

OPERATOR MANUAL

Reliance® 300
Laboratory Glassware Washer

(12/98)
Rev. 2

P-122993-619

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A WORD FROM STERIS CORPORATION

This manual contains important information on proper use and maintenance of the Reliance® 300 Laboratory Glassware Washer. **All personnel involved in the use and maintenance of this equipment must carefully review and comply with the warnings, cautions and instructions contained in this manual.** These instructions are important to protect the health and safety of personnel operating this washer and should be retained in a conveniently accessible area for quick reference.

Complete instructions for uncrating and connecting utilities, as well as equipment drawings, have been furnished. If missing, contact STERIS for replacement copies, giving the serial number and model numbers of the unit.

STERIS carries a complete line of accessories for use with this washer. A STERIS representative will gladly review these with you.

Indications for Use

The Reliance 300 Laboratory Glassware Washer is designed for efficient cleaning of laboratory glassware, plasticware and metal goods used in research, production support and quality control laboratories. This washer is specifically designed to only process goods as outlined in this manual. If there is any doubt about a specific material or product, contact the manufacturer of the product for the recommended washing technique.

Service Information

A thorough preventive maintenance program is essential to safe and proper washer operation. This manual contains maintenance schedules and procedures which should be followed for satisfactory washer performance.

You are encouraged to contact STERIS concerning our comprehensive Preventive Maintenance Agreement. Under the terms of this agreement, preventive maintenance, adjustments, and replacement of worn parts are done on a scheduled basis to assure equipment performance at peak capability and to help avoid untimely or costly interruptions. STERIS maintains a nationwide staff of well equipped, factory-trained technicians to provide this service, as well as expert repair services. Please contact your STERIS representative for details.

Advisory

A summary of the safety precautions to be observed when operating and servicing this equipment can be found in Section 1 of this manual. Do not operate or service the washer until you have become familiar with this information.

Any alteration of this equipment not authorized or performed by STERIS Engineering Service which could affect its operation will void the warranty, could violate federal, state and local regulations, and could jeopardize your insurance coverage.



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The following is a summary of the safety precautions which must be observed when operating or servicing this equipment. WARNINGS indicate the potential for danger to personnel and CAUTIONS indicate the potential for damage to equipment. These precautions are repeated (in whole or in part), where applicable, throughout the manual. Carefully read all safety precautions before proceeding to use or service the equipment.


WARNING - BURN HAZARD:

-  Except for emergency, do not open door when cycle is in progress. In an emergency, first stop the cycle by pressing the STOP/RESET touch pad and wait for water flow to stop. Wear protective gloves and face shield whenever reaching into chamber.
 -  Allow piping to cool down before inspecting and/or cleaning supply-line strainers
-



WARNING - PERSONAL INJURY HAZARD:

-  When closing chamber door, use door handle. Keep fingers/hands away from top and sides of door to prevent fingers from being crushed.
-


WARNING - FALL HAZARD:

-  To prevent falls, keep floors dry by immediately wiping up any spilled liquids in washer loading and unloading areas.
-


WARNING - PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD:

-  Safe and reliable operation of this equipment requires regularly scheduled preventive maintenance, in addition to the faithful performance of routine maintenance. Contact STERIS Engineering Service to schedule preventive maintenance.
 -  Repairs and adjustments to this equipment must be made only by fully qualified service personnel. Non-routine maintenance performed by inexperienced, unqualified personnel or installation of unauthorized parts could cause personal injury, invalidate the warranty, or result in costly damage and ineffective cleaning of loads. Contact STERIS Engineering Service regarding service options.
-





WARNING - ELECTRIC SHOCK AND BURN HAZARD:

-  Disconnect all utilities to washer before servicing. Do not service the washer unless all utilities have been properly locked out. Always follow OSHA Lockout-Tagout and electrical safety-related work practice standards. (See 29 CFR 1910.147 and .331 through .335.)
-

WARNING - CHEMICAL BURN HAZARD:

-  Washer chemical detergents are caustic and can cause adverse effects to exposed tissues. Do not get in eyes, on skin or attempt to ingest by mouth.
 - Read and follow the precautions and instructions on the chemical detergent label and in the Material Safety Data Sheet (MSDS) prior to handling the chemical detergent, refilling the chemical container or servicing the injection pump and lines.
 - Wear protective gloves, face shield and clothing whenever handling the chemical detergent or servicing the injection pump and lines.

CAUTION - POSSIBLE EQUIPMENT DAMAGE:

-  When choosing a chemical, select one with a low chloride content. Chemicals with a high chloride content can be harmful to stainless steel.
-  Always position manifold accessory over the manifold connector before operating unit. If manifold accessory is not positioned correctly, damage may result and unit will be unable to effectively wash load.
-  Use non-abrasive cleaners when cleaning door and chamber assemblies. Follow directions on containers and rub in a back-and-forth motion (in same direction as surface grain). Abrasive cleaners will damage stainless steel. Cleaners rubbed in a circular motion or applied with a wire brush or steel wool can be harmful to stainless steel. Do not use these cleaners on painted surfaces.
-  Always use a silicone lubricant to lubricate the injection pump squeeze tube. Petroleum-based lubricants, such as Vaseline or grease, will cause squeeze tube to melt.

An Equipment Drawing, showing all utility and space requirements, was sent to you after the order for this equipment was received. The clearance space, specified on Equipment Drawing, is necessary for proper installation, operation and maintenance. Uncrating/Installation Instructions were furnished with the washer. If any of these documents are missing or misplaced, contact STERIS giving the serial, equipment and model numbers of the unit. Replacement copies will be sent to you promptly.

Installation Checklist

After installing the washer according to the Uncrating/Installation Instructions, complete the following checklist to assure complete and correct installation. Or contact your STERIS representative to schedule a technician to test your installation and demonstrate proper equipment operation.

- Shutoff valves (not by STERIS), for maintenance purposes and capable of being locked in OFF position only, installed on steam, air and water lines and in compliance with local codes, OSHA standards, etc.
- Disconnect switches (not by STERIS), capable of being locked in OFF position only, installed in electrical supply lines near the unit and in compliance with local codes, OSHA standards, etc.

NOTE: If unit is installed next to other equipment, shutoff valves and disconnect switches should be located so that service can be shut off to one piece of equipment at a time.

- Washer positioned, as shown on Equipment Drawing, with required clearance space and in relation to building supply lines.
- Washer is level.
- If washer is equipped with Drain Discharge Cooldown and Cold Water Pre-wash option, building cold water line supplies water to unit at dynamic pressure and temperature as specified on Equipment Drawing.
- Building hot water line supplies water to unit at dynamic pressure and temperature as specified on Equipment Drawing.
- If Steam Heated unit, building steam line provides steam to unit at dynamic pressure as specified on Equipment Drawing.
- If Steam Heated unit, building condensate return line is connected to washer as specified on Equipment Drawing.
- Pure water line supplies water to unit at dynamic pressure as specified on Equipment Drawing.
- Building air line supplies air to unit at static pressure as specified on Equipment Drawing.
- Building waste line is connected to washer as specified on Equipment Drawing.
- Building ventilation system is connected to washer as specified on Equipment Drawing.
- Electrical supply for unit is as specified on Equipment Drawing.
- Floor surrounding unit has non-slip surface.

The Reliance 300 Laboratory Glassware Washer is designed for cleaning glassware, plasticware and metal goods typically used in research and quality control laboratories.

Washer is equipped with a fully-programmable microprocessor control system capable of storing up to 10 cycles for processing a wide variety of loads. The control system monitors and automatically controls all cycle operations and functions.

Before operating the washer, it is important to become familiar with the location and function of all major components and controls (see Figure 3-1).

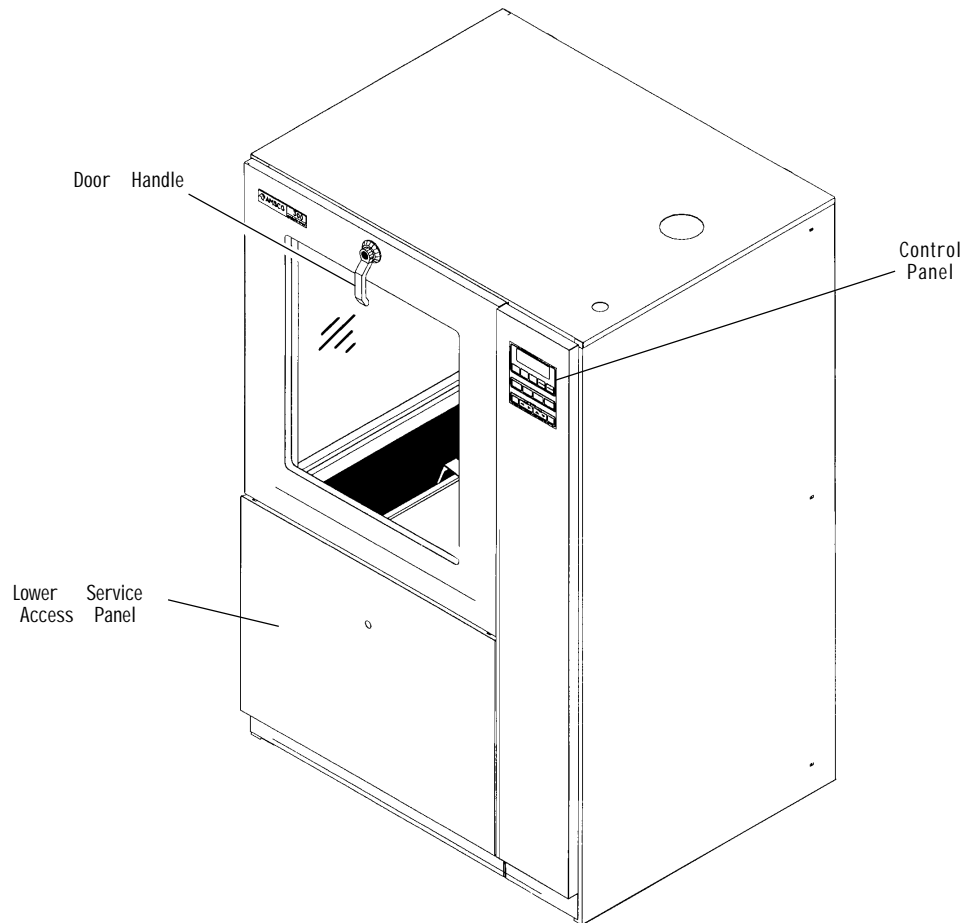


Figure 3-1. Reliance 300 Laboratory Glassware Washer

Main Power Switch

The Main Power Switch, located on top of electrical box, is used to shut off power to the unit Control Board and I/O Board prior to servicing the washer (see Figure 3-2).

IMPORTANT: This switch should remain in the ON position at all times for normal unit operation.

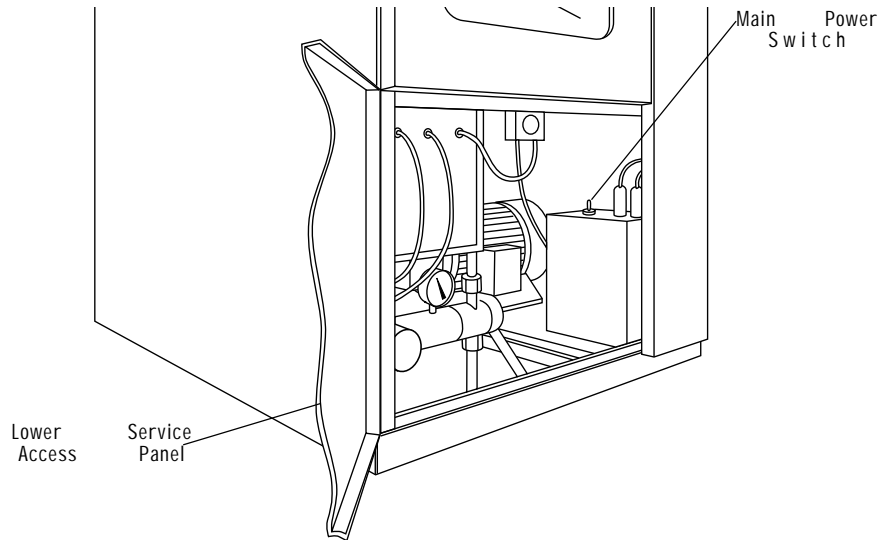


Figure 3-2. Main Power Switch

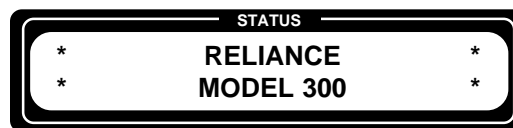
Control Panel

The Control Panel is used to direct all washer functions (see Figure 3-3). The operator may select and review cycles and treatments, start, stop or reset cycle operation and monitor cycle performance and washer status from the control panel.

» Display Screen

The two-line, alphanumeric screen displays cycle program data on demand, in-cycle performance data and operator instructions. Display screen also indicates certain abnormal conditions that may occur during a cycle.

When control is in Ready mode, display screen shows:



then:



indicates flashing position.

When control is in Standby mode, display screen shows:



Current
Time of
Day

NOTE: Control should be placed in Standby mode after last cycle of the day and when washer is not in use for an extended period of time.

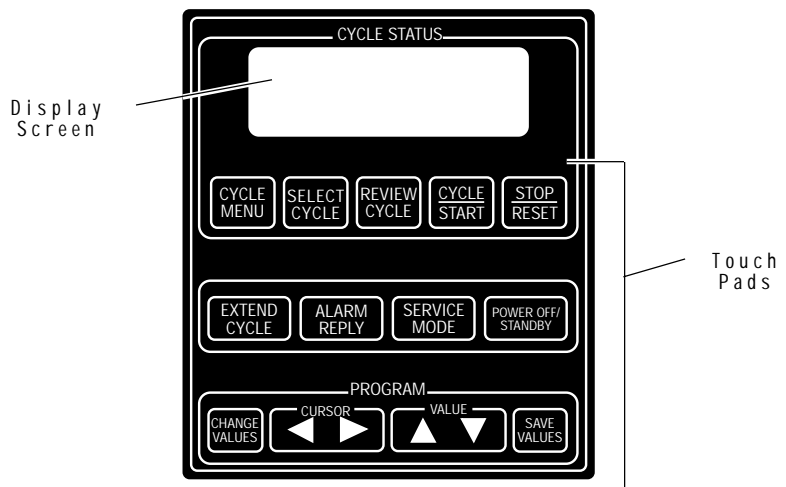


Figure 3-3. Control Panel

» Touch Pads



- **CYCLE MENU** - press to view the first cycle menu. Press again to advance screen to the next cycle menu. Three cycle menus are available.



- **SELECT CYCLE** - press to select one of the four cycles available from each cycle menu.

NOTE: When a displayed cycle or treatment value is selected, the corresponding word or digit flashes.



- **REVIEW CYCLE** - press to review the different treatments and values programmed for the selected cycle. Only those treatment values that can be modified by the operator are displayed. Refer to Section 6, Manual Operation, for instructions on reviewing cycle values.



- **CYCLE/START** - press once to display name of selected cycle. Press a second time to start the cycle. Refer to Section 4, Washer Operation, for instructions on running a cycle.

NOTE: The selected cycle name remains on the screen for 5 seconds after pressing the CYCLE/START touch pad once. To start a cycle, CYCLE/START must be pressed a second time while the selected cycle name is displayed. If touch pad is not pressed within the 5 seconds, screen automatically returns to the cycle menu.



- **STOP/RESET** - press once to exit menus after ending selections or to stop operation of a cycle. Press a second time to abort cycle operation. Refer to Section 6, Manual Operation, for instructions on how to stop and abort cycle operation.

NOTE: When cycle is stopped, press CYCLE/START once to resume cycle operation. Cycle operation resumes at beginning of interrupted treatment phase. When cycle is aborted, cycle operation is discontinued and cycle must be restarted from the beginning of the cycle.



- EXTEND CYCLE - press to double the programmed treatment time while reviewing a cycle. During cycle operation, press to double the remaining (displayed) treatment time. Refer to Section 6, Manual Operation, for instructions on extending treatment time.



- ALARM REPLY - press to stop intermittent alarm buzzer and acknowledge the displayed alarm message. Refer to Section 6 for instructions on acknowledging alarms and Section 8 for specific alarm conditions and corrective actions.



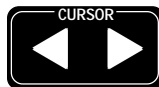
- SERVICE MODE - press to access Service mode. Service mode is used to change cycle and general operating parameters, test inputs/outputs and calibrate RTDs.



- POWER OFF/STANDBY - press once to initialize the controls, fill pure water tank (option) and place control in Ready mode. At end of day, press once to initiate Shutdown cycle and place control in the Standby mode.



- CHANGE VALUES - press to modify, add and remove treatments in pre-programmed cycles and to create custom cycles. Refer to Section 5, Cycle Programming, for instructions on modifying/creating cycles.



- CURSOR ARROWS - press to move left or right on the display screen.




- VALUE ARROWS - depending on selected item, press to either toggle between answer selections or scroll through the alphabet and numbers 0 through 9.


NOTE: Alphabet includes characters for an underline and a space (■).




- SAVE VALUES - press to permanently store all treatment values.

Before Operating Washer

 **WARNING - FALL HAZARD:** To prevent falls, keep floors dry by immediately wiping up any spilled liquids in washer loading and unloading area.

 **WARNING - CHEMICAL BURN HAZARD:** Washer chemical detergents are caustic and can cause adverse effects to exposed tissues. Read and follow the precautions and instructions in the MSDS and other product labeling prior to handling.

 **CAUTION:** When choosing a chemical, select one with a low chloride content. Chemicals with a high chloride content can be harmful to stainless steel.


1. Check that building electrical supply disconnect switch (circuit breaker) is positioned to ON. Verify that unit supply valves are open.
2. Open chamber door.
3. Check that wash chamber is empty and all material has been removed.
4. Check that sump filter in bottom of chamber and inlet filter under manifold connector are clean and in place.
5. Check chemical supply, remotely located. Make sure squeeze tube(s) and low level sensor(s) are placed in container(s).


If supply is low or has run out, install new container and prime the associated chemical pump. Refer to Section 9 for instructions.

NOTE: Always use a non-foaming chemical for effective cleaning and proper pump and water level control operation. Follow manufacturer's recommendations for amount of chemical to be used.

To achieve maximum cleaning efficiency, select chemical appropriate to soil type being processed.

Load Washer

 **CAUTION:** Always position manifold accessory over the manifold connector before operating unit. If manifold accessory is not positioned correctly, damage may result and unit will be unable to effectively wash load.

 **WARNING - PERSONAL INJURY HAZARD:** When closing chamber door, use door handle. Keep fingers/hands away from top and sides of door to prevent fingers from being crushed.

1. Make sure all glassware, plasticware, etc. are correctly positioned on the manifold accessory.
2. Open chamber door and slide loaded manifold accessory into wash chamber. Verify manifold accessory is positioned directly over the manifold connector.
3. Close chamber door.

Typical Cycle Operation

The unit is pre-programmed with three processing cycles, and capable of retaining up to seven additional cycles. Each cycle can be customized to include up to fifteen different treatments. For instructions on programming, refer to Section 5, Cycle Programming, in this manual.

The following cycle description is based on the pre-programmed LIGHT cycle. Refer to Table 4-1 for default treatment values of the LIGHT cycle.

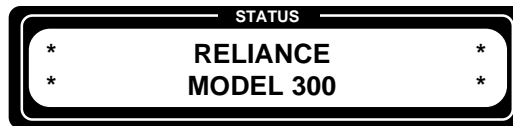
Table 4-1. Default Treatments and Settings for LIGHT Cycle

Treatment Name	Time (minutes)	Water Temp.
Pre-wash 1	1:00	Hot
Wash 1	2:00	Heated to 150°F
Rinse 1	1:00	Hot
Recirc. Pure Water Rinse 1	1:00	Pure Water Heated to 180°F

To begin cycle operation:

1. Make sure Main Power Switch, located in lower service compartment, is positioned to ON.
2. Press POWER OFF/STANDBY touch pad once.

Unit name temporarily appears on the display screen,



Pure water tank (if option applies) fills with water and, if option applies, water is heated up to programmed temperature. Display screen automatically advances to the first cycle menu:



indicates flashing position.

NOTE: Press CYCLE MENU to scroll between the three cycle menus. Press SELECT CYCLE to select a cycle from the displayed menu.



3. When desired cycle is selected (cycle name is flashing on display screen), press CYCLE/START. The name of the selected cycle appears on the screen and remains displayed for 5 seconds.



4. To start selected cycle, press CYCLE/START a second time while cycle name is displayed.

NOTE: If CYCLE/START is not pressed a second time while the selected cycle name is displayed, screen automatically returns to the cycle menu.

5. Washer automatically progresses through the programmed treatments as follows:

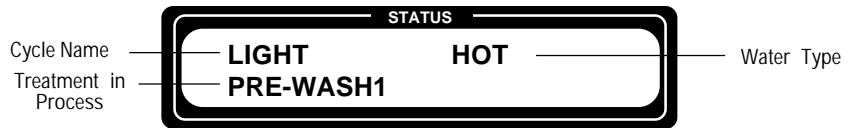
NOTE: Washer operation can be halted at any time by pressing **STOP/RESET**. To resume cycle, press **CYCLE/START**. To abort cycle, press **STOP/RESET** a second time.

NOTE: If unit fails or any abnormal condition occurs during a cycle, refer to Section 8 to identify the possible cause and corrective action.

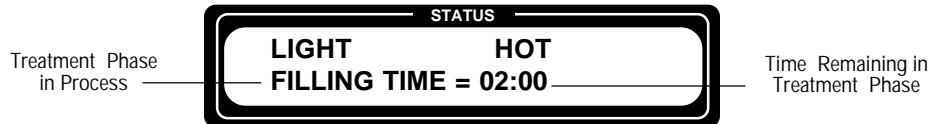
- PRE-WASH

- » Hot water, from building supply, fills the sump until the required water level is attained.

NOTE: Sump may contain water retained from previous cycle.

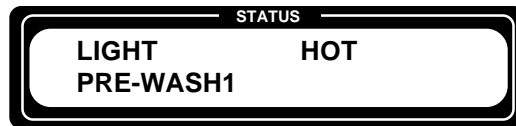


... alternates with ...



NOTE: Time displayed on the screen counts down the time remaining for the treatment phase in progress.

- » Pre-wash water recirculates through the spray system for the programmed amount of time.



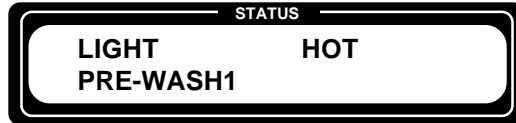
... alternates with ...



NOTE: Treatment time may be manually increased during recirculation phase. Press **EXTEND CYCLE** to double the remaining time as it appears on the screen.



» Pre-wash water is sent to drain.



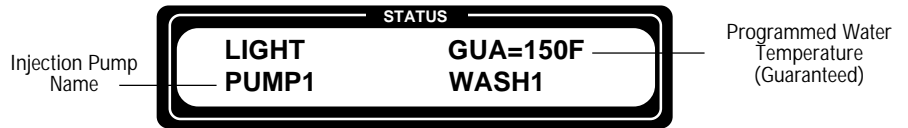
... alternates with ...



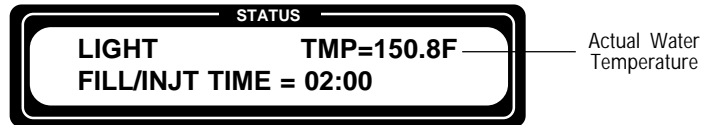
WARNING - CHEMICAL BURN HAZARD: Washer chemical detergents are caustic and can cause adverse effects to exposed tissues. Read and follow the precautions and instructions in the MSDS and other product labeling prior to handling.

• WASH

» Hot water, from building supply, fills the sump until the required water level is attained. While filling, a programmed amount of liquid chemical is automatically injected into the sump.



... alternates with ...



Sump coil heats water up to programmed temperature before timing of recirculation phase begins.

» Chemical solution recirculates through the spray system for the programmed amount of time.



... alternates with ...

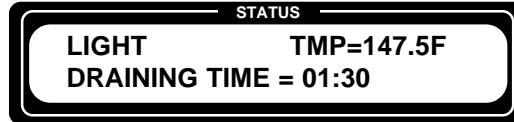


NOTE: Displayed time will only count down if water temperature is equal to or greater than the programmed temperature.

» Chemical solution is sent to drain.

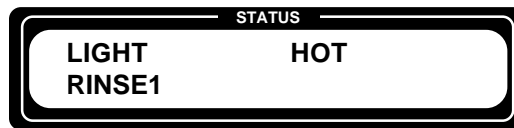


. . . alternates with . . .

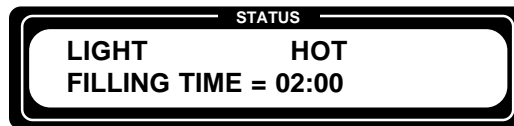


• RINSE

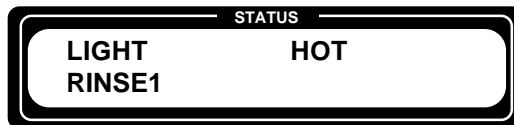
» Hot water, from building supply, fills the sump until the required water level is attained.



. . . alternates with . . .



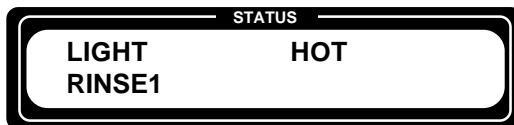
» Rinse water recirculates through the spray system for the programmed amount of time.



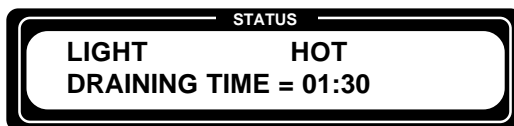
. . . alternates with . . .



» Rinse water is sent to drain.



. . . alternates with . . .



- PURE WATER RINSE

- » Pure water, from building supply (or from storage tank, if option applies), sprays through the spray system for the programmed amount of time. Pure water is recirculated.

STATUS	
LIGHT PUREW1	GUA = 180.0F

Programmed Water Temperature (Guaranteed)

... alternates with ...

STATUS	
LIGHT RECIRC. TIME = 01:00	TMP = 183.4F

Actual Water Temperature

NOTE: Pure Water Rinse treatment may be programmed to be non-recirculated through the spray system.

- » If washer is equipped with Drain Discharge Cooldown and Cold Water Pre-wash option and actual water temperature is above 175°F (79.5°C), cold water is injected into the sump.

STATUS	
LIGHT PUREW1	GUA = 180.0F

... alternates with ...

STATUS	
LIGHT WATER INJ. TIME = 00:10	TMP = 183.4F

- » Washer remains idle, allowing water to cool.

STATUS	
LIGHT PUREW1	GUA = 180.0F

... alternates with ...

STATUS	
LIGHT COOLING TIME = 00:20	TMP = 179.0F

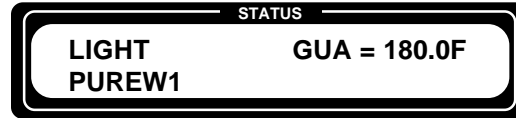
- » Pure water is sent to drain.

STATUS	
LIGHT PUREW1	GUA = 180.0F

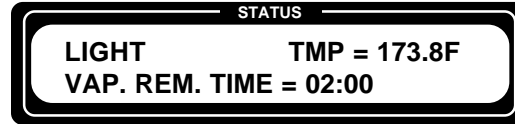
... alternates with ...

STATUS	
LIGHT DRAINING TIME = 01:40	TMP = 173.8F

- » After pure water draining phase, hot vapors are removed from wash chamber.



. . . alternates with . . .



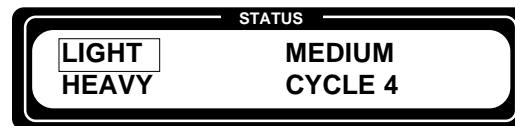
NOTE: If cycle includes more than one Pure Water Rinse treatment, the next Pure Water Rinse will start as soon as the storage tank (option) is filled and, if option applies, water is heated to proper temperature.

- CYCLE COMPLETE

- » The alarm buzzer sounds, screen shows:



6. Open chamber door. Leave door open and allow load to cool before removing manifold accessory. Display screen returns to cycle menu:



indicates flashing position.

IMPORTANT: When cycle is complete, door must be opened and then closed before another cycle may be started.

WARNING - PERSONAL INJURY HAZARD: When closing chamber door, use door handle. Keep fingers/hands away from top and sides of door to prevent fingers from being crushed.

Shutdown

At the end of a work session, the washer should be shut down and cleaned thoroughly. Refer to Section 7 for complete cleaning instructions and scheduled minor maintenance.

1. Press POWER OFF/STANDBY touch pad once.
2. After a one-minute delay, Shutdown cycle starts. Chamber sump and pure water storage tank drain for 2 minutes. If option applies, drain discharge cool down system cools effluent before water is sent to drain.

NOTE: During the one-minute delay before Shutdown cycle starts, operator may return washer to the Ready mode by pressing Power-Off/Standby touch pad.

3. Position Main Power Switch, located in lower service compartment, to OFF.
4. Position building electrical disconnect switch (circuit breaker) to OFF and close the building supply valves. Tag and lockout all utilities.

WARNING - ELECTRIC SHOCK AND BURN HAZARD: Disconnect all utilities to washer before servicing. See Section 1 for expanded warning.

5. Clean equipment as described in Section 7.
6. Make sure building electrical disconnect switch and Main Power Switch are positioned to ON after completion of cleaning and minor maintenance procedures.

NOTE: Leaving Main Power Switch in OFF position overnight will shorten life span of battery backed-up control memory.

The microcomputer control of the unit allows the adjustment of programmed cycles and the creation of new cycles. Using this feature, cycles may be customized to process different types of loads.




The washer is preprogrammed with three basic cycles; LIGHT, MEDIUM and HEAVY. These cycles are programmed with treatments and treatment values to which the control will default in the case of battery or memory failure. In addition to the factory programmed cycles, the control is capable of storing parameters for up to seven custom cycles.

The following chart summarizes the cycle default values and allowable treatment parameters for customized cycles (see Table 5-1).

Table 5-1. Cycle Description

TREATMENT PHASE	PRE-WASH 1 (1 TO 4)		WASH 1 (1 TO 5)		RINSE 1 (1 TO 4)		PURE WATER 1 (1 TO 4)			
	RECIRCULATED		RECIRCULATED		RECIRCULATED		RECIRCULATED		NON-RECIRCULATED (OPTION)	
	DEFAULT	SELECT	DEFAULT	SELECT	DEFAULT	SELECT	DEFAULT	SELECT	DEFAULT	SELECT
RECIRCULATION TIME	01:00	[00:00] TO [15:00]	SEE CYCLES	[00:00] TO [15:00]	01:00	[00:00] TO [15:00]	01:00	[00:00] TO [15:00]	00:10	
INJECTION PUMP SELECTION			PUMP1	[NONE] [PUMP 1] [PUMP 2] [PUMP 3]						
WATER TYPE OR AIR TEMPERATURE	HTW	[CTW*] [HTW]	HEATED 150.0°F	[HTW] [HEATED] 140.0°F TO 190.0°F	HTW	[CTW**] [HTW] [HEATED] 110.0°F TO 190.0°F	PURE WATER HEATED 180°F	[NON-HEATED] [HEATED] 110°F TO 180°F	PURE WATER FROM TANK	
CYCLES	LIGHT	X	02:00		X		X			
	MEDIUM	X	04:00		X		X			
	HEAVY	X	06:00		X		X			

LEGEND

-  RECOMMENDED
-  NOT APPLICABLE
-  VALUE ADJUSTABLE BY THE OPERATOR IN AUTOMATIC MODE
- CTW = COLD TAP WATER
- HTW = HOT TAP WATER
- * DEFAULT SETTING IS COLD WATER IF OPTION APPLIES
- ** RESERVE IN 100 DAYS
RESERVE IN 1000 CYCLES
CYCLE COUNT: 00000001

DEFAULT VALUES NOT SHOWN ON CHART (ADJUSTABLE IN SERVICE MODE ONLY)

- SUMP FILL ALARM TIME: 02:00 (01:00-15:00)
- SUMP GRAVITY DRAIN ALARM TIME: 01:30 (01:00-15:00)
- SUMP HEATING ALARM TIME: 10:00 (01:00-15:00)
- STEAM-HEATED UNIT: 30:00 (30:00-59:59)
- ELECTRIC-HEATED UNIT: 10:00 (01:00-15:00)
- PURE WATER TANK FILL ALARM TIME: 10:00 (01:00-15:00)
- PURE WATER TANK TEMPERATURE: 180.0°F (OPTION) (60.0°F-180.0°F)
- PURE WATER HEATING ALARM TIME (OPTION): 10:00 (01:00-15:00)
- STEAM-HEATED UNIT: 45:00 (45:00-59:59)
- ELECTRIC-HEATED UNIT: 45:00 (45:00-59:59)
- VAPOR REMOVAL TIME (OPTION): 02:00 (01:00-15:00)
- STEAM-HEATED UNIT: 02:45 (01:00-15:00)
- ELECTRIC-HEATED UNIT: 02:45 (01:00-15:00)
- PUMP 1 NAME: PUMP 1 (9 CHARACTERS)
- PUMP 2 NAME: PUMP 2 (OPTIONAL) (9 CHARACTERS)
- PUMP 3 NAME: PUMP 3 (OPTIONAL) (9 CHARACTERS)

Change Values Mode

The Change Values mode allows authorized operators to modify treatment values of existing cycles, create new cycles or modify miscellaneous operating values. Change Values mode consists of four functions (see Figure 5-1).

NOTE: If access code is enabled, operator must enter access code before entering Change Values mode (see Figure 5-7).

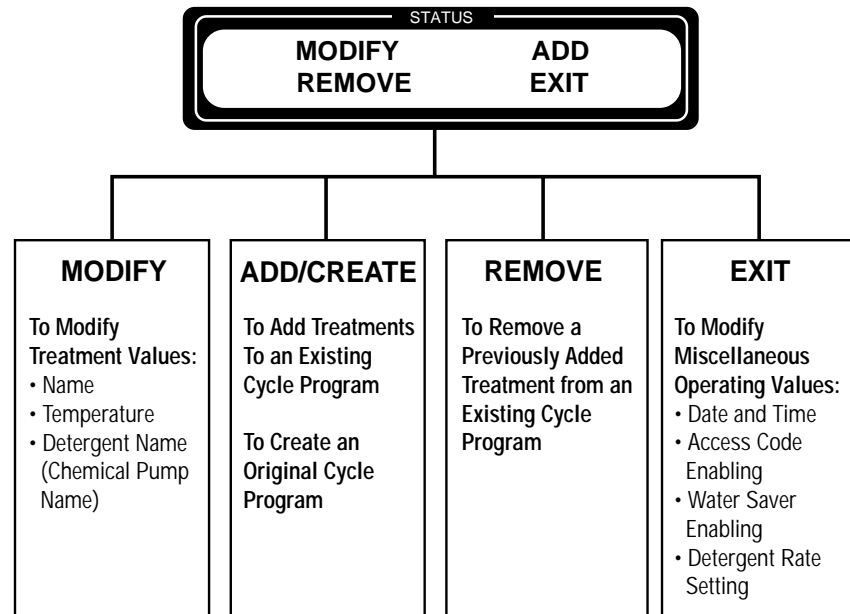


Figure 5-1. Change Values Mode - Program Tree

Treatment Sequence and Display Screens

In Change Values mode, cycles are modified or created by selecting a treatment, then modifying values on a series of display screens. The process is repeated for each selected treatment until a customized cycle is complete.

The six cycle treatment types available occur in a sequential order which may not be changed. Treatments may be added or removed entirely from the operating sequence, however, the control will only allow placement of treatments that follow normal sequence. For example, a pre-wash treatment added to the cycle will always occur after an existing pre-wash, never after a wash treatment.

Treatments and corresponding treatment value screens occur in the following order:

» PRE-WASH



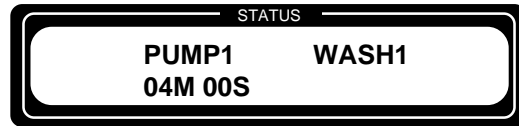
followed by:



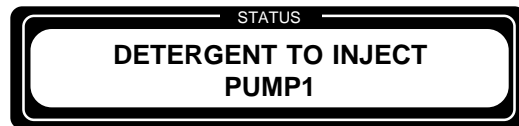
» WASH



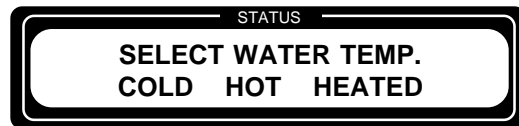
followed by:



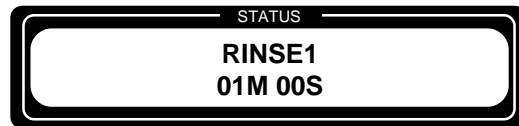
followed by:



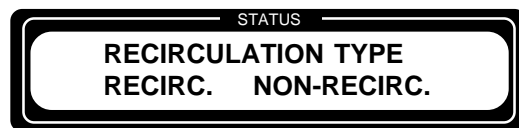
» RINSE



followed by:



» PURE WATER RINSE



Modify Treatment Parameters

The MODIFY function of the Change Values mode is used to alter the values of specific treatments in programmed cycles. The following procedure and flowchart (Figure 5-2) show, as an example, the procedure for modifying the pre-wash treatment of a cycle.

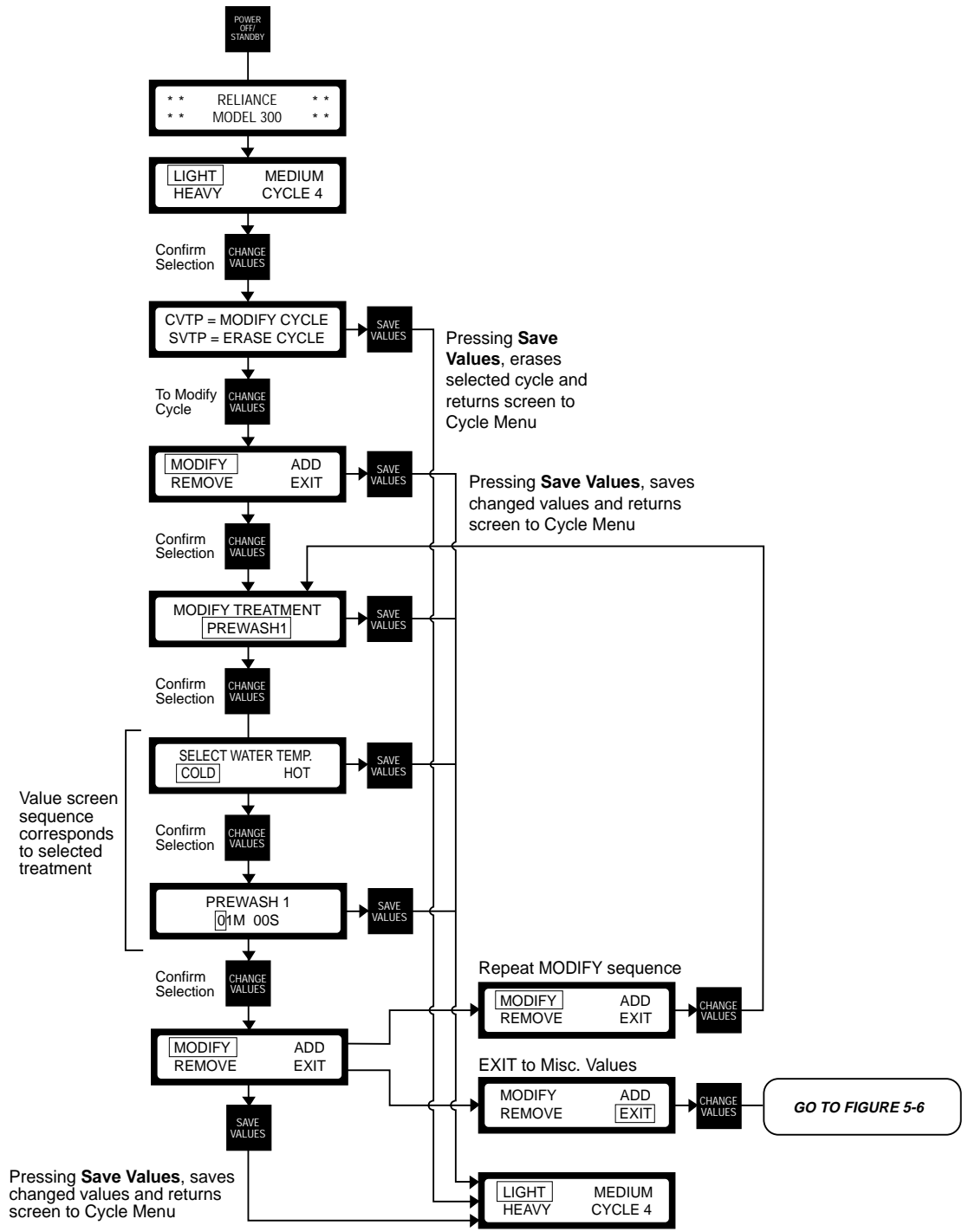
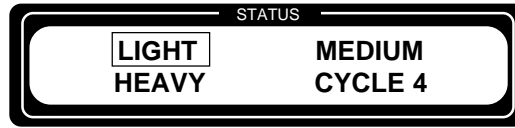


Figure 5-2. Change Values Mode - Modify Cycle Treatment



1. Press Power Off/Standby touch pad once. Unit name temporarily appears on the screen, then the screen displays the first cycle menu:

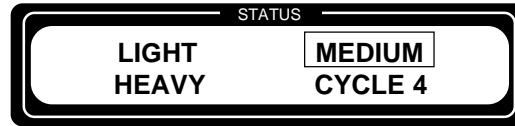


Indicates flashing position.

NOTE: To scroll through available cycle menus, press **CYCLE MENU**.



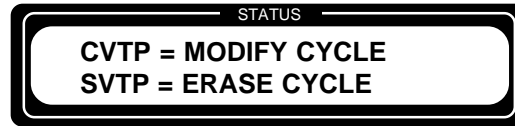
2. Press SELECT CYCLE until desired cycle name flashes.



Indicates flashing position.



3. When the desired cycle name is flashing, press CHANGE VALUES to access the Change Values mode. The following screen appears:



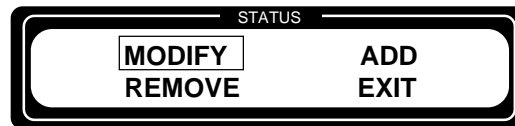
NOTE: Pressing **SAVE VALUES** will erase the selected cycle from control memory. Cycle will revert to a numbered unprogrammed listing on the Cycle Menu.

NOTE: If Access Code feature is enabled and the selected cycle is locked out, the Access Code sequence (see Figure 4-7) will appear after **CHANGE VALUES** is pressed.

NOTE: Change Values mode may be exited at any time by pressing **SAVE VALUES**. New value entries must be confirmed by pressing **CHANGE VALUES**. Control will save confirmed values and return screen to selected cycle menu.



4. Press CHANGE VALUES. The Change Values menu screen appears:



Indicates flashing position.



5. Press CHANGE VALUES to confirm MODIFY function selection. The Modify Treatment screen appears:



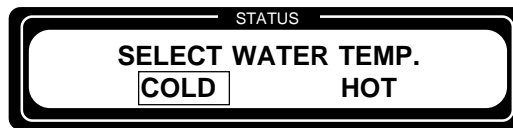
Indicates flashing position.



Press VALUE arrow (either up or down) to scroll through treatments until desired treatment name is flashing.



6. Press CHANGE VALUES to confirm treatment selection. If washer is equipped with Cold Water Prewash option, the Pre-wash Water Temperature selection screen appears:



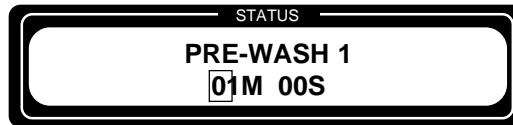
Indicates flashing position.



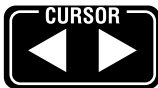
Press CURSOR arrow (either left or right) to toggle between COLD and HOT.



7. Press CHANGE VALUES to confirm temperature selection. The Pre-wash Time value screen appears:



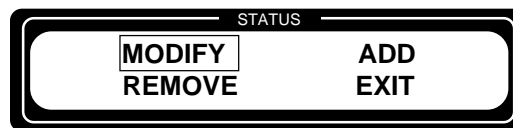
Indicates flashing position.



To enter Pre-wash treatment time, press CURSOR arrows to select position and VALUE arrows to select desired number (0-9). Treatment time is input as minutes and seconds within a range of 0-15 minutes and 0-99 seconds.

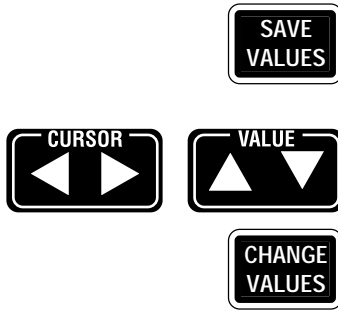


8. Press CHANGE VALUES to confirm time entry. The Change Values menu screen appears:



Indicates flashing position.

9. At this point the operator has the option to either continue in Change Values mode or save values and exit the Change Values mode.



- To exit Change Values mode, press SAVE VALUES. Control saves changed values and returns screen to selected cycle menu.

- To continue in Change Values mode, press CURSOR arrows or VALUE arrows to select function. Press CHANGE VALUES to confirm selection and initiate the function program.

Add Cycle Treatments

The ADD function of the Change Values mode is used to insert treatments in the operating sequence of a programmed cycle.

NOTE: A total of 15 programmed treatments are allowed in a cycle. The total number allowed of each treatment type varies. Refer to Table 5-1 for specific treatment parameters.

The following procedure and flowchart (Figure 5-3) show, as an example, the procedure for adding a new pre-wash treatment to a cycle.

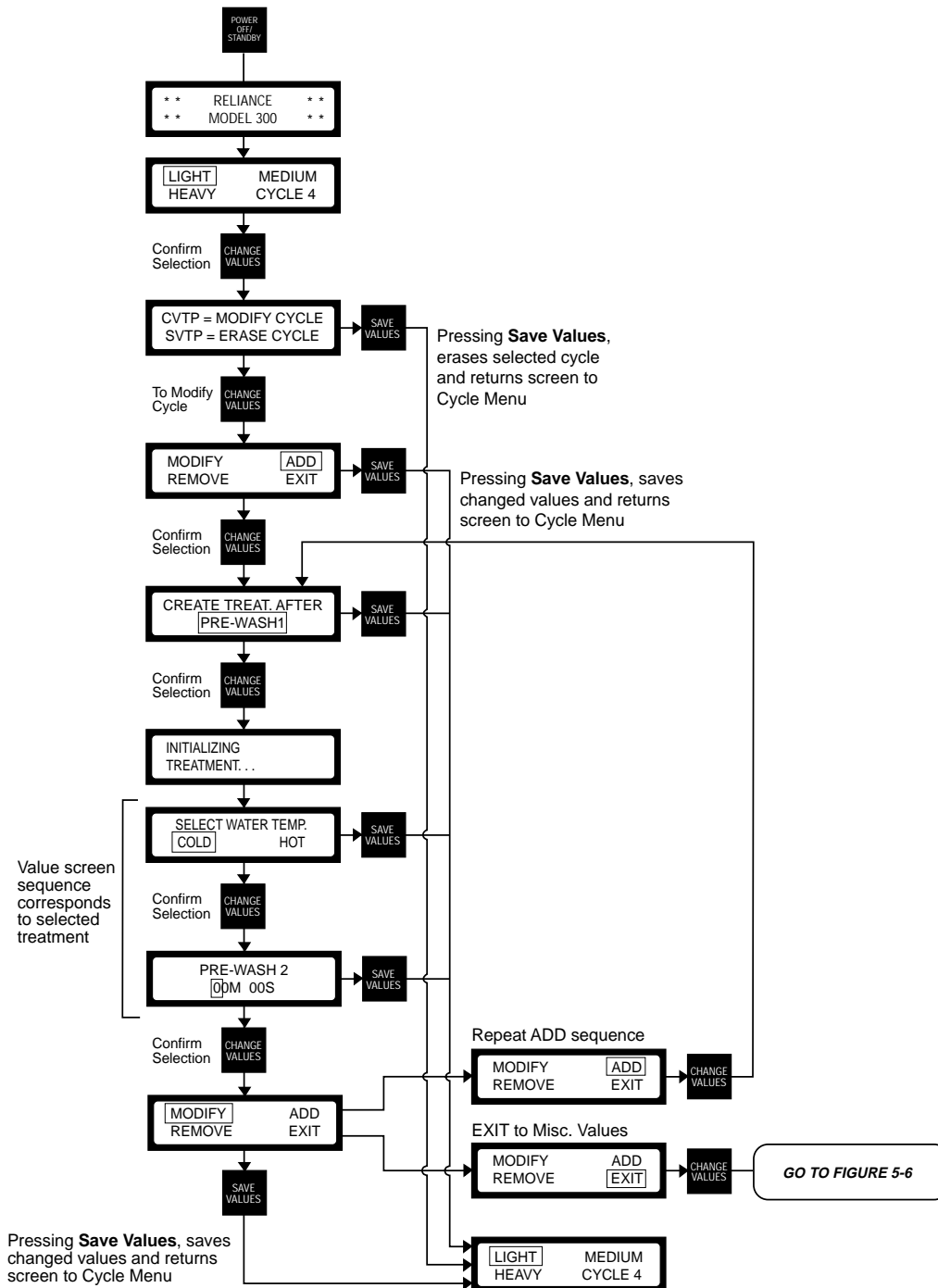
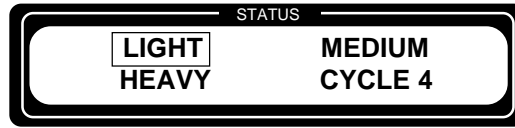


Figure 5-3. Change Values Mode - Add Cycle Treatment



1. Press Power Off/Standby touch pad once. Unit name temporarily appears on the screen, then the screen displays the first cycle menu:

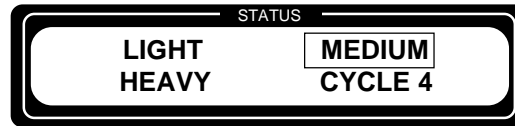


Indicates flashing position.

*NOTE: To scroll through available cycle menus, press **CYCLE MENU**.*



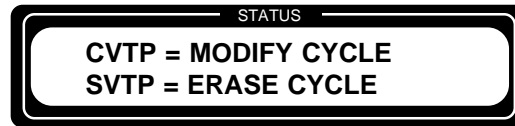
2. Press SELECT CYCLE until desired cycle name flashes.



Indicates flashing position.



3. When the desired cycle name is flashing, press CHANGE VALUES to access the Change Values mode. The following screen appears:



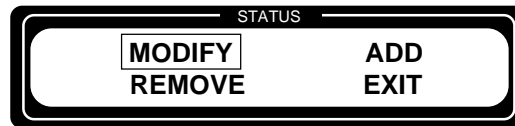
*NOTE: Pressing **SAVE VALUES** will erase the selected cycle from control memory. Cycle will revert to a numbered unprogrammed listing on the Cycle Menu.*

*NOTE: If Access Code feature is enabled and the selected cycle is locked out, the Access Code sequence (see Figure 5-7) will appear after **CHANGE VALUES** is pressed.*

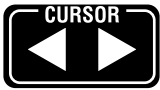
*NOTE: Change Values mode may be exited at any time by pressing **SAVE VALUES**. New value entries must be confirmed by pressing **CHANGE VALUES**. Control will save confirmed values and return screen to selected cycle menu.*



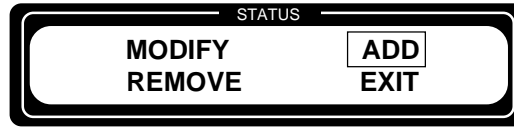
4. Press CHANGE VALUES. The Change Values menu screen appears:



Indicates flashing position.



5. Press CURSOR arrow (either left or right) or VALUE arrow (either up or down) to select ADD function.



Indicates flashing position.



6. Press CHANGE VALUES to confirm ADD function selection. The Add Treatment screen appears:



Indicates flashing position.



Press VALUE arrow (either up or down) to scroll through treatments until desired treatment name is flashing.



7. Press CHANGE VALUES to confirm and add the selected treatment to the programmed cycle. The Treatment Initialization screen appears:



then, if washer is equipped with Cold Water Prewash option, the Pre-wash Water Temperature selection screen appears:



Indicates flashing position.



Press CURSOR arrow (either left or right) to toggle between COLD and HOT.



8. Press CHANGE VALUES to confirm temperature selection. The Pre-wash Time value screen appears:



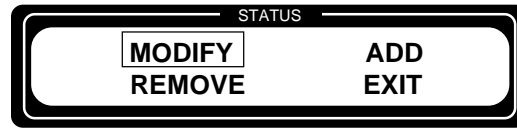
Indicates flashing position.



To enter Pre-wash treatment time, press CURSOR arrows to select position and VALUE arrows to select desired number (0-9). Treatment time is input as minutes and seconds within a range of 0-15 minutes and 0-99 seconds.



9. Press CHANGE VALUES to confirm time entry. The Change Values menu screen appears:

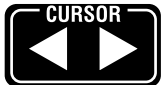


Indicates flashing position.

10. At this point the operator has the option to either continue in Change Values mode or save values and exit the Change Values mode.



- To exit Change Values mode, press SAVE VALUES. Control saves changed values and returns screen to selected cycle menu.



- To continue in Change Values mode, press CURSOR arrows or VALUE arrows to select function. Press CHANGE VALUES to confirm selection and initiate the function program.



Create Custom Cycles

The CREATE function of the Change Values mode is used to initiate programming of custom cycles. This function is only available for a selected cycle with no programmed treatments. Numbered cycles (4-10) on the Cycle Menu are available for custom programming.

The following procedure and flowchart (Figure 5-4) show, as an example, the procedure for creating a new cycle with a pre-wash as the first treatment.

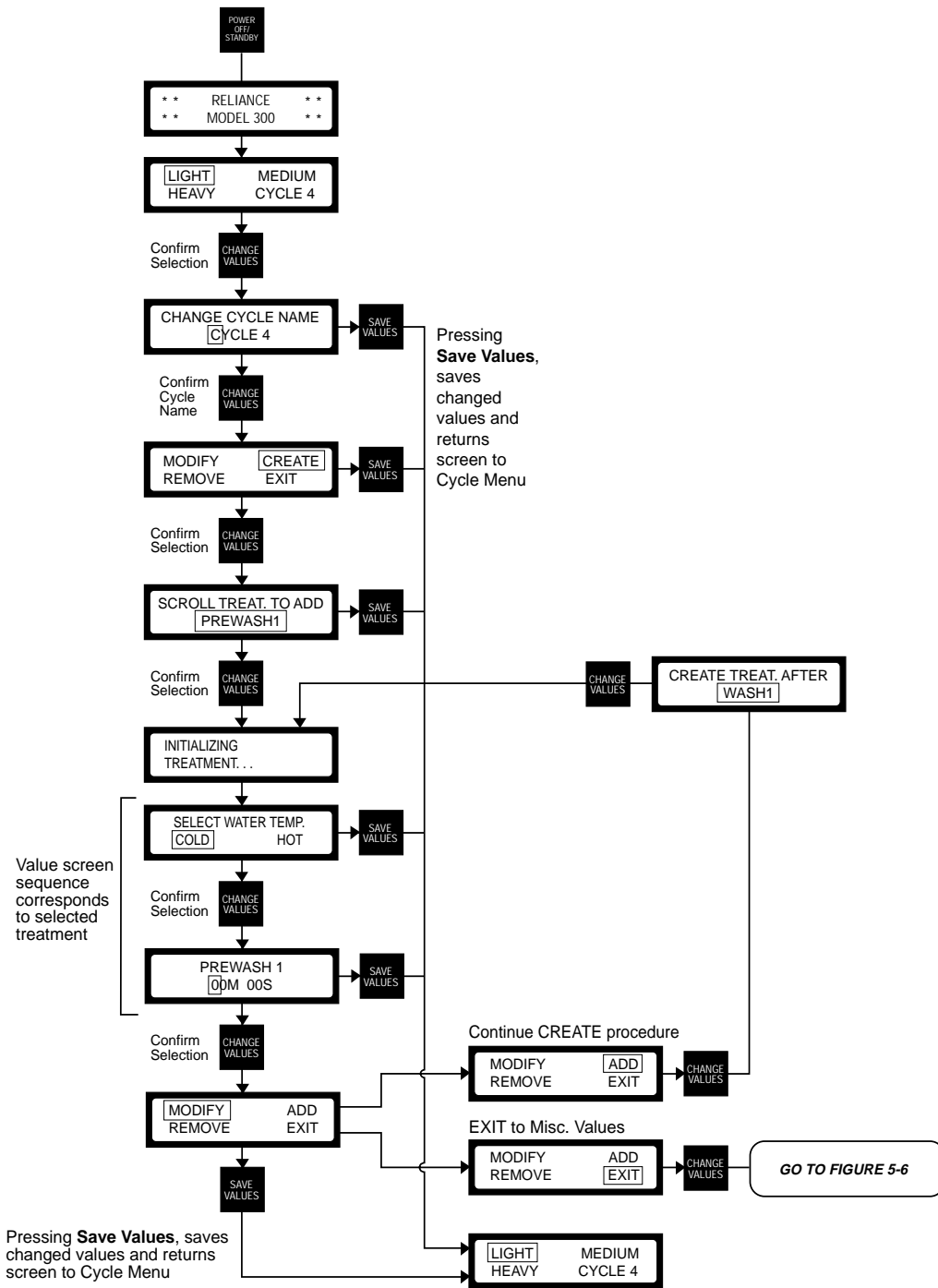
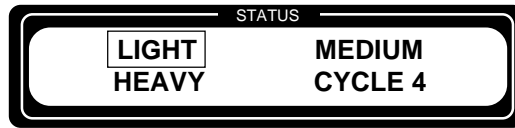


Figure 5-4. Change Values Mode - Create a Custom Cycle



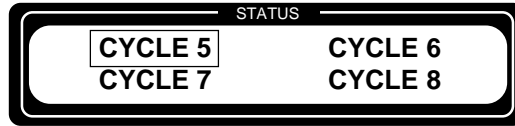
1. Press Power Off/Standby touch pad once. Unit name temporarily appears on the screen, then the screen displays the first cycle menu:



Indicates flashing position.



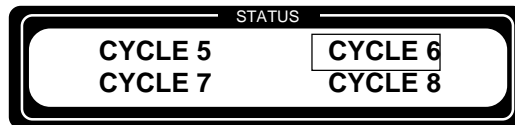
2. Press CYCLE MENU until desired cycle menu appears on the screen.



Indicates flashing position.



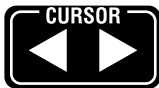
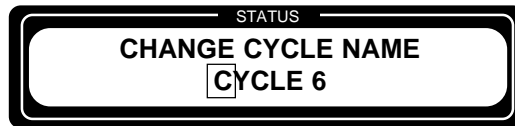
3. Press SELECT CYCLE until desired cycle name flashes.



Indicates flashing position.



4. When the desired cycle name is flashing, press CHANGE VALUES to access the Change Values mode. The following screen appears:

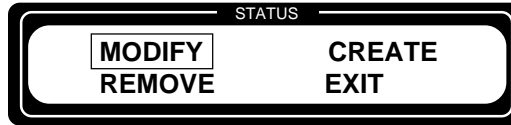


To change cycle name, press CURSOR arrows (either left or right) to select position and VALUE arrows (either up or down) to select desired letter, number, punctuation or space. Cycle name can be a maximum of nine characters including spaces.

NOTE: *Change Values mode may be exited at any time by pressing SAVE VALUES. New value entries must be confirmed by pressing CHANGE VALUES. Control will save confirmed values and return screen to selected cycle menu.*



5. Press CHANGE VALUES. The Change Values menu screen appears:



Indicates flashing position.



6. Press CURSOR arrow or VALUE arrow to select CREATE function.



Indicates flashing position.



7. Press CHANGE VALUES to confirm CREATE function selection. The Create Treatment screen appears:



Indicates flashing position.

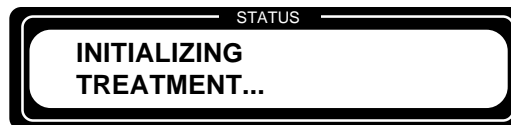


Press VALUE arrow (either up or down) to scroll through treatments until desired treatment name is flashing.

IMPORTANT NOTE: When developing a custom cycle, the operator must be accurate in selecting the first treatment of the cycle. The control will only allow placement of treatments that follow normal sequence. For example, if the first treatment selected was a wash treatment, it is not possible to add a pre-wash treatment to the cycle.



8. Press CHANGE VALUES to confirm and add the selected treatment to the custom cycle. The Treatment Initialization screen appears:



then, if washer is equipped with Cold Water Pre-wash option, the Pre-wash Water Temperature selection screen appears:



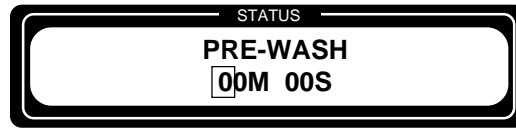
Indicates flashing position.



Press CURSOR arrow (either left or right) to toggle between COLD and HOT.



- Press CHANGE VALUES to confirm temperature selection. The Pre-wash Time value screen appears:



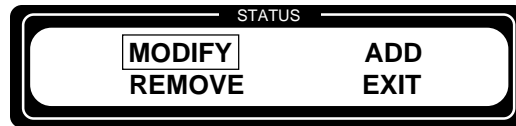
Indicates flashing position.



To enter Pre-wash treatment time, press CURSOR arrows to select position and VALUE arrows to select desired number (0-9). Treatment time is input as minutes and seconds within a range of 0-15 minutes and 0-99 seconds.



- Press CHANGE VALUES to confirm time entry. The Change Values menu screen appears:

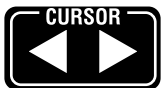


Indicates flashing position.

- At this point the operator has the option to either continue in Change Values mode or save values and exit the Change Values mode.



- To exit Change Values mode, press SAVE VALUES. Control saves changed values and returns screen to selected cycle menu.



- To continue in Change Values mode, press CURSOR arrows or VALUE arrows to select function. Press CHANGE VALUES to confirm selection and initiate the function program.



IMPORTANT NOTE: The CREATE function is displayed only when creating the *first* treatment of a custom cycle. To continue programming the custom cycle, use the ADD function.

Remove Cycle Treatments

The REMOVE function of the Change Values mode is used to delete treatments from a programmed cycle.

The following procedure and flowchart (Figure 5-5) show, as an example, the procedure for deleting the pre-wash treatment from a cycle.

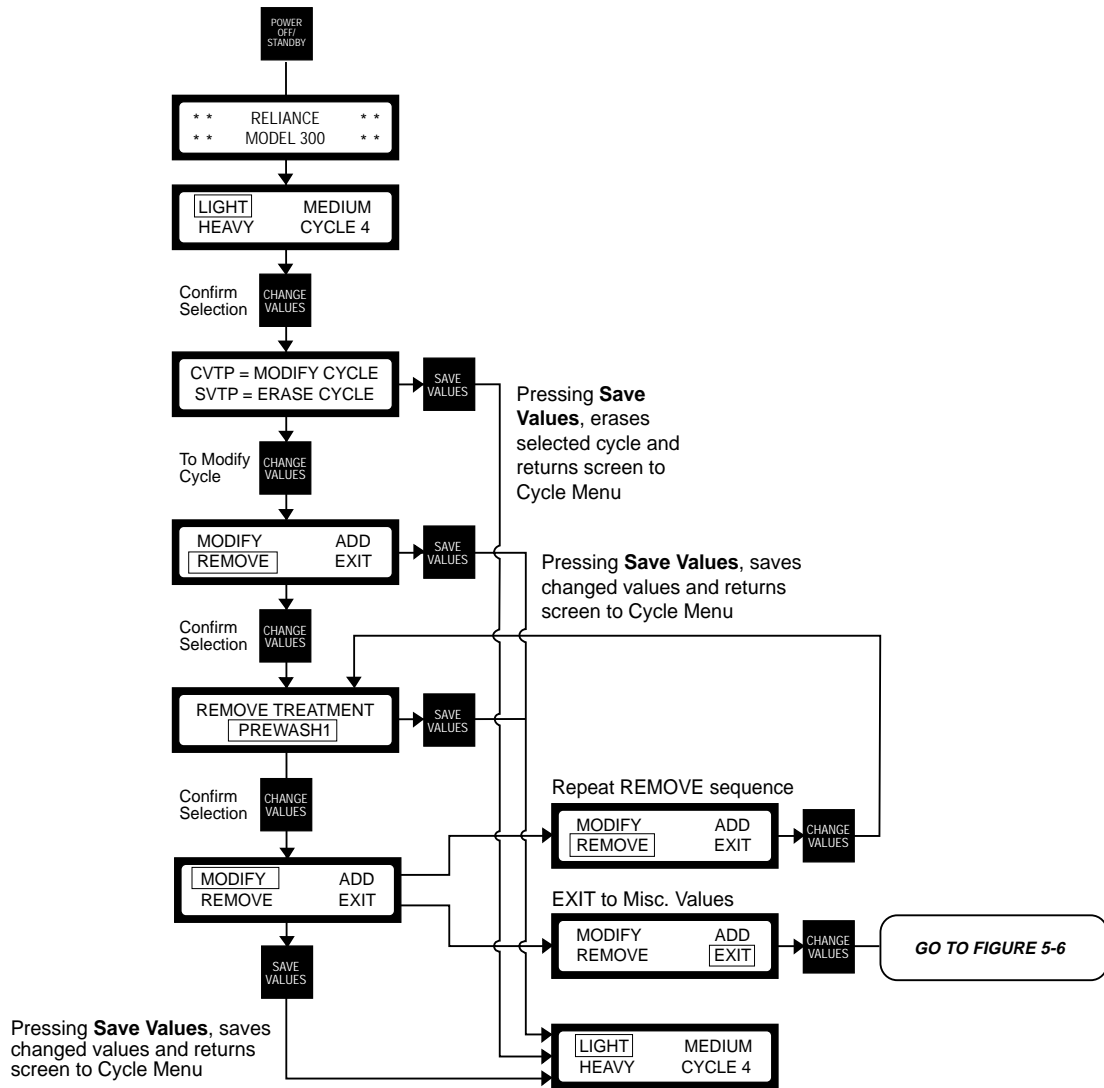
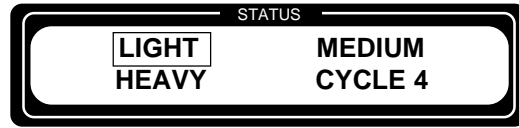


Figure 5-5. Change Values Mode - Remove Cycle Treatment



1. Press Power Off/Standby touch pad once. Unit name temporarily appears on the screen, then the screen displays the first cycle menu:

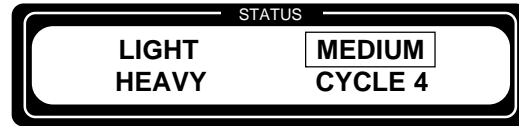


Indicates flashing position.

NOTE: To scroll through available cycle menus, press **CYCLE MENU**.



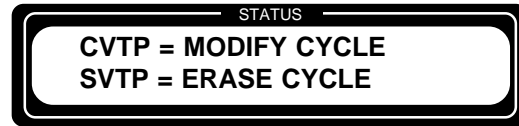
2. Press **SELECT CYCLE** until desired cycle name flashes.



Indicates flashing position.



3. When the desired cycle name is flashing, press **CHANGE VALUES** to access the Change Values mode. The following screen appears:



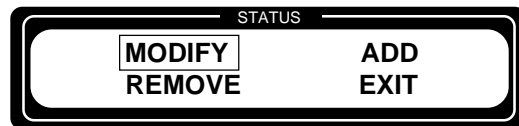
NOTE: Pressing **SAVE VALUES** will erase the selected cycle from control memory. Cycle will revert to a numbered unprogrammed listing on the Cycle Menu.

NOTE: If Access Code feature is enabled and the selected cycle is locked out, the Access Code sequence (see Figure 5-7) will appear after **CHANGE VALUES** is pressed.

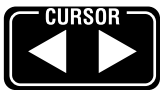
NOTE: Change Values mode may be exited at any time by pressing **SAVE VALUES**. New value entries must be confirmed by pressing **CHANGE VALUES**. Control will save confirmed values and return screen to selected cycle menu.



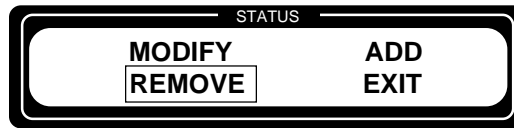
4. Press **CHANGE VALUES**. The Change Values menu screen appears:



Indicates flashing position.



5. Press CURSOR arrow (either left or right) or VALUE arrow (either up or down) to select REMOVE function.



Indicates flashing position.



6. Press CHANGE VALUES to confirm REMOVE function selection. The Remove Treatment screen appears:

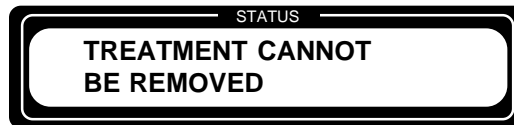


Indicates flashing position.

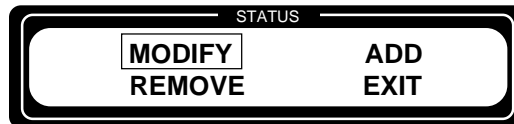


Press VALUE arrow (either up or down) to scroll through treatments until desired treatment name is flashing.

NOTE: If the selected treatment is part of a factory programmed cycle (default treatment) or if the treatment is an option, the treatment cannot be removed and the display will show:



7. Press CHANGE VALUES to confirm and remove the selected treatment from the programmed cycle. The Change Values menu screen appears:

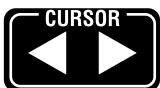


Indicates flashing position.

8. At this point the operator has the option to either continue in Change Values mode or save values and exit the Change Values mode.



- To exit Change Values mode, press SAVE VALUES. Control saves changed values and returns screen to selected cycle menu.



- To continue in Change Values mode, press CURSOR arrows or VALUE arrows to select function. Press CHANGE VALUES to confirm selection and initiate the function program.

Change Miscellaneous Values

The EXIT function of the Change Values mode is used to program various operating values and enable/disable optional features and access code. The following procedure and flowchart (Figure 5-6) shows the complete sequence of miscellaneous values display screens.

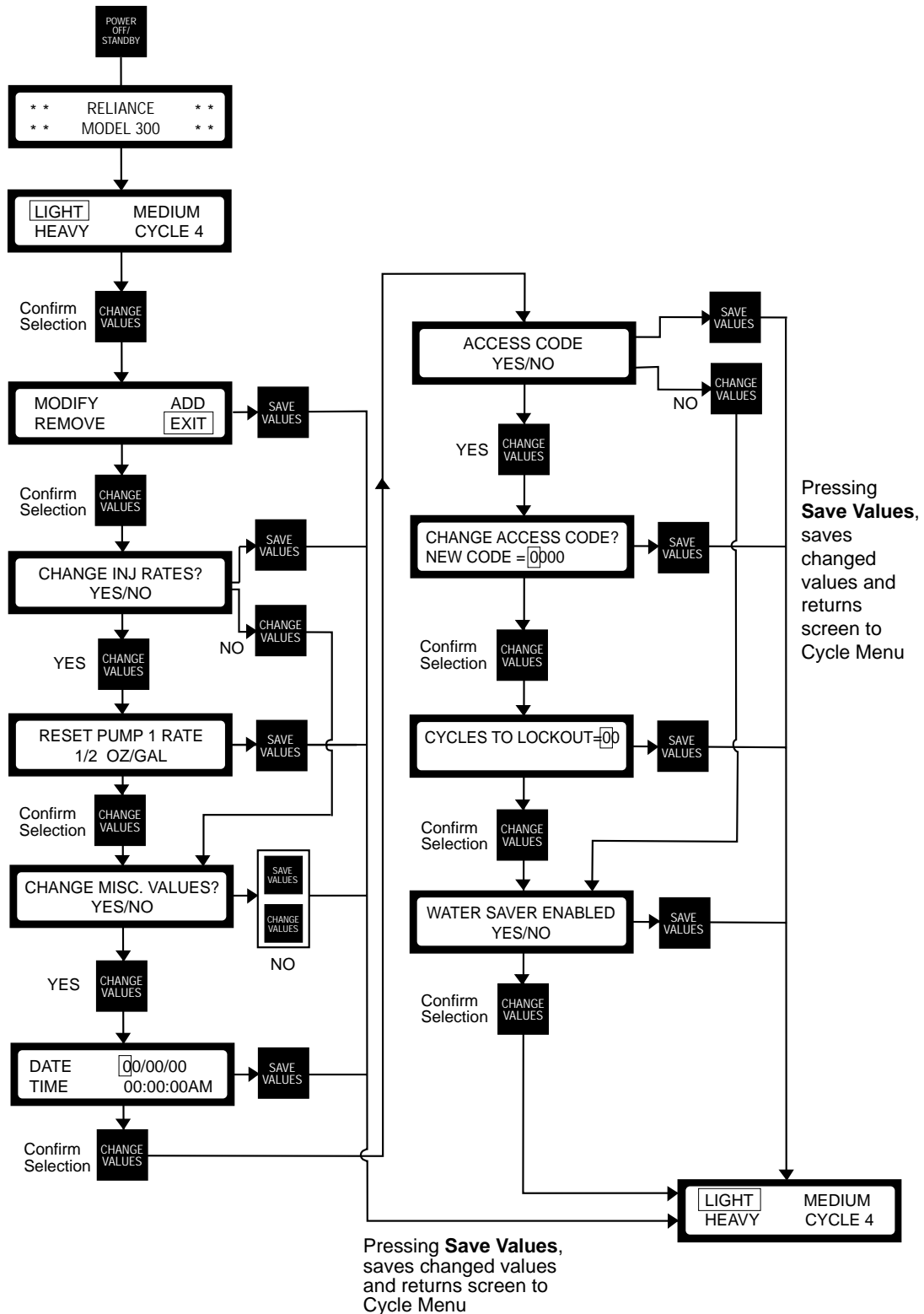
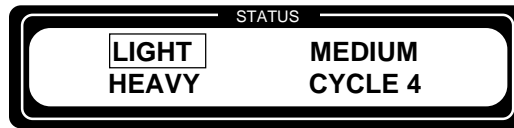


Figure 5-6. Change Values Mode - Change Miscellaneous Values



1. Press Power Off/Standby touch pad once. Unit name temporarily appears on the screen, then the screen displays the first cycle menu:

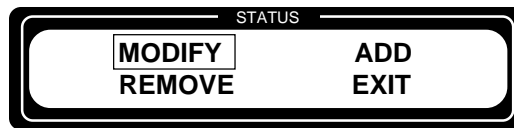


Indicates flashing position.

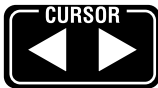
NOTE: Change Values mode may be exited at any time by pressing **SAVE VALUES**. New value entries must be confirmed by pressing **CHANGE VALUES**. Control will save confirmed values and return screen to selected cycle menu.



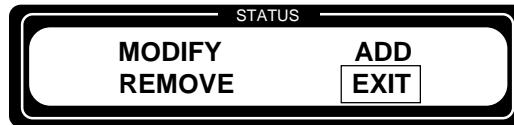
2. Press CHANGE VALUES to access the Change Values mode. The Change Values menu screen appears:



Indicates flashing position.



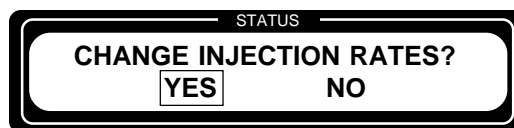
3. Press CURSOR arrow (either left or right) or VALUE arrow (either up or down) to select EXIT function.



Indicates flashing position.



4. Press CHANGE VALUES to confirm answer selection. The Detergent Injection Rate screen appears:



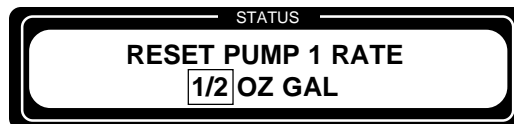
Indicates flashing position.



Press CURSOR arrow to toggle between YES and NO. Selecting YES allows operator to change the pump injection rates. Selecting NO allows operator to change miscellaneous operating values.



5. Press CHANGE VALUES to confirm answer selection. If NO was selected, screen will advance to Change Miscellaneous Values selection. If YES was selected, the Reset Pump Rate screen appears:



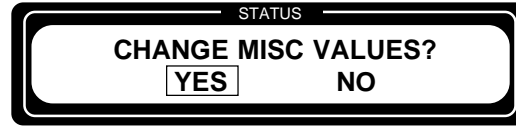
Indicates flashing position.



To enter desired pump rate, press VALUE arrows to select desired rate (1/4 to 2 oz/gal, in 1/8 increments).



- Press **CHANGE VALUES** to confirm rate entry. If washer is equipped with more than one chemical injection pump, screen will advance to the next Reset Pump Rate screen, allowing operator to enter desired pump rate for pump 2. If washer is equipped with one chemical injection pump, the Change Misc. Values screen appears:



Indicates flashing position.

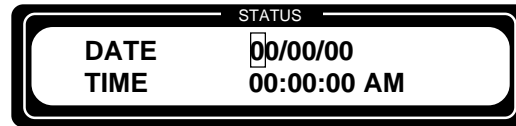


Press **CURSOR** arrow to toggle between YES and NO. Selecting NO exits Change Values mode. Selecting YES allows operator to change miscellaneous operating values.

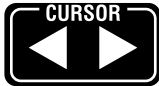
*NOTE: If NO is selected, pressing either **SAVE VALUES** or **CHANGE VALUES** exits Change Values mode.*



- Press **CHANGE VALUES** to confirm answer selection. The Date and Time value screen appears:



Indicates flashing position.



To enter correct date and time, press **CURSOR** arrows to select position and **VALUE** arrows to select desired number (0-9). Date is input as two-digit numerical values for Month/Day/Year. Time is input as Hour/Minute/Second.

NOTE: Date format can be changed in Service mode to appear on display screen as Year/Month/Day or Day/Month Year



- Press **CHANGE VALUES** to confirm date and time entry. The Access Code screen appears:



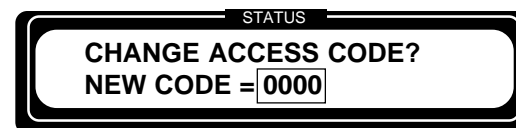
Indicates flashing position.



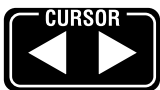
Press **CURSOR** arrow to toggle between YES and NO. Selecting YES enables access code and cycle lockout features. Selecting NO disables the access code feature.



- Press **CHANGE VALUES** to confirm answer selection. If NO was selected, screen will advance to Water Saver selection. If YES was selected, the New Access Code value screen appears:



Indicates flashing position.



To enter desired access code, press **CURSOR** arrows to select position and **VALUE** arrows to select desired number (0-9). The access code is input as a four-digit number from 0000 to 9999.

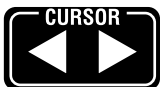
NOTE: If no access code is entered, 0000 will be automatically programmed as the access code.



10. Press **CHANGE VALUES** to confirm value entry. The Cycle Lockout screen appears:



Indicates flashing position.



To enter locked-out cycles, press **CURSOR** arrows to select position and **VALUE** arrows to select desired number (0-9). Cycles to lockout is input as a two-character number within the range of 00-10.

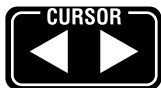
NOTE: Cycles are locked out in sequential order. If one cycle is locked out (01), only Cycle 1 will require an operator to enter the access code prior to making cycle changes. If four cycles are locked out (04), Cycles 1 through 4 will require an access code and Cycles 5 through 10 will remain accessible for change by any operator (no access code required).



11. Press **CHANGE VALUES** to confirm value entry. The following screen appears:



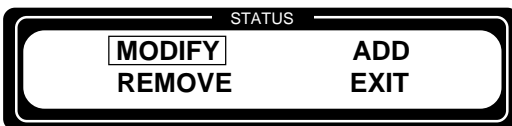
Indicates flashing position.



Press **CURSOR** arrow to toggle between YES and NO.



12. Press **CHANGE VALUES** to confirm answer selection. The Change Values menu screen appears:

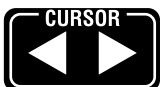


Indicates flashing position.



13. At this point the operator has the option to either continue in Change Values mode or save values and exit the Change Values mode.

- To exit Change Values mode, press **SAVE VALUES**. Control saves changed values and returns screen to selected cycle menu.
- To continue in Change Values mode, press **CURSOR** arrows or **VALUE** arrows to select function. Press **CHANGE VALUES** to confirm selection and initiate the function program.



Programming Values with Access Code Enabled

The Access Code feature is used to prevent unauthorized changes to the parameters of designated cycles and/or operating values. With this feature, access to cycle values may be selectively limited to authorized operators, depending on the security needs of the washer environment. When Access Code is enabled, only authorized operators can change operating values on cycles that are locked out.

The following procedure and flowchart (Figure 5-7) provide examples of how to access the Change Values mode when the Access Code feature is enabled.

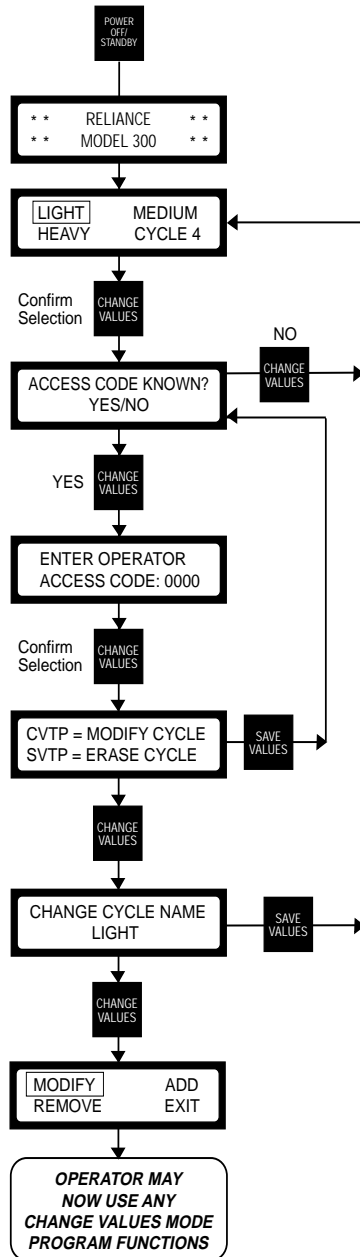
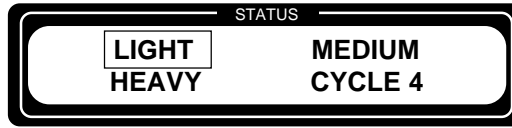


Figure 5-7. Change Values Mode - Programming with Access Code Enabled



1. Press Power Off/Standby touch pad once. Unit name temporarily appears on the screen, then the screen displays the first cycle menu:



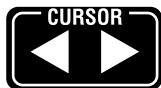
Indicates flashing position.



2. Press CHANGE VALUES to confirm cycle selection. The following screen appears:



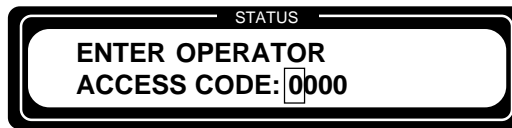
Indicates flashing position.



Press CURSOR arrow (either left or right) to toggle between YES and NO.



3. Press CHANGE VALUES to confirm answer selection. If YES, the following screen appears:



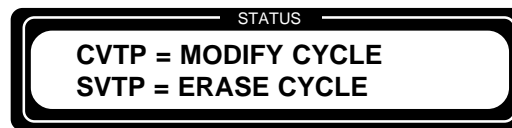
Indicates flashing position.



To enter correct access code, press CURSOR arrows (either left or right) to select position and VALUE arrows (either up or down) to select desired number (0-9). The access code is input as a four-digit number from 0000 to 9999.



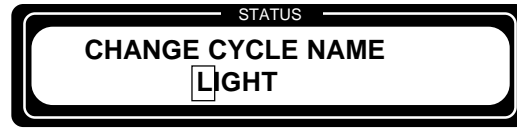
4. Once proper access code is entered, press CHANGE VALUES to access the Change Values mode. The following screen appears:



*NOTE: Pressing **SAVE VALUES** will erase the selected cycle from the control memory and return screen to access code selection. Erased cycle will revert to a numbered unprogrammed listing on the Cycle Menu.*

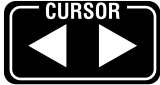


- Press CHANGE VALUES to modify the selected cycle. The Change Cycle Name screen appears:

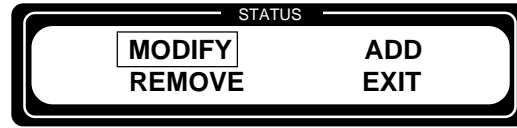


Indicates flashing position.

To enter correct cycle name, press CURSOR arrows (either left or right) to select position and VALUE arrows (either up or down) to select desired letter (A-Z).

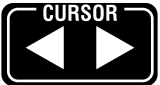


- Once cycle name is entered, press CHANGE VALUES to continue in the Change Values mode. The Change Values menu screen appears:



Indicates flashing position.

At this point the operator may continue in Change Values mode. All cycles and Change Values function are available for programming. To continue in Change Values mode, press CURSOR arrows or VALUE arrows to select function. Press CHANGE VALUES to confirm selection and initiate the function program.

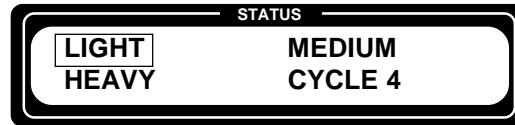


Review Cycle Values

Each cycle program may be reviewed by accessing the Review mode when a cycle is not in progress. The Review mode allows the operator to view the current settings of each programmable treatment value for the specific cycle selected.



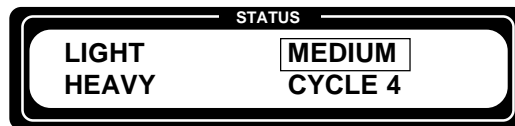
1. Press CYCLE MENU until desired cycle menu appears on the screen.



indicates flashing position.



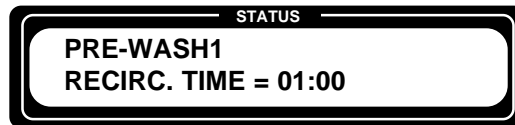
2. Press SELECT CYCLE until desired cycle name flashes.



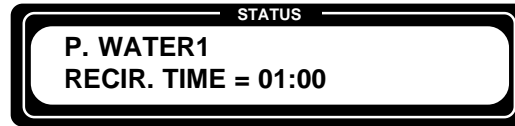
indicates flashing position.



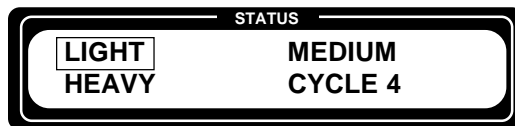
3. Press REVIEW CYCLE to access the Review mode, and view the first treatment value programmed for the selected cycle.



4. Continue to press REVIEW CYCLE to sequentially view each treatment value programmed for the selected cycle.



5. Press STOP/RESET (or REVIEW CYCLE). Control exits the Review mode and display screen returns to the selected cycle menu.



indicates flashing position.

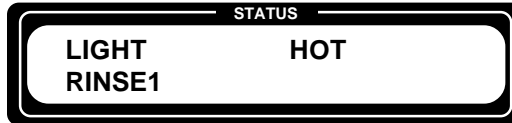
StopCycleOperation



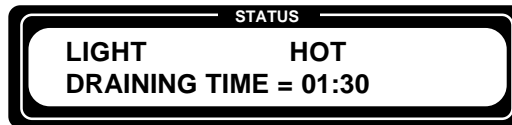
1. Press STOP/RESET to immediately halt operation of the cycle in progress. Display screen indicates that STOP/RESET was pressed,



2. Press CYCLE/START to resume cycle operation. Treatment resets to beginning of the interrupted phase (i.e., fill, recirculate or drain),



... alternates with ...



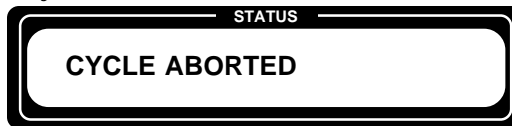
Abort Cycle Operation



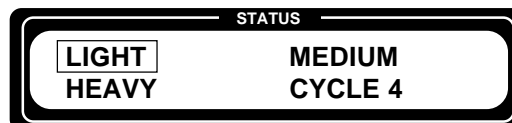
1. Press STOP/RESET to halt the cycle in progress.



2. Press STOP/RESET a second time to abort the cycle. Display screen indicates that cycle was aborted,



Control automatically aborts cycle operation and returns screen to selected cycle menu.

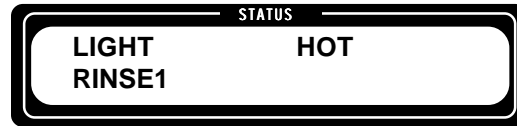


indicates flashing position.

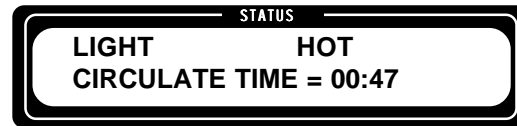
Extend Cycle Treatment Time

Treatment times may be temporarily extended by pressing EXTEND CYCLE touch pad either while the cycle is in progress or prior to initiating a cycle during the cycle program review. The temporarily extended treatment times apply only to the immediate cycle selected. On completion of the cycle, treatment times return to the programmed settings.

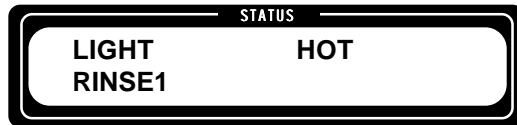
- » **During A Cycle** After starting a cycle, the programmed time for each treatment may be temporarily extended only when the particular treatment phase (i.e., recirculating, drying) is in operation.



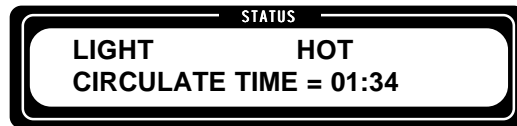
. . . alternates with . . .



To extend treatment time, press EXTEND CYCLE while the actual treatment phase (i.e., recirculating) is in operation. Each time the touch pad is pressed, the remaining time, on the display, is doubled.



. . . alternates with . . .



NOTE: Filling and draining phases are not effected by the extend cycle feature. If EXTEND CYCLE is pressed during these treatment phases, cycle continues as programmed.

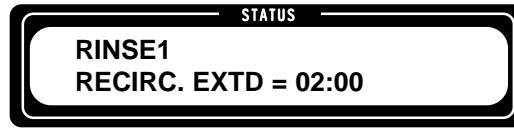
» Prior to Starting A Cycle



1. Once desired cycle is selected, press REVIEW CYCLE to access the Review mode. Continue to press REVIEW CYCLE to advance screen to the desired treatment.



2. With correct treatment displayed, press EXTEND CYCLE. The programmed treatment time is temporarily doubled. If EXTEND CYCLE is pressed again, treatment time returns to the original programmed setting.



NOTE: While in the Review mode, pressing EXTEND CYCLE only allows operator to double the programmed treatment time. If a longer treatment time is desired, programmed setting must either be temporarily extended during the cycle or adjusted in the Change Values mode prior to starting the cycle.



3. Press CYCLE/START twice to initiate the cycle. Cycle automatically progresses through each treatment as temporarily adjusted in the Review mode.

NOTE: Cycle may be started at any point in the Review mode.

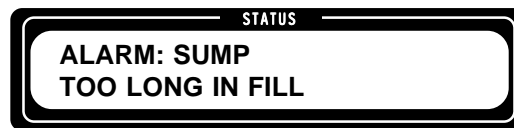
4. On completion of the cycle, the alarm buzzer sounds and an operator instruction is displayed.
5. When door(s) is opened, display screen returns to the first cycle menu, control exits Review mode and treatment times return to the programmed settings.



WARNING - FALL HAZARD:
To prevent falls, keep floors dry by immediately wiping up any spilled liquids in washer loading and unloading areas.

Acknowledge Alarm Condition


If an alarm condition occurs during cycle operation, an alarm buzzer sounds to notify operator, the appropriate alarm message screen appears on the display,




Press ALARM REPLY touch pad to silence alarm buzzer and acknowledge the displayed alarm message. Display shows:



Press CYCLE/START touch pad to resume cycle operation.

 **WARNING-PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD:** Safe and reliable operation of this equipment requires regularly scheduled preventive maintenance, in addition to the faithful performance of routine maintenance. Contact STERIS Engineering Service to schedule preventive maintenance.

 **WARNING-PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD:** Repairs and adjustments to this equipment must be made only by fully qualified service personnel. Non-routine maintenance performed by inexperienced, unqualified personnel or installation of unauthorized parts could cause personal injury, invalidate the warranty, or result in costly damage and ineffective cleaning of loads. Contact STERIS Engineering Service regarding service options.

Maintenance procedures described in Sections 7 and 9 should be performed regularly at the intervals indicated, using the maintenance schedule in Table 7-1 as a guide. Local conditions (water quality, usage, etc.) may require more frequent maintenance than indicated.

Customer should maintain a record of all maintenance procedures performed on the unit.

If a problem occurs, refer to Section 8, Troubleshooting. Refer to Section 9 for replacement parts list.

NOTE: Never permit unqualified persons to service the washer.

Preventive Maintenance Schedule

The following guide should be followed to properly maintain the washer. Some procedures should be carried out only by qualified service technicians. These procedures are noted by a star (*). Contact STERIS Engineering Service when service is required.

Table 7-1. Preventive Maintenance Schedule

SERVICE PERFORMED:	Minimum Frequency
1.0 PREPARATION FOR PREVENTIVE MAINTENANCE	
1.1 Discuss equipment with operators and check printouts.	6 times per year
1.2 Follow appropriate safety procedures; prepare unit for PM.	6 times per year

Table 7-1. Preventive Maintenance Schedule (continued)

SERVICE PERFORMED:	Minimum Frequency
<p>2.0 DOOR ASSEMBLY</p> <p>2.1 Verify proper door, door latch and door switch operation. Adjust switch if needed.</p> <p>2.2 Check condition of door gasket for wear and tear. Replace as needed.</p> <p>2.3 Check operation of door gas cylinder.</p> <p>2.4 Check door glass for cracks. Replace door if needed.</p>	<p>6 times per year</p> <p>6 times per year</p> <p>6 times per year</p> <p>6 times per year</p>
<p>3.0 VALVES</p> <p>3.1 Replace check valves.</p> <p>3.2 Rebuild optional cold water sump fill (AC7).</p> <p>3.3 Rebuild optional drain cooling (AC6).</p> <p>3.4 Rebuild hot water fill (AC0).</p> <p>3.5 Rebuild steam to sump (AC2).</p> <p>3.6 Rebuild optional pure water steam (AC5).</p> <p>3.7 Rebuild optional pure water fill (AC1).</p> <p>3.8 Drain valve (AC8) - replace pivot arm hose.</p> <p>3.9 Rebuild drain valve (AC8).</p> <p>3.10 Optional pure water outlet (AC12) - replace pivot arm hose.</p> <p>3.11 Rebuild optional pure water outlet valve (AC12).</p> <p>3.12 Optional transfer valve (AC12) - replace pivot arm hose.</p> <p>3.13 Rebuild optional transfer valve (AC12).</p>	<p>1 time per year</p> <p>1 time per year</p> <p>1 time per year</p> <p>1 time per year</p> <p>1 time per year</p> <p>1 time per year</p> <p>1 time per year</p> <p>1 time per year</p> <p>1 time per year</p> <p>Every 2 yrs</p> <p>Every 2 yrs</p> <p>1 time per year</p> <p>Every 2 yrs</p>
<p>4.0 MISC PIPING COMPONENTS</p> <p>4.1 Inspect cold water strainer, clean as needed.</p> <p>4.2 Inspect hot water strainer, clean as needed.</p> <p>4.3 Inspect steam strainer, clean as needed.</p> <p>4.4 Rebuild sump trap.</p> <p>4.5 Rebuild optional pure water tank trap.</p> <p>4.6 Check wash pump seals for leaks.</p> <p>4.7 Replace pump seals.</p>	<p>6 times per year</p> <p>6 times per year</p> <p>6 times per year</p> <p>1 time per year</p> <p>1 time per year</p> <p>6 times per year</p> <p>1 time per year</p>
<p>5.0 CHAMBER COMPONENTS</p> <p>5.1 Check rotary spray arm assemblies for free movement and even coverage. Clean nozzles if needed.</p> <p>5.2 Check condition of nylon bushings on rotary spray arm hub in top of wash chamber.</p> <p>5.3 Replace spray arm bushings.</p> <p>5.4 Clean bottom filters in wash chamber.</p> <p>5.5 Check piping system for leaks. Repair if needed.</p> <p>5.6 Verify proper operation of water level control.</p>	<p>6 times per year</p> <p>3 times per year</p> <p>1 time per year</p> <p>6 times per year</p> <p>6 times per year</p> <p>6 times per year</p>


**Contact your local STERIS Engineering Service representative for this service.*

Table 7-1. Preventive Maintenance Schedule (continued)

SERVICE PERFORMED:	Minimum Frequency
<p>6.0 CONTROL</p> <p>6.1 Verify that all the touch pads function properly.</p> <p>6.2 Verify that the date and time are correct. If not, correct.</p> <p>6.3 Verify operation of the battery backed RAM, replace as needed.</p> <p>6.4 Verify that the buzzer is working.</p> <p>6.5 Check all service-settable values in Service Test Mode for factory recommended settings. Verify functional operation of each valve using the Service Test Mode.</p> <p>6.6 Verify temperature displays with potentiometer. Make adjustments as needed per Maintenance Manual.</p> <p>Sump RTD</p> <p>Pure water tank RTD (optional accessory)</p>	<p>6 times per year</p> <p>6 times per year</p> <p>6 times per year</p> <p>6 times per year</p> <p>1 time per year</p> <p>6 times per year</p> <p>6 times per year</p>
<p>7.0 DETERGENT/ADDITIVE/LUBRICANT INJECTION PUMP(S)</p> <p>7.1 Verify that rollers are not binding</p> <p>7.2 Verify that tubing is not clogged, cracked, crushed or distorted. Lubricate squeeze tube. Clean/replace if needed.</p> <p>7.3 Verify that the correct amount of detergent is being dispensed. Adjust if needed.</p> <p>7.4 Replace the tubing.</p> <p>7.5 Verify proper operation of low level sensor.</p>	<p>6 times per year</p> <p>6 times per year</p> <p>6 times per year</p> <p>1 time per year</p> <p>6 time per year</p>
<p>8.0 PNEUMATICS</p> <p>8.1 Verify proper operation of actuators.</p> <p>8.2 Check for leaks in the air lines. Repair if needed.</p> <p>8.3 Check air filter regulator. Drain moisture from bowl. Replace filter element if clogged or rusty.</p> <p>8.4 Replace mufflers on air solenoid valves.</p>	<p>6 times per year</p> <p>6 times per year</p> <p>6 times per year</p> <p>1 times per year</p>
<p>9.0 PURE WATER TANK (IF EQUIPPED)</p> <p>9.1 Verify proper operation of level control.</p>	<p>6 times per year</p>
<p>10.0 FINAL CHECKOUT AND TEST</p> <p>10.1 Clean dirt and lint from components. Check all wiring, terminals and socket connections for damage or fraying.</p> <p>10.2 Verify that unit has proper labels (caution, warning).</p> <p>10.3 Run machine through a cycle to verify proper operation. Check all displays.</p> <p>10.4 Reinstall any panel or cover removed. Check area to ensure removal of all materials used during inspection.</p> <p>10.5 Notify customer that PM inspection is complete.</p>	<p>6 times per year</p> <p>6 times per year</p> <p>6 times per year</p> <p>6 times per year</p> <p>6 times per year</p>


Daily Cleaning Procedures

After last cycle of the day, allow unit to cool, and then remove and clean sump filter in bottom of wash chamber. Always clean filter while it is still wet, before foreign matter dries.

 **WARNING - FALL HAZARD: To prevent falls, keep floors dry by immediately wiping up any spilled liquids in washer loading and unloading areas.**

Weekly Cleaning Procedures

» Clean Washer Exterior Clean washer exterior as outlined below.

 **CAUTION: Use non-abrasive cleaners when cleaning unit. Follow directions on containers and rub in back-and-forth motion, in same direction as surface grain. Abrasive cleaners will damage stainless-steel. Cleaners rubbed in a circular motion or applied with a wire brush or steel wool on door and chamber assemblies can be harmful to stainless-steel. Do not use these cleaners on painted surfaces.**

1. Using a damp cloth or sponge, apply cleaner in a back-and-forth motion, rubbing in same direction as surface grain.
2. Thoroughly wipe off cleaner.
3. Polish surface with a clean, dry, lint-free cloth.

» Clean Rotary Spray Arms

1. Remove rotary spray holder and lower rotary spray arms.

NOTE: There is a loose bushing between rotary spray arm hub and top of wash chamber. When lowering rotary spray arm, the bushing will fall. Be certain to hold onto bushing while removing rotary holder and lowering rotary spray arms.

2. Unscrew spray arms from rotary spray arm hub.
3. Rinse spray arm under running water to clean out sediment.
4. Use a fine wire (approximately the wire gauge of a paper clip) to clean sediment from spray nozzles. Rinse under running water.
5. Replace spray arms. Position spray arms so that holes are approximately 15 degrees from vertical.
6. Place bushing on top of rotary spray arm hub and reattach spray arm assembly to top of wash chamber.

Monthly Cleaning Procedures

» Remove Hard Water Deposits

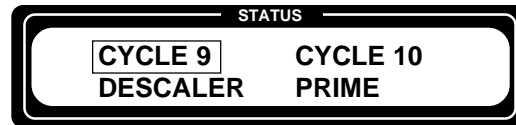
NOTE: Depending of hardness of water being used, it may be necessary to remove hard water deposits more often. Remove deposits from chamber and accessories whenever deposits become visible.

Remove hard water deposits from chamber and manifold accessories as follows, using Descaler Cycle especially designed for this purpose.

1. Place empty manifold accessory in chamber.



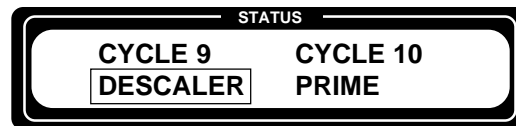
2. Press CYCLE MENU to scroll to the appropriate cycle menu.



indicates flashing position.



3. Press SELECT CYCLE to select Descaler cycle.



indicates flashing position.



4. Press CYCLE/START. Display shows:



5. Press CYCLE/START again to confirm Descaler cycle selection.

NOTE: If CYCLE/START touch pad is not pressed within 5 seconds, display returns to main Cycle Menu.

Washer starts processing the programmed Descaler cycle. Display shows:



...alternates with...






WARNING - CHEMICAL BURN HAZARD: Washer chemical detergents are caustic and can cause adverse effects to exposed tissues. Read and follow the precautions and instructions in the MSDS and other product labeling prior to handling.


» Clean Building Supply-line Strainers




WARNING - BURN HAZARD: Allow piping to cool down before inspecting and/or cleaning supply-line strainers.

6. Open chamber door and pour 4 oz (118 ml) of a descaling liquid into chamber. Close door.
 7. Press CYCLE/START to resume cycle operation.
 8. At completion of cycle, open door and allow unit to air dry.
 9. Check sump filter for debris. If debris is present, rinse filter under running water to clean.
-
1. Close building supply lines: hot water, cold water (if option applies), pure water and steam (if option applies).
 2. Unlock and open lower access panel.
 3. Remove and clean strainers.
 4. Replace strainers and close lower access panel. Open building supply lines.

- 
WARNING - PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD: Repairs and adjustments to this equipment must be made only by fully qualified service personnel. Non-routine maintenance performed by inexperienced, unqualified personnel or installation of unauthorized parts could cause personal injury, invalidate the warranty, or result in costly damage and ineffective cleaning of loads. Contact STERIS Engineering Service regarding service options.

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WARNING - ELECTRIC SHOCK AND/OR BURN HAZARD: Disconnect all utilities to washer before servicing. Refer to Section 1 for expanded warning.

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WARNING - FALL HAZARD: To prevent falls, keep floors dry by immediately wiping up any spilled liquids in washer loading and unloading areas.

This section describes the types of washer malfunctions which may occur, and indicates probable causes and corrective actions.

If you are unable to correct the problem with use of the Troubleshooting Charts, or if a problem occurs that is not described on the charts, please call your STERIS Engineering Service representative.

NOTE: Never permit unqualified persons to service the washer.

Table Descriptions

Table 8-1 – Problems where **NO** alarm screen occurs.

Table 8-2 – Problems where alarm screen occurs.

Table 8-1. Troubleshooting Chart - No Alarm Screen

PROBLEM	POSSIBLE CAUSE AND/OR CORRECTION
1. Screen displays Service mode menu.	1. Washer in Service mode – switch washer to operating mode by pressing EXTEND CYCLE touch pad. 2. Call Service.

Table 8-1. Troubleshooting Chart – No Alarm Screen (continued)

PROBLEM	POSSIBLE CAUSE AND/OR CORRECTION
2. Cycle does not start when CYCLE/START touch pad is pressed.	<ol style="list-style-type: none"> 1. Chamber door open – close door and press CYCLE/START touch pad. 2. Blown fuses in electrical box – replace fuses. 3. Call Service.
3. Insufficient or no water entering chamber through spray system.	<ol style="list-style-type: none"> 1. Manifold accessory incorrectly positioned in chamber – make sure manifold accessory is positioned directly over manifold connector. 2. Rotary spray arms clogged – clean spray arms. 3. Sump filter clogged – clean filter. 4. Pump rotating in wrong direction – check if pump is rotating counter clockwise, as indicated by arrow. 5. Worn manifold connector – replace if necessary. 6. Call Service.
4. Pump does not start during a treatment.	<ol style="list-style-type: none"> 1. Chamber door open – close and press CYCLE/START touch pad. 2. Call Service.
5. Foam in chamber.	<ol style="list-style-type: none"> 1. Chemical is foaming – use recommended products (non-foaming chemicals). 2. Too much chemical is injected during treatment – check chemical injection rate in Service Mode. 3. Call Service.
6. Treatment stops for no apparent reason.	<ol style="list-style-type: none"> 1. Chamber door(s) open – close door and press CYCLE/START touch pad. 2. Call Service.
7. Insufficient or no water entering chamber during treatment.	<ol style="list-style-type: none"> 1. Supply valves not fully open – open building and washer supply valves. Hot water supply line pressure must be between 15 and 50 psig (103 and 345 kPa); cold water (option) supply line pressure must be between 30 and 50 psig (207 and 345 kPa). 2. Call Service.

Table 8-1. Troubleshooting Chart – No Alarm Screen (continued)

PROBLEM	POSSIBLE CAUSE AND/OR CORRECTION
8. Chamber does not drain completely.	<ol style="list-style-type: none"> 1. Sump filter clogged – clean filter. 2. Drain line plugged – flush out drain line. 3. Building piping obstructed – check piping and flush out if necessary. 4. Call Service.
9. Loads come out dirty.	<ol style="list-style-type: none"> 1. Empty chemical supply – install new supply. 2. Incorrect chemical used – use recommended products (non-foaming chemicals). 3. Rotary spray arms clogged – clean spray arms. 4. Pump rotating in wrong direction – check if pump is rotating clockwise, as indicated by arrow. 5. Worn manifold connector – replace if necessary. 6. Call Service.

Table 8-2. Troubleshooting Chart - Alarm Screen

PROBLEM	POSSIBLE CAUSE AND/OR CORRECTION
<ol style="list-style-type: none"> 1. STOP/RESET touch pad was pressed. Screen displays: <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px 0;">STOP WAS PRESSED PRESS START TO RESUM</div> 	<ol style="list-style-type: none"> 1. Press ALARM REPLY touch pad to silence alarm buzzer. Press CYCLE/START touch pad to resume operation, or press STOP/RESET touch pad again to abort cycle operation.
<ol style="list-style-type: none"> 2. Chamber sump is taking too long to fill with water. Alarm sounds and screen displays: <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px 0;">ALARM: SUMP TOO LONG IN FILL</div> 	<ol style="list-style-type: none"> 1. Supply valves closed – press ALARM REPLY touch pad to silence alarm buzzer. Open building and washer supply valves and press CYCLE/START touch pad to resume operation. 2. If condition recurs, call Service.
<ol style="list-style-type: none"> 3. Chamber sump is taking too long to drain. Alarm sounds and screen displays: <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px 0;">ALARM: SUMP TOO LONG IN DRAIN</div> 	<ol style="list-style-type: none"> 1. Water level sensor stuck or obstructed – press ALARM REPLY touch pad to silence alarm buzzer. Check water level sensor, clean if necessary and press CYCLE/START touch pad to resume operation. 2. If condition recurs, call Service.

Table 8-2. Troubleshooting Chart – Alarm Screen (continued)

PROBLEM	POSSIBLE CAUSE AND/OR CORRECTION
<p>4. Water temperature in chamber sump is below the programmed temperature. Alarm sounds and screen displays:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> ALARM: SUMP FAILED TO REACH SET TEMP. </div>	<ol style="list-style-type: none"> 1. Steam supply valves closed – press ALARM REPLY touch pad to silence alarm buzzer. Open building and washer steam supply valves and press CYCLE/START touch pad to resume operation. 2. If conditions recurs, call Service.
<p>5. Chamber sump RTD is detecting out-of-range temperatures. Alarm sounds and screen displays:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> ALARM: SUMP RTD DEFECTIVE </div>	<ol style="list-style-type: none"> 1. RTD connector unplugged – press ALARM REPLY touch pad to silence alarm buzzer. Check RTD connection and press CYCLE/START touch pad to resume operation. 2. If condition recurs, call Service.
<p>6. Chamber sump RTD detecting out-of-range temperature. Alarm sounds and screen displays:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> ALARM: SUMP WATER TEMP. TOO HIGH </div>	<ol style="list-style-type: none"> 1. Press ALARM REPLY touch pad to silence alarm buzzer and call Service.
<p>7. If washer is equipped with Heated Pure Water Rinse option, water temperature in pure water storage tank is below the programmed temperature. Alarm sounds, and screen displays:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> ALARM: PURE W. TANK FAILED TO REACH TEMP </div>	<ol style="list-style-type: none"> 1. Steam supply valve closed – press ALARM REPLY touch pad to silence alarm buzzer. Open building and washer steam supply valves and press CYCLE/START touch pad to resume operation. 2. If condition recurs, call Service.
<p>8. If washer is equipped with Heated Pure Water Rinse option, pure water tank RTD is detecting out-of-range temperatures. Alarm sounds and screen displays:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> ALARM: PW TANK RTD DEFECTIVE </div>	<ol style="list-style-type: none"> 1. RTD connector unplugged – press ALARM REPLY touch pad to silence alarm buzzer. Check RTD connection and press CYCLE/START touch pad to resume operation. 3. If condition recurs, call Service.
<p>9. If option applies, pure water storage tank is taking too long to fill with water. Alarm sounds and screen displays:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> ALARM: PURE W. TANK TOO LONG IN FILL </div>	<ol style="list-style-type: none"> 1. Pure water supply valves closed – press ALARM REPLY touch pad to silence alarm buzzer. Open building and washer pure water supply valves and press CYCLE/START touch pad to resume operation. 2. If condition recurs, call Service.

Table 8-2. Troubleshooting Chart – Alarm Screen (continued)

PROBLEM	POSSIBLE CAUSE AND/OR CORRECTION
<p>10. If washer is equipped with Heated Pure Water Rinse option, pure water tank RTD is detecting out-of-range temperatures. Alarm sounds and screen displays:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> ALARM: PURE WATER TEMP. TOO HIGH </div>	<p>1. Press ALARM REPLY touch pad to silence alarm buzzer and call Service.</p>
<p>11. Pump contactor overload tripped. Alarm sounds and screen displays:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> ALARM: MOTOR OVERLOAD TRIPPED . . . </div>	<p>1. Press ALARM REPLY touch pad to silence alarm buzzer and call Service.</p>
<p>12. Alarm sounds and screen displays:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> (CYCLE NAME) (WATER TYPE) CYCLE STOPPED </div> <p>Alternating with:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> ALARM: (PUMP NAME) DETERGENT EMPTY </div>	<p>1. Empty chemical container – press ALARM REPLY touch pad to silence alarm buzzer. Install new supply and press CYCLE/START touch pad to resume operation.</p> <p>2. Low level sensor out of container – press ALARM REPLY touch pad to silence alarm buzzer. Insert level sensor in container and press CYCLE/START touch pad to resume operation.</p>
<p>13. Door was opened during cycle processing. Alarm sounds and screen displays:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> ALARM: LOAD DOOR OPEN DURING PROCESS </div>	<p>1. Press ALARM REPLY touch pad to silence alarm buzzer. Close load-end door and press CYCLE/START touch pad to resume operation.</p> <p>2. If condition recurs, call Service.</p>
<p>14. Screen displays:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> MAINTENANCE DUE! CALL SERVICE . . . </div>	<p>1. Call Service.</p>

⚠ WARNING - PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD: Repairs and adjustments to this equipment must be made only by fully qualified service personnel. Non-routine maintenance performed by inexperienced, unqualified personnel or installation of unauthorized parts could cause personal injury, invalidate the warranty, or result in costly damage and ineffective cleaning of loads. Contact STERIS Engineering Service regarding service options.

This section includes procedures for the replacement and inspection of selected washer components. Exploded views and assembly drawings showing various parts and assemblies referred to can be found in the *Maintenance Manual, P-764329-127*, purchased separately.

Chemical Container Replacement

To achieve maximum cleaning efficiency, select chemical appropriate to soil type being processed.

⚠ WARNING - CHEMICAL BURN HAZARD: Washer chemical detergents are caustic and can cause adverse effects to exposed tissues. Do not get in eyes, on skin or attempt to ingest by mouth. Read and follow the precautions and instructions on the chemical detergent label and MSDS prior to handling the chemical detergent or refilling the chemical container. Wear protective gloves, face shield and clothing whenever handling the chemical detergent.

NOTE: Always use a non-foaming chemical for effective cleaning and proper pump operation. Follow chemical manufacturer's recommendations for amount of chemical to be used.

When chemical is low or has run out:

1. Install a new container.
2. Place low level sensor upright in container.
3. Insert squeeze/pickup tube into new container.
4. See Priming Procedure, later in this section, to fill tubing with chemical.

⚠ CAUTION: When choosing a chemical, select one with a low chloride content. Chemicals with a high chloride content can be harmful to stainless steel.

Injection Pump Tube Lubrication and Replacement



WARNING - CHEMICAL BURN HAZARD: Washer chemical detergents are caustic and can cause adverse effects to exposed tissues. Do not get in eyes, on skin or attempt to ingest by mouth. Read and follow the precautions and instructions on the chemical detergent label and MSDS prior to handling the chemical detergent or refilling the chemical container. Wear protective gloves, face shield and clothing whenever handling the chemical detergent or servicing the chemical injection pump and lines.



CAUTION: Always use a silicone lubricant to lubricate the detergent squeeze tube. Petroleum-based lubricants, such as Vaseline or grease, will cause squeeze tube to melt.

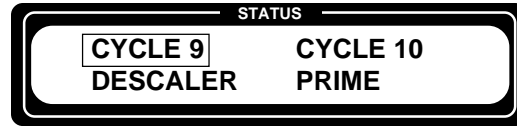
1. Each month, lubricate section of squeeze tube in contact with pump(s) using a silicone lubricant.
2. Each month, check squeeze tube(s) for any leaks or signs of wear. If necessary, replace tube as follows:
 - a. If unit is on, press Power Off/Standby touch pad once and position Main Power Switch to OFF.
 - b. Open lower service access panel. The injection pumps are located under the chamber.
 - c. Remove clamps and disconnect the squeeze tube ends from the pickup and feed lines.
 - d. Remove screws attaching injection pump faceplate to injection pump head. Lift faceplate away from pump head.
 - e. To remove squeeze tube from pump head, pull out tube by one end. Discard the tube.
 - f. Clean all pump surfaces.
 - g. Insert one end of new tube into pump head and rotate roller block manually.
 - h. Liberally spread a silicone lubricant over rollers in the roller block and all tubing surfaces in contact with the pump head.
 - i. Return faceplate to pump head and fasten with screws previously removed.
 - j. Connect ends of tube to pickup and feed lines. Attach clamps to both lines.
 - k. Close lower access panel.
 - l. See Priming Procedure, following, to fill tubing with chemical.
 - m. Position unit Main Power Switch to ON. Press Power Off/Standby touch pad once, initiate a cycle and check squeeze tube operation.

Priming Procedure

1. Open chamber door.



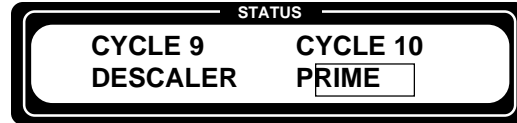
2. Press CYCLE MENU to scroll to appropriate cycle menu.



indicates flashing position.



3. Press SELECT CYCLE to select Prime cycle.



indicates flashing position.



4. Press CYCLE/START. Display shows:



indicates flashing position.



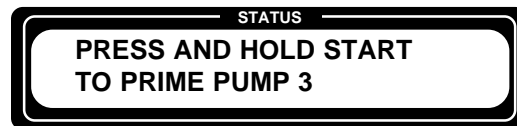
5. Press VALUE arrows (either up or down), until name of pump to be primed is displayed.



indicates flashing position.



6. Press CYCLE/START to confirm pump selection. Display shows:



7. Press and hold CYCLE/START touch pad until a few drops of chemical come out of the detergent injector (located inside chamber sump).

*NOTE: **CYCLE/START** touch pad can be released to allow operator to check inside sump.*



8. Press STOP/RESET when priming is over.

Replacement Parts

The parts listed in this section are those that would be necessary to do minor maintenance on this washer.

To order replacement parts, proceed as follows:

1. Include the part number and description listed below.
2. Include the model and serial numbers of your equipment on your order.
3. Send your order directly to the STERIS Sales or Service Center servicing your area.

Contact your STERIS representative if you need parts that are not listed below.

NOTE: Use only STERIS authorized parts on the equipment. Use of unauthorized parts will void the warranty.

Table 9-1. Replacement Parts

Description	Part Number
Door	
Handle, Door	P-117905-493
Lock and Key	P-117950-001
Rotary Sprays	
Arm, Rotary Spray, S/S, #1L	P-117904-615
Arm, Rotary Spray, S/S, #1R	P-117904-616
Piping	
Kit, Repair, for 4-Way Pneumatic Valve 1/8"	P-117908-020
Kit, Repair, for 1-3/4" Pneumatic Valve	P-117904-011
Kit, Repair, for 1/2" F Water Solenoid Valve	P-764316-147
Coil, Spare for 1/2" F Water Solenoid Valve	P-117955-186
Screen, Filter, for 1/2" F Steam Strainer	P-117906-429
Kit, Repair, for 1/2" F Steam Trap	P-117904-127
Cylinder, Pneumatic	P-117902-389
Seal, Mechanical Pump	P-117903-641
Pneumatics	
Muffler, Exhaust Air, 1/8"	P-117902-312
Manometer, 1/8"	P-117953-975
Regulator, Pressure, 1/8"	P-117903-144
• Nut	P-117903-692
Electrical	
Fuse, 4 A, 250 V	P-117952-810
Fuse, 1.6 A, 250 V	P-117951-596
Fuse, 15 A, 600 V	P-117902-669
Fuse, 25 A, 600 V	P-117903-630
Fuse, 3 A, 250 V	P-117902-357

Table 9-1. Replacement Parts (continued)

Description	Part Number
Miscellaneous	
Clamp, Quick-disconnect, 2"	P-117950-808
O'ring, Viton, 2"	P-117951-499
Clamp, S/S, #12	P-117950-786
Clamp, S/S, #28	P-117950-789
Clamp, S/S, #52	P-117950-791
Hose, 1-3/4" x 2-1/4", Black	P-117950-761
Hose, 3" x 2-1/4", Black	P-117950-677
Hose, Air, 1/4", Nylon, Red	P-117903-348
Hose, Air, 5/32", Nylon, Blue	P-117902-323
Hose, Air, 5/32", Nylon, Red	P-117902-322
Sensor, Water Level	P-117903-117
• Collar	P-117906-995
RTD Assembly	P-117955-383
Fitting, Compression	P-117955-591
Filter, Sliding Inlet	P-117950-016
Filter, Sump	P-117984-835

Protect your STERIS equipment with cost-effective extended service agreements

The best way to prevent costly downtime due to equipment malfunction is with regularly scheduled maintenance performed by qualified technicians trained in the latest technology. STERIS offers annual maintenance agreements to give your capital equipment planned maintenance that will help correct little problems before they become big ones. STERIS Engineering Service combines the precise maintenance program and factory-trained technicians to assure you of maximum productivity.

Our STERIS service technicians thoroughly inspect, clean, adjust and provide all necessary maintenance to keep your equipment performing according to factory specifications, all at an established economical rate that you can plan for.

We have more than 5,000 customers who are benefiting from STERIS maintenance agreements. Why not join them? Obtain complete details by calling 1-800-333-8828, or writing to:



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