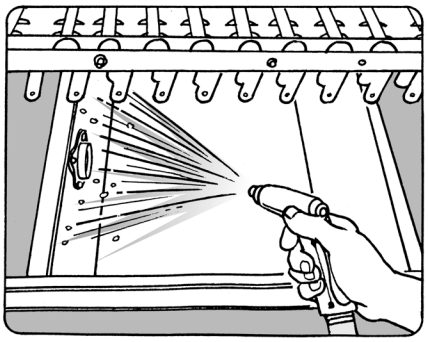


Fig. 26

Replace the pump intake screens, strainer pans, and strainer baskets. Leave the machine doors open to allow the interior to air out and dry. Rehang curtains.

Clean machine exterior like any other stainless steel appliance. Use damp cloth and mild soapy water.

If equipped with photoelectric sensor rinse, flush the openings where the sensors are located at the load end of the machine (Fig. 27).

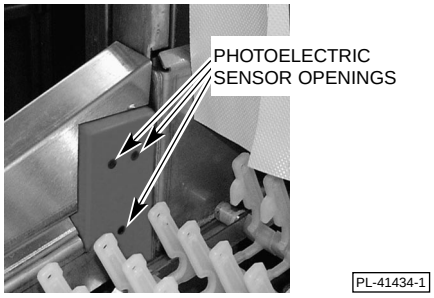


Fig. 27

CLEANING THE TOP DUCT

WARNING: DISCONNECT ELECTRICAL POWER AND PLACE A TAG AT THE DISCONNECT SWITCH INDICATING THAT THE MACHINE IS BEING WORKED ON BEFORE YOU BEGIN CLEANING.

Debris and airborne particles will settle on the Top Covers and the surfaces inside the Top Duct. The Top Duct should be cleaned about every two weeks, as appropriate for your location. There are two handles on each Top Cover so they can be lifted or moved to access the inside of the Top Duct for cleaning (Fig. 28).

Before draining and cleaning the machine, perform the following cleaning task. Use an appropriate ladder and both hands to remove each Top Cover. Clean inside the Top Duct with mild detergent / warm water solution and brush, cloth, or sponge. Clean the Top Duct from the *UNLOAD END* of the machine towards the *LOAD END*. If necessary, the Top Duct may be hosed down. Rinse with clean water. Clean both sides of the Top Covers individually while they are removed. After cleaning the Top Duct and the Top Covers, replace each Top Cover in its correct location.

After cleaning the Top Duct, drain and clean the dishwasher as discussed on pages 5 and 6.

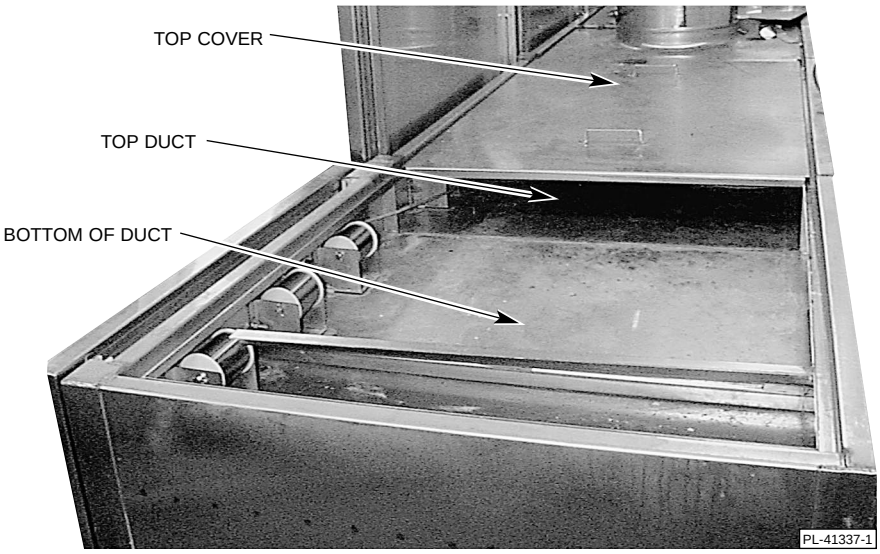


Fig. 28

CLEANING THE BLOWER-DRYER AIR FILTER

Some steam operated blower dryers are equipped with a removable air filter (Fig. 29). At least twice each month, the air filter should be removed and cleaned in a sink with warm soapy water and hosed off with clean water. The air filter can be washed in the dishwasher and flushed with clean water after washing. Replacement air filters are available — contact Hobart service.

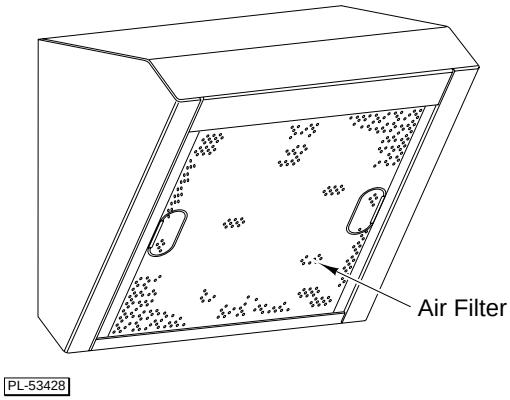


Fig. 29

DOs AND DON'Ts FOR YOUR NEW HOBART WAREWASHER

DO assure proper water hardness of 4 to 6 grains per gallon.

DO pre-scrap dishes thoroughly.

DO use only detergents recommended by your chemical professional.

DO at the end of the day, thoroughly cleanse the machine, rinse, and dry (leave doors open).

DO closely follow your chemical professional's prescribed deliming schedule.

DO use only products formulated to be safe on stainless steel.

DO NOT over soften water (recommended water hardness range is 4 to 6 grains per gallon).

DO NOT use detergents formulated for residential dishwashers.

DO NOT allow food soil to accumulate on the tank bottom.

DO NOT exceed chemical manufacturer's recommended concentrations for detergent, sanitizer, rinse aid, or lime scale remover.

DO NOT use steel wool to clean ware or warewasher surface.

DO NOT allow foreign objects to enter the unit, especially metallic contaminants.

NOTE: Failure to follow use, care, and maintenance instructions may void your Hobart warewasher warranty.

HANG CURTAINS

Curtains must be in their proper places (Fig. 30) . . .

A Short Curtain on the unload side of each upper Wash Arm,

Long Curtains on both sides of every section divider,

Two Long Curtains at the Load End.

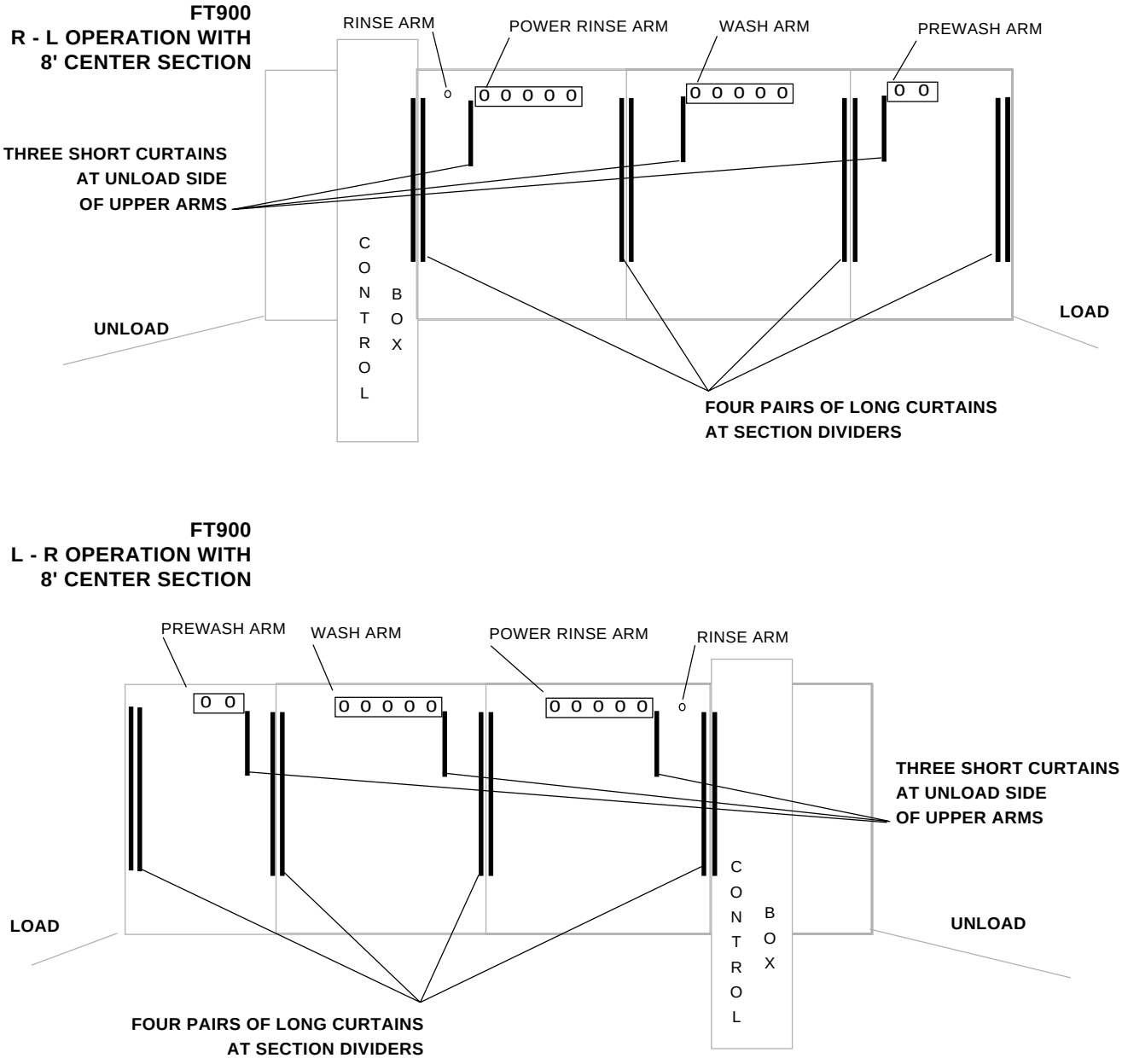
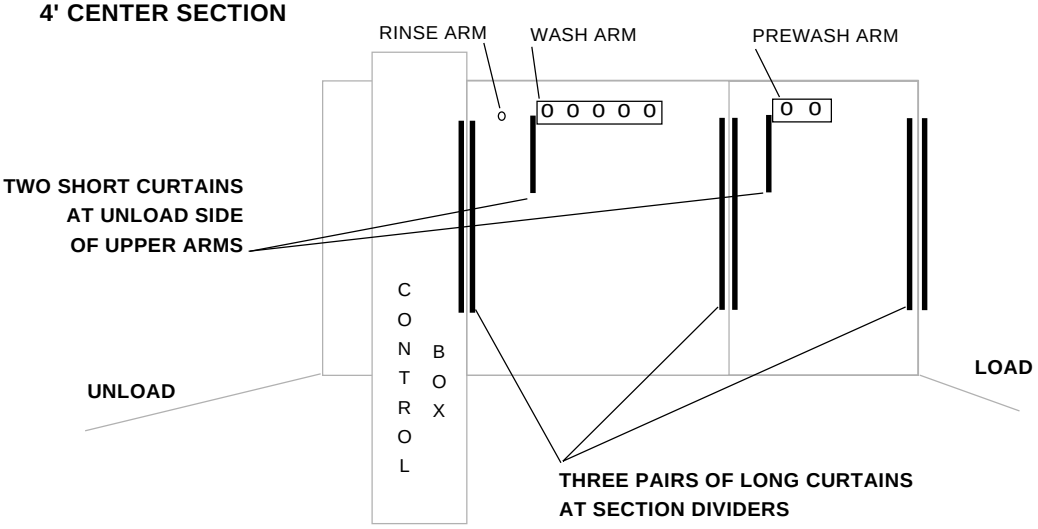


Fig. 30

FT900S
R - L OPERATION WITH
4' CENTER SECTION



FT900S
L - R OPERATION WITH
4' CENTER SECTION

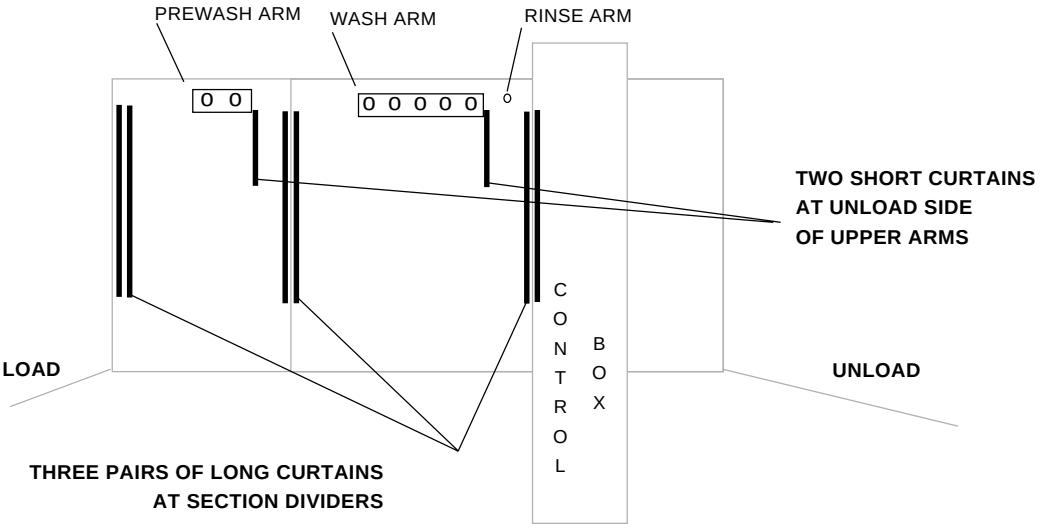
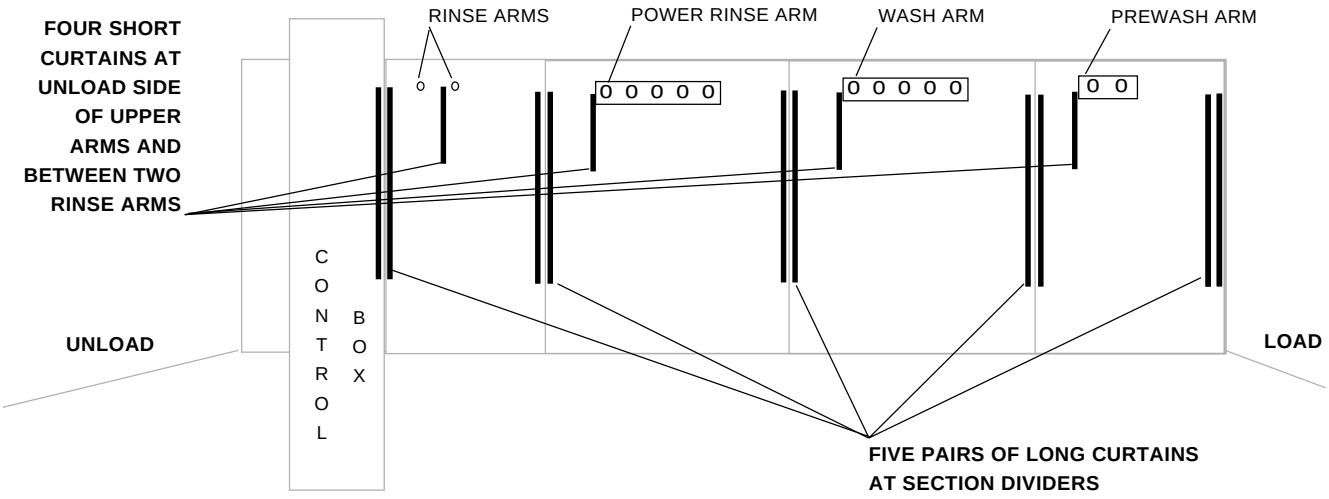


Fig. 30

FT900W
R - L OPERATION WITH
11' CENTER SECTION



FT900W
L - R OPERATION WITH
11' CENTER SECTION

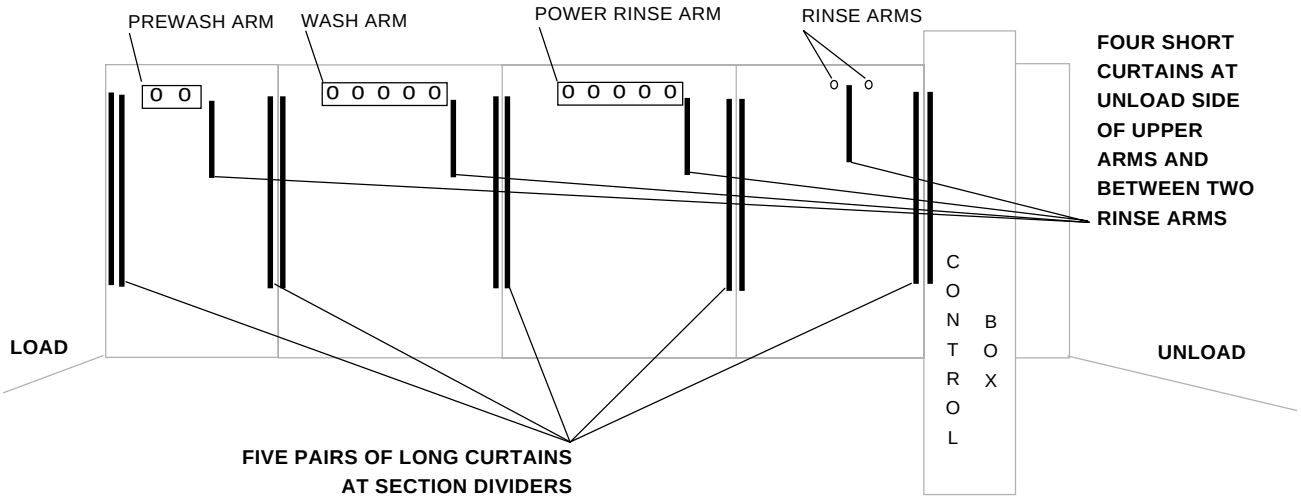


Fig. 30

MAINTENANCE

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH INDICATING THAT YOU ARE WORKING ON THE CIRCUIT BEFORE PERFORMING ANY MAINTENANCE PROCEDURE.

LUBRICATION

A list of acceptable lubricants, as well as the lubricants themselves, are available from your local Hobart Service Office.

Line Strainers

Line strainers used in water or steam lines should be cleaned one week after machine installation and periodically thereafter.

Motors

All motors have sealed bearings and require no lubrication maintenance.

Conveyor Gearmotor

Check the oil level in the conveyor gearmotor at the unload end of the machine every six months by removing the gear case plug (Fig. 31). The oil level should be at the bottom of the plug hole. The gear case can be drained from the Drain Plug on the front side (Fig. 32). Use only Mobilgear # 630 to replenish or replace.

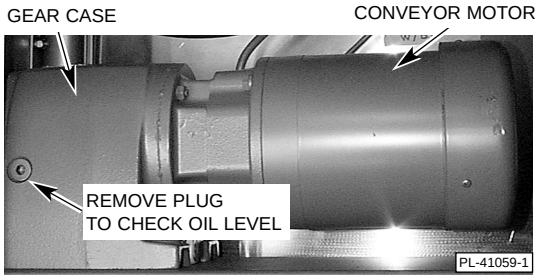


Fig. 31

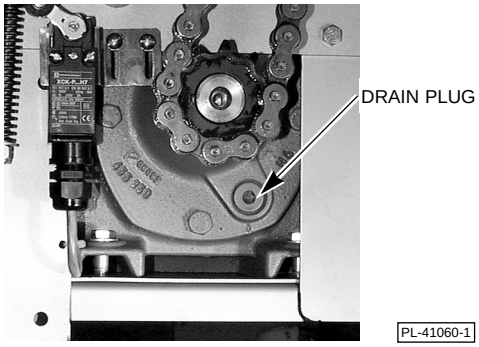


Fig. 32

Conveyor Drive Chain

Inspect the drive chain (Fig. 33) regularly and lubricate as required with Grafo Concentrate A (supplied).

Conveyor Sprocket Bearings

Located at the loading and unloading ends, these bearings should be lubricated every four months. Grease fittings (Fig. 33), one at each of the four bearings, a grease gun, and 4 ounces of Alvania #2 grease are provided for this purpose.

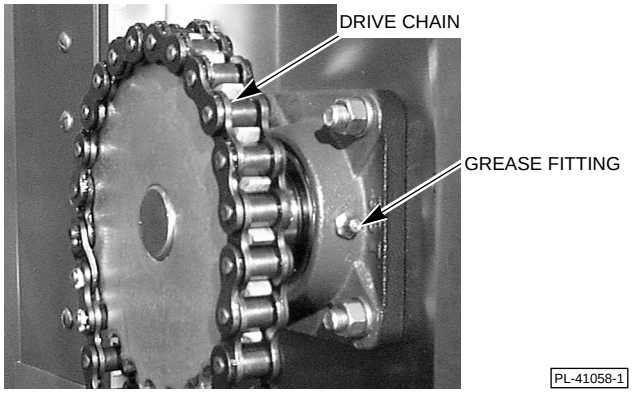


Fig. 33

Conveyor Speed Adjustment

The conveyor speed can be adjusted by your local Hobart service technician. For Model FT900 and FT900W, maximum speed is 12 feet-per-minute, FPM, (factory preset is 8 – 9 FPM). For Model FT900S, maximum speed is 6.3 FPM. Contact your local Hobart service office if your conveyor speed needs adjustment.

TROUBLESHOOTING

Manual Reset Button on Pump Motors and Conveyor Motor

In case any of the pump or conveyor motors becomes overheated, the thermal overload will cause the motor to not operate. A gray manual reset button is provided on the junction box for each motor. To restart after the motor is allowed to cool, press the gray manual reset button on the motor junction box (Fig. 34).

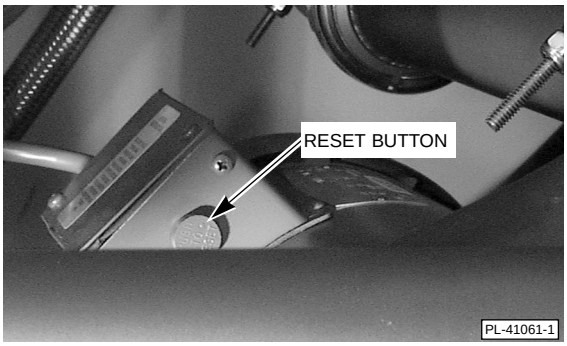


Fig. 34

NOTE: If symptom(s) persist after possible causes have been checked, contact Hobart Service.

SYMPTOM	POSSIBLE CAUSE
Machine Won't Operate After Start Button Is Pressed.	1. Blown fuse or tripped circuit breaker at power supply. 2. Inspection door(s) not closed ('Doors Closed' light is off). 3. Conveyor may be jammed. 4. Manual overload protector may have tripped on pump motors or conveyor motor.
Dishes Not Clean.	1. Insufficient wash water due to drain obstruction preventing proper drain closing. 2. Missing end plug from wash arm. 3. Wash arm nozzle obstruction. 4. Water leaking past manifold O-ring. 5. Loss of water pressure due to pump obstructions. DISCONNECT ELECTRICAL POWER SUPPLY(IES) AND PLACE A TAG AT THE DISCONNECT SWITCH TO INDICATE YOU ARE WORKING ON THE CIRCUIT. Drain tank(s) and check for any obstructions at the pump intake. 6. Incorrect water temperature. Check circuit breaker to electric heat supply, or main steam valve. Make certain valve is completely open. 7. Incorrect detergent dispensing. Contact your detergent representative.

SYMPTOM	POSSIBLE CAUSE
Leaking Valve (Except Solenoid Type) Supplied by Others	1. Foreign material preventing proper valve operation. A critical period is soon after installation when pipe compound or metal shavings may lodge at the valve seat. Shut off supply line. Unscrew and lift bonnet from valve body. Clean valve and reassemble. 2. If problem is with a solenoid valve, it is recommended that you contact your local Hobart service office.
Spotting of Silverware, Glasses, and Dishes.	1. Improperly loaded dishes. 2. Incorrect final rinse water temperature (minimum 180°F). 3. Loss of water pressure due to pump obstruction. DISCONNECT ELECTRICAL POWER SUPPLY(IES) AND PLACE A TAG AT THE DISCONNECT SWITCH TO INDICATE YOU ARE WORKING ON THE CIRCUIT. Drain tank(s) and check for any obstructions at the pump intake. 4. Clogged wash arm nozzles. 5. Improper water hardness (4 – 6 grains / gallon is the recommended range). 6. Incorrect detergent for water type. 7. Clogged rinse nozzle(s). 8. Misaligned rinse arms. Rinse arms should be positioned so that they align in hub on chamber wall.
Inadequate Rinse.	1. Dirty line strainer causing reduced water flow. Turn off water supply. 2. Low supply line pressure. 3. Clogged rinse nozzle(s).
Continuous Rinse Operation (on machines equipped with Rinse Actuators, Fig. 35).	1. Rinse Actuator (Fig. 35) not moving freely. DISCONNECT ELECTRICAL POWER SUPPLY(IES) AND PLACE A TAG AT THE DISCONNECT SWITCH TO INDICATE YOU ARE WORKING ON THE CIRCUIT. Check actuator for movement. 2. Rinse actuator switch failed. Contact Hobart Service 3. Rinse valve failed or jammed open. Contact Hobart Service.

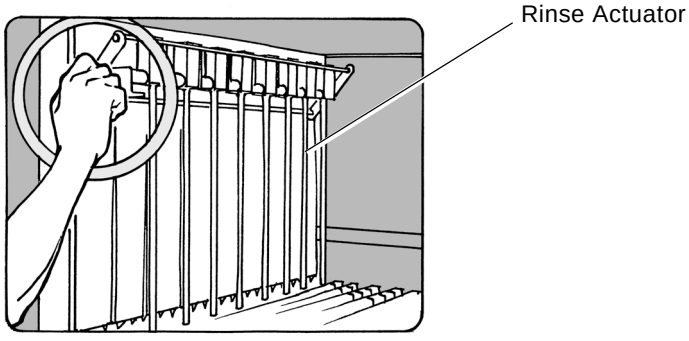


Fig. 35

SYMPTOM	POSSIBLE CAUSE
Continuous Rinse Operation (on machines equipped with Photoelectric Sensor Rinse, Figs. 27, 36.)	1. Photoelectric sensors are blocked. Clean sensor openings (Fig. 27). 2. Remove side panels from load end of machine adjacent to pre-wash chamber. With machine power on, verify indicators on upper sensor (Fig. 36) flash on and off when blocking and unblocking the upper sensor. Start machine running; verify lower sensor indicator (Fig. 36) is flashing when conveyor is running. Some conveyor configurations only have the upper sensor. If either indicator does not flash, contact Hobart Service to replace sensors. 4. Rinse valve failed or jammed open. Contact Hobart Service.
No Wash Tank Heat.	1. The machine is equipped with low water safety devices which shut off heat if water level drops. Check for proper water level. 2. Circuit breaker to heat system tripped. 3. Check heat float for debris and free movement. 4. Steam supply valve not open completely. 5. Overtemp protector tripped. Contact Hobart Service.
No Fill or Slow Fill.	1. Dirty line strainer (Fig. 37) causing reduced water flow. Turn off water supply, remove strainer cap, withdraw and clean screens. 2. Make sure doors are closed. 3. Check both upper and lower fill floats for debris and free movement. 4. Problem with solenoid valve. Contact Hobart Service.

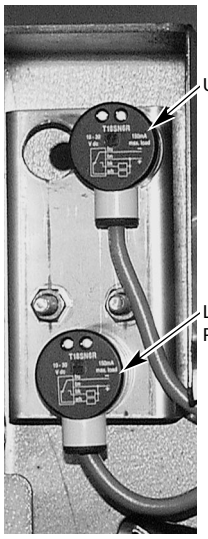


Fig. 36

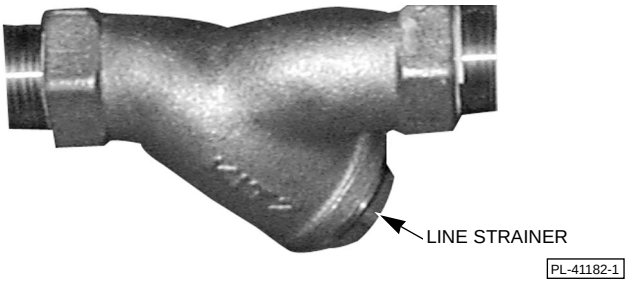


Fig. 37

SERVICE

Contact your local Hobart-authorized service office for any repairs or adjustments needed on this equipment. Long-term Maintenance contracts are available on this and other Hobart products.

					DATE _____	
DAY / SHIFT	**TIME**	**PREWASH TANK TEMPERATURE**	**WASH TANK TEMPERATURE**	**POWER RINSE TANK TEMPERATURE**	**FINAL RINSE TEMPERATURE**	**COMMENTS / RECORDED BY**