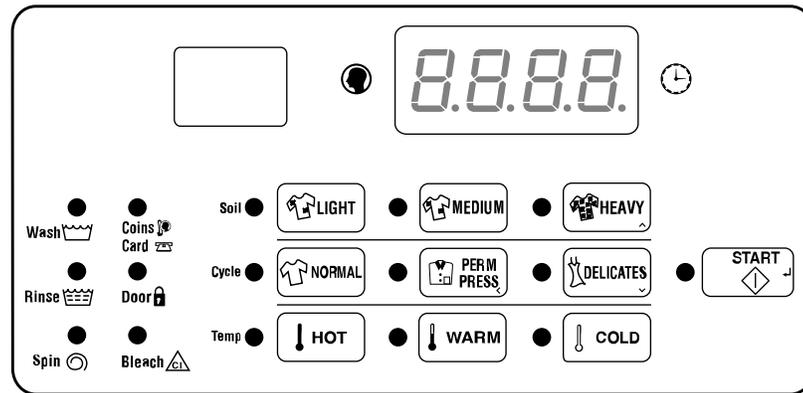


Washer-Extractor

Refer to Page 8 for Model Numbers



CHM1776C_SVG

Original Instructions

Keep These Instructions for Future Reference.

(If this machine changes ownership, this manual must accompany machine.)





WARNING

Machine installations must comply with minimum specifications and requirements stated in the applicable Installation Manual, any applicable municipal building codes, water supply requirements, electrical wiring regulations and any other relevant statutory regulations. Due to varied requirements and applicable local codes, this machine must be installed, adjusted, and serviced by qualified maintenance personnel familiar with applicable local codes and the construction and operation of this type of machinery. They must also be familiar with the potential hazards involved. Failure to observe this warning may result in personal injury, property damage, and/or equipment damage, and will void the warranty.

W820

NOTE: The **WARNINGS** and **IMPORTANT SAFETY INSTRUCTIONS** appearing in this manual are not meant to cover all possible conditions and situations that may occur. Common sense, caution, and care must be exercised when installing, maintaining, or operating the machine.

Any problems or conditions not understood should be reported to the dealer, distributor, service agent or the manufacturer.

Table of Contents

Model Identification.....	8
Introduction.....	11
Replacement Parts	11
Customer Service.....	11
Preliminary Information.....	12
About the Control.....	12
Glossary of Terms.....	12
Power Failure Recovery.....	12
Communications.....	12
Infra-red Communications (Optional).....	12
Control Identification.....	13
Select Cycle Keypads.....	13
Select Wash Temp Keypads.....	13
Select Soil Keypads.....	13
Display Identification.....	14
Light Emitting Diodes (LEDs).....	14
Four 7-Segment Digits.....	14
Machine Operation.....	15
Start Up.....	15
Ready Mode.....	15
Partial Vend Mode.....	15
Additional Vend Mode.....	15
Start Mode.....	15
Door Locking Mode.....	15
Cycle Sequence.....	15
Run Mode.....	15
Door Unlocking Mode.....	15
End of Cycle Mode.....	15
Signals.....	15
Changing Cycles.....	16
Special Features.....	17
Programming the Control.....	17
Collecting Audit Information.....	17

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Testing Machine and Control Functions.....	17
Rapid Advance Feature.....	17
Clearing the Vend Feature	17
Communications Mode.....	17
Coin Drop.....	17
Start Pulse Operation.....	17
Top Cover and Coin Vault Openings.....	18
Break-In Alarm.....	18
Special Vend.....	18
OPL Mode.....	18
Drop-Off Mode.....	18
Low Power/Auto-Shutdown Option.....	18
Opening the Top Cover.....	19
Entering the Manual Mode.....	20
How to Enter the Manual Mode.....	20
How to Exit Programming Feature.....	20
Programming Control.....	21
What Can Be Programmed?.....	21
Programmable Options Available.....	22
Programming Flowcharts.....	30
LIGHT Vend Price AtS1.....	36
Coin #1 Value dEn1.....	37
Coin #2 Value dEn2.....	38
Start Pulse Value PLSE.....	39
Start Pulse Mode PLSn.....	40
Available Type AtyP.....	41
Default Cycle dCYC.....	42
OPL Mode Enable/Disable oPL.....	43
Audio Signal AUd.....	44
Card Reader Display Control cARd.....	46
Error Code Programming Err.....	47
Cycle Programming CyC.....	53
Supply Compartment Dispenser Programming SUPC (Design 1 Models Only)...	58
Number of Balance Retries bALr.....	58
IR Access (Enable/Disable) IrA.....	58
Fahrenheit/Celsius t FC (Models with Heat).....	59
Hot Water Temperature FH.....	60
Warm Water Temperature FHC.....	60
Cold Water Temperature FC.....	61
Cooldown Enable/Temperature Codn (Models with Heat).....	61
Production Test Cycle (Enable/Disable) PtEn.....	62
Manual Rapid Advance (Enable/Disable) rAEn.....	62
No Cycle Time Display nCtd.....	63
Programmable Cycle Time Display PCtd.....	63
Slow Drain Detection Adjust Value SdAd.....	64
Pause/Resume Mode (Enabled/Disabled) SPAU.....	64

MEDIUM Vend Price AtS2.....	65
HEAVY Vend Price AtS3.....	66
NORMAL Vend Price AtS4.....	67
PERM PRESS Vend Price AtS5.....	68
DELICATES Vend Price AtS6.....	69
Delicate Hot Vend Price AtS7.....	70
Delicate Warm Vend Price AtS8.....	71
Delicate Cold Vend Price AtS9.....	72
Set Real-Time Clock rtC-.....	73
Special Vend A Data SPA-.....	74
Special Vend B Days Enable/Disable SPb-.....	87
Special Vend C Days Enable/Disable SPC-.....	88
Special Vend D Days Enable/Disable SPd-.....	88
Cycle Modifier Programming CnP-.....	89
Drop Off Mode (Enable/Disable) droP.....	93
Low Power/Auto Shutdown A Days Enable LPSA.....	93
Low Power/Auto Shutdown B Days Enable LPSb.....	94
Low Power/Auto Shutdown C Days Enable LPSC.....	94
Low Power/Auto Shutdown D Days Enable LPSd.....	95
Power Fail Reset PFr.....	95
Manual Diagnostics (Enable/Disable) dAEn.....	96
Low Water Level FL0.....	96
Medium Water Level FnEd	97
High Water Level FHI.....	97
Temperature Controlled Fill Enable/Disable tCF(Models with Heat).....	98
Auto-Water Leak Detection ALd-.....	99
Collecting Audit Information.....	100
How to Enter Audit Feature.....	100
Entering the Audit Feature by Manual Mode.....	100
Entering the Audit Feature with the Coin Vault Open.....	100
How to Read Audit Data.....	100
How to Exit Audit Feature.....	100
Manual Reset.....	101
How to Enter Manual Reset.....	101
Testing Machine and Electronic Control Functions.....	102
How to Enter Diagnostic Testing Feature.....	102
How to Start Tests.....	102
How to Exit Diagnostic Testing Feature.....	102
Diagnostic Test Descriptions.....	104
Error Codes.....	110
Rapid Advance Feature.....	114
How to Enter Rapid Advance.....	114
How to Enter Rapid Advance During an Active Cycle.....	114

How to Use Rapid Advance.....	114
How to Exit Rapid Advance Feature.....	114
Clear Vend Feature.....	115
How to Clear Vend.....	115
Power Fail Recovery.....	116
Communications Mode.....	117
Infra-red Communications.....	117
How to Begin Communications with an External Device.....	117
Card Reader Communications (Card Models Only).....	117
Network Communications.....	117
Default Cycles.....	118

Model Identification

Information in this manual is applicable to these models:

Models					
20 Pound [9 Kg]	HCD020LC2	SCH020WLF	SCL020WLF	SCN020WCF	SCU020LYV
	HCD020LD2	SCH020WLV	SCL020WLV	SCN020WCV	SCU020WC2
	HCD020LDF	SCH020WXF	SCL020WXF	SCN020WD2	SCU020WCF
	HCD020LDV	SCH020WXV	SCL020WXV	SCN020WDF	SCU020WCV
	HCL020LD2	SCH020WYF	SCL020WYF	SCN020WDV	SCU020WD2
	SCD020LDF	SCH020WYV	SCL020WYV	SCN020WEF	SCU020WDV
	SCD020LDV	SCL020LCF	SCN020LC2	SCN020WEV	SCU020WE2
	SCH020LCF	SCL020LDF	SCN020LCF	SCN020WY2	SCU020WEV
	SCH020LDF	SCL020LDV	SCN020LCV	SCN020WYF	SCU020WLF
	SCH020LDV	SCL020LEF	SCN020LD2	SCN020WYV	SCU020WLV
	SCH020LEF	SCL020LEV	SCN020LDF	SCU020LC2	SCU020WX2
	SCH020LEV	SCL020LLV	SCN020LDV	SCU020LCV	SCU020WXV
	SCH020LLV	SCL020LXF	SCN020LEF	SCU020LD2	SCU020WY2
	SCH020LXF	SCL020LXV	SCN020LEV	SCU020LDV	SCU020WYF
	SCH020LXV	SCL020LY2	SCN020LX2	SCU020LE2	SCU020WYV
	SCH020LYF	SCL020LYF	SCN020LXF	SCU020LEV	SCY020LEV
	SCH020LYV	SCL020LYV	SCN020LXV	SCU020LLF	SCY020WEV
	SCH020WCF	SCL020WCF	SCN020LY2	SCU020LLV	
	SCH020WCV	SCL020WCV	SCN020LYF	SCU020LX2	
	SCH020WEF	SCL020WEF	SCN020LYV	SCU020LXV	
SCH020WEV	SCL020WEV	SCN020WC2	SCU020LY2		
30 Pound [13.6 Kg]	HCD030LD2	SCH030WXF	SCL030WXF	SCN030WCV	SCU030LX2
	HCD030LDF	SCH030WXV	SCL030WXV	SCN030WD2	SCU030LXV
	HCD030LDV	SCH030WYF	SCL030WYF	SCN030WDF	SCU030LY2
	SCD030LD2	SCH030WYV	SCL030WYV	SCN030WDV	SCU030LYV
	SCD030LDF	SCL030LCF	SCN030LC2	SCN030WEF	SCU030WC2
	SCD030LDV	SCL030LCV	SCN030LCF	SCN030WEV	SCU030WCF
	SCH030LCF	SCL030LD2	SCN030LCV	SCN030WLV	SCU030WCV
	SCH030LCV	SCL030LEF	SCN030LD2	SCN030WX2	SCU030WD2
	SCH030LEF	SCL030LEV	SCN030LDF	SCN030WY2	SCU030WDV
	SCH030LEV	SCL030LXF	SCN030LDV	SCN030WYF	SCU030WE2
	SCH030LXF	SCL030LXV	SCN030LE2	SCN030WYV	SCU030WEV
	SCH030LXV	SCL030LYF	SCN030LEF	SCU030LC2	SCU030WLV
	SCH030LYF	SCL030LYV	SCN030LEV	SCU030LCV	SCU030WX2
	SCH030LYV	SCL030WC2	SCN030LXF	SCU030LD2	SCU030WXV
	SCH030WCF	SCL030WCF	SCN030LXV	SCU030LDV	SCU030WY2
	SCH030WCV	SCL030WCV	SCN030LY2	SCU030LE2	SCU030WYF
	SCH030WEF	SCL030WEF	SCN030LYF	SCU030LEF	SCU030WYV
	SCH030WEV	SCL030WEV	SCN030LYV	SCU030LEV	SCY030LDF
	SCH030WLF	SCL030WLF	SCN030WC2	SCU030LLF	SCY030LEV
	SCH030WLV	SCL030WLV	SCN030WCF	SCU030LLV	SCY030WEV

Table continues...

Models					
40 Pound [18.1 Kg]	HCB040LDF HCD040LD2 HCD040LDF HCD040LDV SCB040LCF SCB040LCV SCB040LDV SCB040LEF SCB040LEV SCB040LLF SCB040LXV SCB040LYV SCB040WCF SCB040WCV SCB040WDV SCB040WEV SCB040WXV SCB040WYV SCD040LD2 SCD040LDF SCD040LDV SCH040LCF SCH040LCV SCH040LEF	SCH040LEV SCH040LLF SCH040LXF SCH040LXV SCH040LYF SCH040LYV SCH040WCF SCH040WCV SCH040WEF SCH040WEV SCH040WLF SCH040WLV SCH040WVF SCH040WVY SCH040WYV SCL040LCF SCL040LCV SCL040LDF SCL040LE2 SCL040LEF SCL040LEV SCL040LLF SCL040LXF SCL040LXV	SCL040LYF SCL040LYV SCL040WC2 SCL040WCF SCL040WCV SCL040WEF SCL040WEV SCL040WLF SCL040WLV SCL040WVF SCL040WVY SCN040LC2 SCN040LCF SCN040LCV SCN040LD2 SCN040LDF SCN040LE2 SCN040LEF SCN040LEV SCN040LLF SCN040LXF	SCN040LXV SCN040LY2 SCN040LYF SCN040LYV SCN040WC2 SCN040WCF SCN040WCV SCN040WD2 SCN040W1DF SCN040WDV SCN040WE2 SCN040WEF SCN040WEV SCN040WX2 SCN040WY2 SCN040WYF SCN040WYV SCU040LC2 SCU040LCV SCU040LD2 SCU040LDV SCU040LE2 SCU040LEF SCU040LEV	SCU040LLF SCU040LLV SCU040LX2 SCU040LXV SCU040LY2 SCU040LYV SCU040WC2 SCU040WCF SCU040WCV SCU040WD2 SCU040WDF SCU040WE2 SCU040WEF SCU040WEV SCU040WL2 SCU040WL3 SCU040WLV SCU040WX2 SCU040WXV SCU040WY2 SCU040WYF SCY040LDF SCY040LEV SCY040WEV
60 Pound [27.2 Kg]	HCD060LD2 HCD060LDF HCD060LDV SCD060LD2 SCD060LDF SCD060LDV SCH060LCF SCH060LCV SCH060LEF SCH060LEV SCH060LLF SCH060LXF SCH060LXV SCH060LYV SCH060WCV SCH060WEF SCH060WEV SCH060WLF SCH060WLV	SCH060WVF SCH060WVY SCH060WYF SCH060WYV SCL060LCF SCL060LCV SCL060LE2 SCL060LEF SCL060LEV SCL060LLF SCL060LXF SCL060LXV SCN060LDV SCL060LYV SCL060WCV SCL060WEF SCL060WEV SCL060WLF SCL060WLV	SCL060WVF SCL060WVY SCL060WYF SCL060WYV SCN060LC2 SCN060LCF SCN060LCV SCN060LD2 SCN060LDF SCN060LDV SCN060LE2 SCN060LEF SCN060LXF SCN060LY2 SCN060LYF SCN060LYV SCN060WC2	SCN060WCF SCN060WCV SCN060WD2 SCN060WDF SCN060WDV SCN060WEF SCN060WEV SCN060WY2 SCN060WYF SCN060WYV SCU060LC2 SCU060LCV SCU060LD2 SCU060LDV SCU060LE2 SCU060LEV SCU060LLF SCU060LX2 SCU060LXV	SCU060LY2 SCU060LYV SCU060WC2 SCU060WCF SCU060WCV SCU060WD2 SCU060WDF SCU060WLV SCU060WE2 SCU060WEF SCU060WEV SCU060WL2 SCU060WL3 SCU060WL4 SCU060WL5 SCU060WX2 SCU060WXV SCU060WY2 SCU060WYF SCU060WYV SCY060LEV SCY060WEV
80 Pound [36.3 Kg]	HCD080LDF HCD080LDV SCD080LDF SCD080LDV SCH080LCF SCL080LCF SCN080LCF	SCN080LCV SCN080LDF SCN080LDV SCN080LEF SCN080LXF SCN080LYF SCN080LYV	SCN080WCF SCN080WCV SCN080WDF SCN080WVY SCN080WEV SCN080WYF SCN080WYV	SCU080LCV SCU080LDV SCU080LEV SCU080LXV SCU080LYV SCU080WCV SCU080WDV	SCU080WEV SCU080WXV SCU080WYV

Table continues...

Model Identification

Models					
100 Pound [45.4 Kg]	SCN100LCF SCN100LCV SCN100LDF SCN100LDV	SCN100LEF SCN100LEV SCN100LXF SCN100LXV	SCN100LYF SCN100LYV SCN100WCF SCN100WCV	SCN100WDF SCN100WDV SCN100WEF SCN100WEV	SCN100WXF SCN100WXV SCN100WYF SCN100WYV
125 Pound [56.7 Kg]	SCN125LYV	SCN125WYV			

Introduction

Replacement Parts

If literature or replacement parts are required, contact the source from which the machine was purchased or contact Alliance Laundry Systems at +1 (920) 748-3950 for the name and address of the nearest authorized parts distributor.

Customer Service

For technical assistance, contact your local distributor or contact:

Alliance Laundry Systems

Shepard Street

P.O. Box 990

Ripon, WI 54971-0990

U.S.A.

www.alliancelaundry.com

Phone: +1 (920) 748-3121 Ripon, Wisconsin

Preliminary Information

About the Control

This control is an advanced, programmable computer that allows the owner to control most machine features by pressing a sequence of keypads.

The control allows the owner to program custom cycles, set vend prices, retrieve audit information, run diagnostic tests, program special vend features and other programmable features. Refer to *Programming the Control* for a list of features. Machines shipped from the factory have a default cycle and wash temperature setting built in, however, the owner can change the default cycle, or any cycle, as needs permit.

The default cycle is PERM PRESS and WARM.

IMPORTANT: In the event of a power failure, the control will not have to be reprogrammed. It is designed with a memory system that will remember how it was programmed until the electrical power is restored.

IMPORTANT: It is extremely important that the machine has a good ground connection and that all mechanical and electrical connections to the control are made before applying power to or operating the machine.

Glossary of Terms

The following are a few terms and abbreviations to learn. These are referred to throughout the instructions.

Display – This term refers to the window area of the control that displays words and values.

LED (Light Emitting Diode) – This term refers to the lights next to the keypads and status words of the control.

Power Failure Recovery

If a cycle is in progress and the power fails, the cycle status is saved in memory. When the power recovers, the machine will resume into the previously active cycle if so programmed by the owner.

The owner may program a special feature called POWER FAIL RESET which sets a maximum power failure duration. To program this feature, refer to *Power Fail Reset PFr*.

If the length of the power failure is greater than the POWER FAIL RESET time, the control will end the cycle and the display will revert back to Ready Mode.

Communications

The control may be programmed manually, by infra-red communication with an external device or by the network. A limited number of features can be programmed by a card reader.

Infra-red Communications (Optional)

An external device, such as a PDA, allows the owner to program and retrieve information from the control without touching the keypad. An external device greatly expands the programming options available to the owner. However, the external device is not required to program and operate the machine. The operation of an external device and the advanced features available are covered separately in the instructions included with the external device software. Contact Alliance Laundry Systems for a list of approved PDAs and other external devices.

Serial Card Reader Communications (Card Models Only)

The control will accept communication with a serial card reader in order to perform vending transactions when a card is inserted to pay for cycles. The card reader can also allow the owner to program a limited number of features and collect audit information.

For detailed information on serial card reader communications, refer to instructions included with card reader.

Network Communications

The control will also accept communication with a network interface board which allows the control to be linked to a personal computer. This network link allows an owner to program, collect data and run diagnostics on any machine.

For detailed information on network communications, refer to the network instructions.

Control Identification

Select Cycle Keypads

(Refer to *Figure 1*)

Select Cycle keypads are used to select the specific washer cycle. These keypads include NORMAL, PERM PRESS, and DELICATES. These keypads allow the user to select a cycle other than the default cycle (PERM PRESS). The Select Cycle keypads are not active after the first Fill step of the cycle. The selected cycle is indicated by the light (LED) on the pad. Pressing the flashing START (enter) keypad will confirm the selection and the cycle will begin. When the card reader is used, pressing the START (enter) keypad will start the cycle and deduct the vend price from the card.

Select Wash Temp Keypads

(Refer to *Figure 1*)

Select Wash Temp keypads are used to select the temperature of the water used for the wash fill. These keypads include HOT, WARM, and COLD. These keypads allow the user to select a water temperature other than the default setting (WARM). The Se-

lect Wash Temp keypads are active only during the first Fill step of the cycle. The selected temperature is indicated by the light (LED) on the pad.

Select Soil Keypads

(Refer to *Figure 1*)

The Select Soil keypads are used to select cycle modifier options. The LIGHT option is the default and indicates no cycle modifiers are active. The MEDIUM and HEAVY options can be programmed to offer extra features for an added vend price. Features available include an added prewash, extra wash time, an added extra rinse, and a warm rinse temperature.

For details on programming the Soil option, refer to *Programming the Control*.

The Select Wash Temp keypads, Select Cycle keypads and Select Soil keypads are used in various combinations for programming cycles, retrieving audit information, running diagnostic tests, and other operations. These instructions cover the manual programming and data retrieval options.

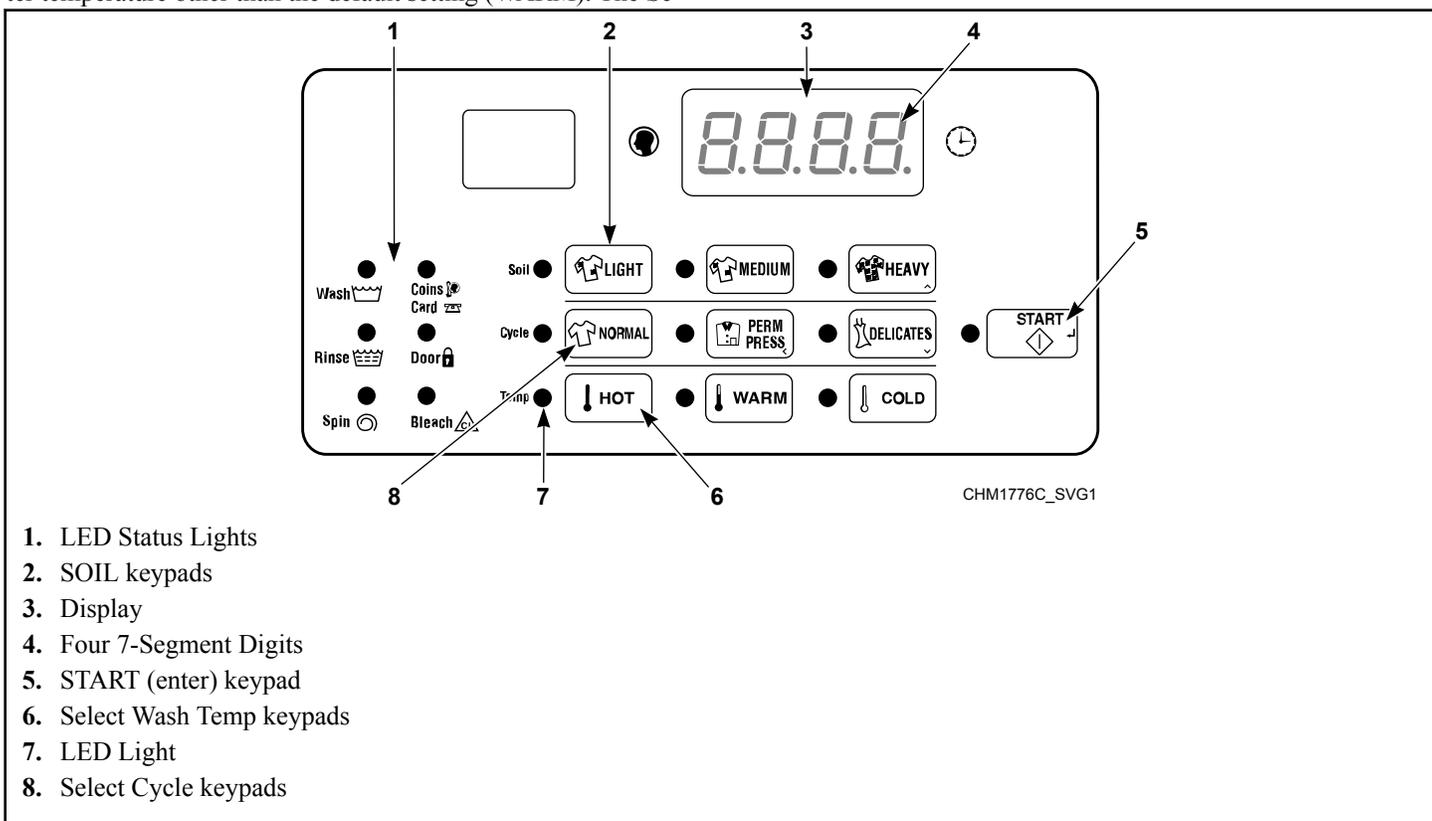


Figure 1

Display Identification

Light Emitting Diodes (LEDs)

(Refer to *Figure 1*)

Light Emitting Diodes (LEDs) are used to indicate the chosen cycle, wash temperature, soil, cycle status, if vend is needed, when the bleach compartment is dispensing, and door lock information. See below for information on each LED.

CYCLE LED (NORMAL , PERM PRESS, DELICATES)

Cycle LED will remain lit the entire cycle.

TEMP LED (HOT, WARM or COLD)

Temp LED will remain on until the end of the cycle or will change to show the rinse temperature if programmed to do so.

SOIL LED (LIGHT, MEDIUM or HEAVY)

Soil LED will remain lit the entire cycle.

WASH LED

Wash LED is lit at the beginning of a wash portion of the cycle and will remain lit until the wash is complete.

RINSE LED

Rinse LED is lit at the beginning of a rinse portion of the cycle and will remain lit until the rinse is complete.

SPIN LED

Spin LED is lit during the final spin portion of the cycle.

COINS/CARD LED

Coins/Card LED prompts the user for coins or a card to satisfy the vend price. Four (4) digits show the vend price remaining to be satisfied. The vend price displayed will decrease with each coin inserted. If new options are selected during the first Fill step of the wash cycle and it requires additional vend, the Coins/Card light will flash one (1) second on and one (1) second off, and the display will show the vend price remaining to be satisfied.

DOOR LED

Door LED is lit whenever the door is locked. The door can't be opened when this LED is lit.

BLEACH LED

Bleach LED is lit when bleach compartment is dispensing for the first time in the cycle.

Four 7-Segment Digits

The 7-Segment Digits are used to display the time remaining in a cycle, vend price, error messages and descriptive codes. During diagnostic testing or manual programming of the control, these digits will display descriptive codes and values (as described in *Entering the Manual Mode*).

Machine Operation

Start Up

When power is applied to the machine, the control becomes active and will display its software version as **5HH** (**HH** is the version number) for one (1) second. If the control was not powered down during a running cycle, it will enter the Ready Mode, Partial Vend Mode or Start Mode.

Ready Mode

In this mode of operation the control indicates the current selected cycle, temperature and soil level by lighting the LEDs. The full current vend price for the cycle appears in the display. The Insert Coins/Card LED is lit.

To start the cycle, the user must satisfy the vend price and then press the START (enter) keypad.

The user will be able to select a different cycle, soil level or wash water temperature by pressing a cycle keypad when the machine is in Ready Mode.

Partial Vend Mode

The control enters this mode when part of the vend price has been entered, but not enough vend is entered to satisfy the vend price. The control will display the remaining vend price needed to start the cycle and the Insert Coins/Card LED is lit.

The user will be able to select a different cycle, soil level or wash water temperature by pressing a cycle keypad when the machine is in Partial Vend Mode.

Additional Vend Mode

The control enters this mode if a higher priced cycle, wash water temperature or soil level is selected while the machine is in Start Mode or Run Mode, but before the first Fill step has completed. If the vend price is not satisfied within one (1) minute, the control will go back to the first selection and the cycle will continue if it was paused. After the first Fill step, all key presses will be ignored, allowing the machine to go through the complete cycle.

Start Mode

The control enters this mode when the full vend price is satisfied, the vend price is zero (0), the control is in OPL Mode or the correct Drop Off Mode key sequence is entered. The START (enter) keypad LED will flash one (1) second on and one (1) second off. If Start Mode is entered because the vend price is satisfied or the control is in OPL Mode, the display will show **PUSH** for one (1) second, **Start** for one (1) second and the current cycle time for one (1) second. If Start Mode is entered because the vend price is zero (0), the display will show **Free**. When first entering Start

Mode, a signal will sound for one (1) second on and one (1) second off for 10 seconds if Signal for Start is enabled.

After pressing the START (enter) keypad, the door will lock and the cycle will begin.

Door Locking Mode

The control enters this mode after the START (enter) keypad is pressed in Start Mode. The control stays in Door Locking Mode until it confirms the door is closed and locked.

Cycle Sequence

Upon the start of a cycle, the control will display the total cycle time. The appropriate LEDs will light while the machine passes through different cycle steps. Any coin entered after the first fill step will be added to the total coin counter, but the user will not be able to change cycles.

Run Mode

The control enters this mode when a cycle is running. The time remaining appears in the display, the status LEDs are lit and the loading door is locked.

Door Unlocking Mode

The control enters this mode after cycle has ended. The control waits for confirmation that door is unlocked. Once confirmation is received that door is unlocked, control will enter End of Cycle Mode.

End of Cycle Mode

When a cycle is complete, the control will display **00** until the machine door is opened, a key is pressed, or a coin/card is entered. The display will revert back to Ready Mode if door is opened or keypad is pressed. If vend is entered, the control will change to Partial Vend Mode or Start Mode.

Signals

The options for when a signal can be used during the machine operation are listed below:

1. **End of Cycle Signal** - By default, this signal is turned off. If turned on, the signal sounds for three (3) seconds at the end of a cycle.
2. **Signal On Keypad Depression** - By default, this signal is turned on and sounds for a quarter of a second each time a keypad is pressed.

3. **Signal On Coin Input/Card Insertion** - By default, this signal is turned on and will sound for a quarter of a second each time a coin or card is entered.
4. **Signal for Card Removal (Card Models Only)** - By default, this signal is turned on and will sound one (1) second on and one (1) second off when the control is prompting for card removal.
5. **Signal for Start** - By default, this signal is turned on and will sound one (1) second on and one (1) second off for 10 seconds after vend price has been satisfied.

NOTE: Refer to *Programming the Control* to program signal options.

Changing Cycles

Cycles, wash temperatures and soil levels can be changed anytime during the first Fill step. After the first Fill step, all keypad presses are ignored.

Selecting a higher priced cycle, wash temperature or soil level will pause the first Fill step, and Coins/Card will flash one (1) second on and one (1) second off until the vend price has been satisfied. After the vend price has been satisfied, the cycle will continue with the new selections. If the vend price is not satisfied within one (1) minute, the machine control will go back to the previously set cycle, wash temperature and soil level.

Special Features

Programming the Control

The control allows the machine owner to program the control with the use of the keypad. Cycle and vend options may be programmed, audit information may be viewed and diagnostic tests may be run by pressing combinations of keypads.

For details on programming select cycle and vend options, refer to *Programming Control*.

Collecting Audit Information

The control will store audit information in its memory that can be retrieved by pressing various combinations of keypads. The control will record coins entered, total machine cycles, total start pulses and total rapid advance cycles.

For more information on the audit features, refer to *Collecting Audit Information*.

NOTE: Additional audit information is retrievable with an external device, the card reader and the network. Refer to the appropriate instruction manual.

Testing Machine and Control Functions

Special diagnostic features built into the control allow the owner to run specific diagnostic tests. By opening and closing the top cover and then pressing various sequences of Select Cycle, Select Wash Temperature and Soil keypads, the owner may retrieve or perform the following tests:

- Front End Control Software Version Number
- Output Board Control Software Version Number
- Output Board Water Level Sensor Trim Value
- Top Cover Opening Test
- Coin Vault Opening Test
- Coin Drop #1 Input Test
- Coin Drop #2 Input Test
- Coin Drop Header Present Test
- Door Switch Input Test
- Door Lock Input Test
- Show Fill Time Test
- Show Drain Time Test
- Temperature Sensor Display Test
- Start Pulse Test
- VFD Balance Input Test
- 24 VAC Switch Input Test
- VFD Drive Fault Input Test
- Frame Stability Switch Input Test
- VFD Balance Weight Test (Design 1 models only)
- Drive DC Bus Display Test (Design 2 and 3 models only)

- Water Purge Test
- Water Leak Detection Test
- Drive Software Version Number (Design 2 and 3 models only)
- Drive Parameter Table Version Number (Design 2 and 3 models only)
- Drive Type (Design 2 and 3 models only)

For detailed information on running diagnostic tests, refer to *Testing Machine and Electronic Control Functions*.

Rapid Advance Feature

If enabled in programming, this feature allows the user to manually advance through active cycles. This feature is useful when tests must be performed immediately on a machine currently in an active cycle. In this case, the user can manually advance through the cycles to Ready Mode. At this point, the user can perform the required tests and then return the machine to the point it was interrupted.

Clearing the Vend Feature

This feature allows the user to return the control back to the Ready Mode if coins have been entered but the full vend price has not yet been satisfied, while in Partial Vend Mode.

For more information on using the Clear Vend feature, refer to *Clear Vend Feature*.

Communications Mode

This feature allows the control to communicate with an external device, card reader or network. This allows the control to be programmed and have its data read without using the keypad.

For more detailed information on using the Communications Mode feature, refer to *Communications*.

Coin Drop

The control will accept pulses from a single or dual coin drop to satisfy vend price. Each coin drop will have the ability to satisfy the vend.

Start Pulse Operation

The control will accept pulses from optional payment systems. The machine can be programmed to receive a single start pulse or multiple start pulses, or the Start Pulse Option can be turned off. The Start Pulse Mode allows the machine to go from the Ready Mode to the Start Mode after a single or multiple pulses are received.

Top Cover and Coin Vault Openings

The control will capture the times and dates of the openings of the Coin Vault and the Top Cover. The information is saved in memory. An open top cover combined with various keypad presses allows the control to enter manual modes of operation if the Break-In Alarm is not on. These modes include Manual Programming, Audit Collection and Diagnostics.

Break-In Alarm

This feature allows the owner to program the machine to signal a network alarm, cause a machine alarm or shut down the machine if the top cover or coin vault is opened without disabling the alarm first. The date and time of the break-in is recorded. To avoid the alarm during coin collections, the alarm must be turned off or temporarily disabled by pressing the two (2) programmed keypads.

The alarm is turned off by default. The alarm can be turned on by programming the control with an external device or network.

Special Vend

This feature allows the owner to program the control to allow programmable vend prices for specific hours and dates.

For details on programming Special Vend, refer to *Programming Control*.

OPL Mode

This feature allows the user to start a cycle without satisfying the vend price.

For details on enabling OPL Mode, refer to *Programming Control*.

Drop-Off Mode

This feature allows the owner to limit machine use to an attendant without requiring vend. Starting the machine will require the correct sequence of four keypad presses as programmed by an external device, card reader or network.

For details on enabling Drop-Off Mode, refer to *Programming the Control*.

Low Power/Auto-Shutdown Option

This feature allows the owner to program the control to shut down or enter a low power consumption mode based on programmable times and dates if either of these options are enabled.

For details on programming the Low Power/Auto-Shutdown option, refer to *Programming Control*.

Opening the Top Cover

To manually program the control, the top cover must be opened. Opening and closing the top cover trips a switch which allows access to various programming options. Once opened, the top cover may either be left open, and then closed after programming, or it may be closed immediately.

NOTE: If the Break-In Alarm option is enabled, it must be disabled before opening the top cover. For more information on using the Break-In Alarm, refer to the instructions included with the external device.

The top cover is located on the top of the machine.

1. Unlock top cover.

2. Slide top cover forward slightly to move notches away from the pegs on the front of cabinet.
3. Lift the top cover up. To completely remove, lift top cover away from both top cover hinges. Refer to *Figure 2*.

After removing, or opening and closing the top cover, the operator has 4 minutes and 15 seconds to begin programming. If the appropriate keypads have not been pressed in that time, the control will not accept operator programming. Should this happen, opening and closing the top cover will once again trip the switch which allows access to the programming options.

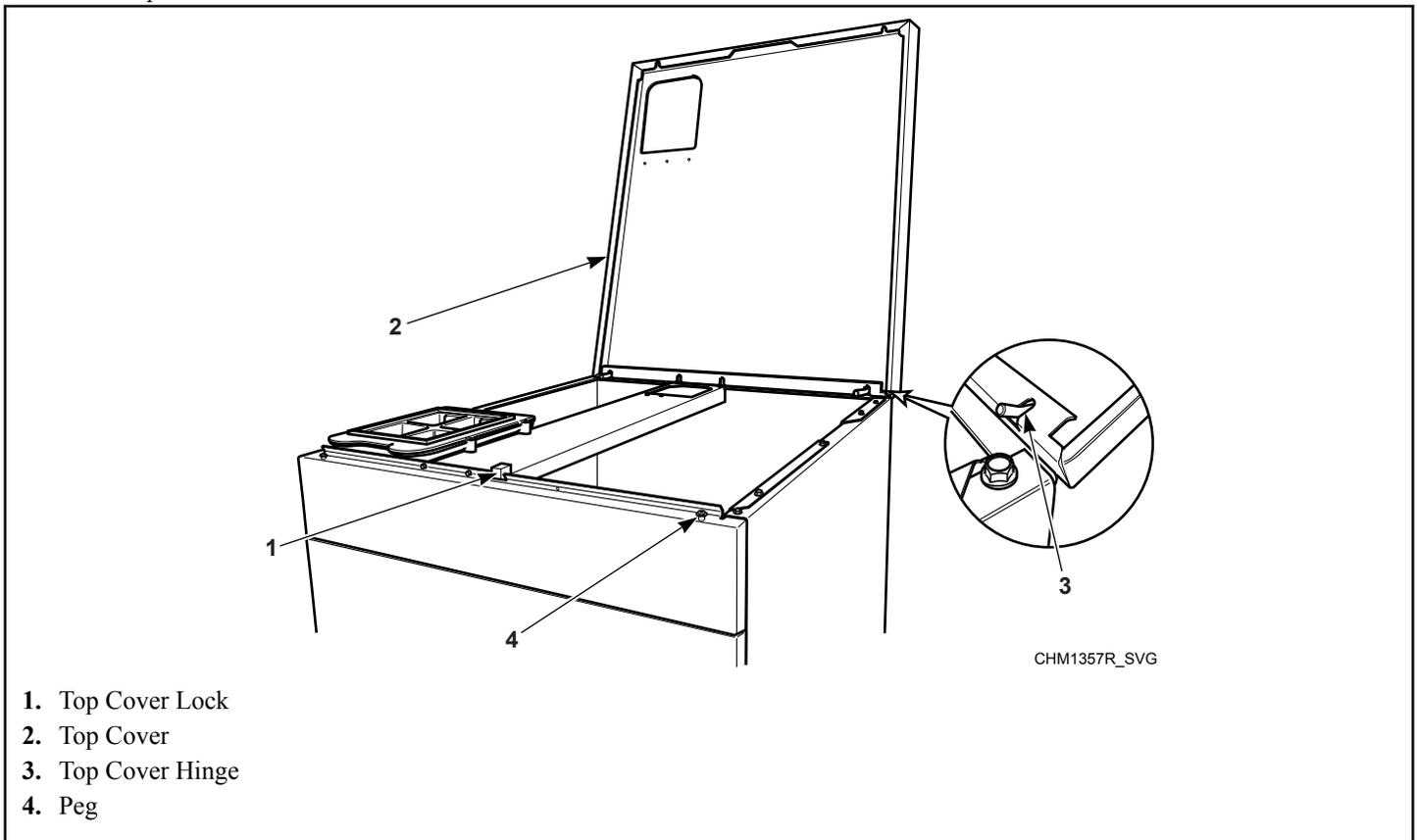


Figure 2

Entering the Manual Mode

For programming, testing, and retrieving information from the control, it is often necessary to enter the Manual Mode by following the six (6) simple steps below.

For an overview the Manual Mode, refer to *Entering Manual Mode*.

return to the selected feature. The features in the group cannot be entered.

How to Exit Programming Feature

Press the PERM PRESS (<) keypad until the control returns to Ready Mode.

How to Enter the Manual Mode

1. If accessing Diagnostic Tests, be sure the machine is in the Ready Mode before continuing to step 2. If the machine is in an active cycle, rapid advance through the cycle. Refer to the *Rapid Advance Feature*. If coins or a card has been entered, refer to *Clear Vend Feature*.
2. Open the top cover. Refer to *Opening the Top Cover*.
NOTE: The coin vault switch must be closed to enter Manual Mode.
3. While pressing and holding the NORMAL keypad with one hand, press the LIGHT keypad with the other hand.
4. The display will show *rRPd*.
5. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the options until the desired option appears in the display.
6. Press the START (enter) keypad.

Manual Mode is broken into three (3) groups: Manual Programming, Manual Rapid Advance and Manual Diagnostics. Manual Programming can only be turned on or off with an external device or the network. Refer to the appropriate instruction manual. Manual Rapid Advance and Manual Diagnostics can be turned on and off using an external device, by manual programming (refer to *Manual Rapid Advance (Enable/Disable) rAEn* and *Manual Diagnostics (Enable/Disable) dAEn of Programming Control*), or with the network.

By default, all groups are turned *on*.

The manual features available in each group are as follows (the menu displayed on the display in this mode is in parentheses).

- **Manual Programming**
 - Manual Programming (*Prpg*)
 - Manual Read Audit (*RAudt*)
 - Manual Reset (*rSEt*)
- **Manual Rapid Advance**
 - Rapid Advance (*rRPd*)
- **Manual Diagnostics**
 - Manual Diagnostic Tests (*d ,tG*)

If a group is turned off, the display will change from the selected feature to *oFF* when the START (enter) keypad is pressed and an audio signal will sound for one (1) second. The display will then

Programming Control

What Can Be Programmed?

This feature allows the owner to program cycle parameters, standard vend pricing, special vends and other features by using the keypads. The control must have the Manual Programming Mode enabled, which is the factory default. This mode can only be turned **OFF** and **ON** by using an external device or a network. Refer to this section when programming the control.

This section offers a detailed description of all available programmable options.

Each description includes instructions on when and why the option might be used and, more importantly, how to program the option.

For an overview of the programming organization, refer to the flowcharts on the following pages.

For more advanced users, see the quick reference list (refer to *Table 1*) and programming flowcharts (refer to *Programming Flowcharts*) for the options available through the programming mode.

NOTE: The codes in the Option Display column of *Table 1* are displayed when that option is selected.

Programmable Options Available

Option Number	Option Display	Description	Default Value	Value Range
1	<i>RLS1</i>	NORMAL/HOT Vend Price	200	0-65535
2	<i>dEn1</i>	Coin #1 Value	25	1-65535
3	<i>dEn2</i>	Coin #2 Value	100	1-65535
4	<i>PLSE</i>	Start Pulse Value	25	1-65535
5	<i>PLSn</i>	Start Pulse Mode	128	<i>oFF</i> /128/192
6	<i>RLYP</i>	Available Type	0	0-3
7	<i>dCPC</i>	Default Cycle	5*	1-9*
8	<i>oPL</i>	OPL Mode Enable/Disable	<i>oFF</i>	<i>on</i> / <i>oFF</i>
9	<i>RUd</i>	Audio Signal	29*	0-31*
10	<i>CRd</i>	Card Reader Display Control	<i>oFF</i>	<i>on</i> / <i>oFF</i>
11	<i>Err-</i>	Errors	—	Press START (enter) keypad to access options
a.	<i>CEr-</i>	Coin Error Parameters	—	Press START (enter) keypad to access options
1.	<i>CEr1</i>	Coin Error	<i>on</i>	<i>on</i> / <i>oFF</i>
2.	<i>CEr2</i>	Coin Error Penalty	<i>oFF</i>	<i>on</i> / <i>oFF</i>
3.	<i>CEr3</i>	Coin Drops Header Present Error	<i>on</i>	<i>on</i> / <i>oFF</i>
b.	<i>EFL</i>	Fill Errors	<i>on</i>	<i>on</i> / <i>oFF</i>
c.	<i>E dr</i>	Drain Error	<i>on</i>	<i>on</i> / <i>oFF</i>
d.	<i>E Ub</i>	Unbalance Error Display	<i>on</i>	<i>on</i> / <i>oFF</i>
e.	<i>E oP</i>	Open Thermister Error Display	<i>on</i>	<i>on</i> / <i>oFF</i>
f.	<i>E SH</i>	Shorted Thermistor Error Display	<i>on</i>	<i>on</i> / <i>oFF</i>
g.	<i>E Ht</i>	Heat Error Display (Heater only)	<i>on</i>	<i>on</i> / <i>oFF</i>
h.	<i>LEr-</i>	Water Leak Detection Error	—	Press START (enter) keypad to access options
1.	<i>LEr1</i>	Water Leak Detection During a Machine Cycle (On/Off)	<i>oFF</i>	<i>on</i> / <i>oFF</i>
2.	<i>LEr2</i>	Water Leak Detection Day of Week Enable	127*	0-127*

Table 1 continues...

Option Number	Option Display	Description	Default Value	Value Range
3.	<i>LEr3</i>	Number of cycles between leak detection test	0*	0-127*
i	<i>E 5d</i>	Slow Drain Detection	<i>oFF</i>	<i>on/oFF</i>
12	<i>[4C-</i>	Cycle Programming	Refer to <i>Table 26</i> for default cycle information	
a.	<i>R9I t</i>	Cycle Agitate	—	Press START (enter) keypad to access options
1.	<i>tYPE</i>	Agitate Type	**	1-2*
2.	<i>RSPd</i>	Agitate Speed (VFD only)	**	<i>Lo/rE9*</i>
b.	<i>SE9-</i>	Cycle Segment Programming	—	Press START (enter) keypad to access options
1.	<i>59En</i>	Segment Enable/Disable	**	<i>on/oFF</i>
2.	<i>FI LL</i>	Fill Step	—	Press START (enter) keypad to access options
a.	<i>FLEn</i>	Fill Step Enable/Disable	**	<i>on/oFF</i>
b.	<i>FLEU</i>	Fill Level	**	<i>HI /nEd/Lo</i>
c.	<i>tEnP</i>	Fill Temperature	**	<i>[oLd/URrn/Hot</i>
3.	<i>SUPL</i>	Supply Step	—	Press START (enter) keypad to access options
a.	<i>SUEn</i>	Supply Step Enable/Disable	**	<i>on/oFF</i>
b.	<i>dl SP</i>	Dispenser Options	**	<p>Design 1 models: display will show Cx (compartment-oriented) or Sx (supply-oriented), depending on how option 5 (Supply/Compartment Dispenser Programming) is programmed.</p> <p>Design 2 and 3 models: Compartment and Supply dispensing is programmed separately.</p> <p>Press START (enter) keypad to access options.</p>
(1)	<i>[2 or 51</i>	Compartment #2/Supply #1 (Design 1 models)	**	<i>on/oFF</i>
(2)	<i>[3 or 52</i>	Compartment #3/Supply #2 (Design 1 models)	**	<i>on/oFF</i>
(3)	<i>[4 or 53</i>	Compartment #4/Supply #3 (Design 1 models)	**	<i>on/oFF</i>

Table 1 continues...

Option Number	Option Display	Description	Default Value	Value Range
(4)	<i>S4</i>	Supply #4 (Design 1 models)	**	<i>on/off</i>
(1)	<i>C2</i>	Compartment #2 (Design 2 and 3 models)	**	<i>on/off</i>
(2)	<i>C3</i>	Compartment #3 (Design 2 and 3 models)	**	<i>on/off</i>
(3)	<i>C4</i>	Compartment #4 (Design 2 and 3 models)	**	<i>on/off</i>
(4)	<i>S1</i>	Supply #1 (Design 2 and 3 models)	**	<i>on/off</i>
(5)	<i>S2</i>	Supply #2 (Design 2 and 3 models)	**	<i>on/off</i>
(6)	<i>S3</i>	Supply #3 (Design 2 and 3 models)	**	<i>on/off</i>
(7)	<i>S4</i>	Supply #4 (Design 2 and 3 models)	**	<i>on/off</i>
c.	<i>SdUr</i>	Supply Duration	**	Press START (enter) keypad to access options
(1)	<i>SEC</i>	Seconds	**	0-59
(2)	<i>nl n</i>	Minutes	**	0-9
4.	<i>AgSt</i>	Agitate Step	—	Press START (enter) keypad to access options
a.	<i>AgEn</i>	Agitate Step Enable/Disable	**	<i>on/off</i>
b.	<i>AdUr</i>	Agitate Duration (in minutes)	**	1-30 for agitate types 1 or 2
c.	<i>HEAt</i>	Heat in Agitate (if heater is present)	**	<i>off/1/2**</i>
5.	<i>DrRn</i>	Drain Step	<i>on</i>	<i>on/off</i>
6.	<i>SPIn</i>	Extract Step	—	Press START (enter) keypad to access options
a.	<i>SPEn</i>	Extract Step Enable/Disable	**	<i>on/off</i>
b.	<i>SSEC</i>	Extract Seconds	**	0-59

Table 1 *continues...*

Option Number	Option Display	Description	Default Value	Value Range
c.	<i>Snl n</i>	Extract Minutes	**	Intermediate Extract: Min. Step Time = 30 seconds Max. Step Time = 3:59 minutes Final Extract: Min. Step Time = 30 seconds Max. Step Time = 9:59 minutes
d.	<i>SSPd</i>	Extract Speed (VFD models only)	**	1-5* (Design 1) 1-6* (Design 2 and 3)
c.	<i>Cn in</i>	Cycle Time	0*	0-255 minutes
13	<i>SUPC</i>	Supply/Compartment Dispenser Programming (Design 1 Models only)	C (Compartment)	C (Compartment)/S (Supply Dispenser)
14	<i>bALr</i>	Number of Balance Retries (VFD only)	3 (Design 1) 1 (Design 2 and 3)	1-7
15	<i>l rR</i>	IR Access (On/Off)	<i>on</i>	<i>on/off</i>
16	<i>t FC</i>	Fahrenheit/Celsius	<i>FAHr</i> (Fahrenheit)	<i>FAHr</i> (Fahrenheit)/ <i>CEL</i> (Celsius)
17	<i>FH</i>	Hot Water Temperature	140°F [60°C]	35°F-194°F [2°C-90°C]
18	<i>FHC</i>	Warm Water Temperature	100°F [38°C]	35°F-194°F [2°C-90°C]
19	<i>FC</i>	Cold Water Temperature	35°F [2°C]	35°F-194°F [2°C-90°C]
20	<i>Codn</i>	Cooldown Enable/Temperature	<i>off</i>	<i>off</i> 50°F-160°F [10°C-71°C]
21	<i>PtEn</i>	Production Test Cycle (On/Off)	<i>on</i>	<i>on/off</i>
22	<i>rREn</i>	Manual Rapid Advance (On/Off)	<i>on</i>	<i>on/off</i>
23	<i>nCtd</i>	No Cycle Time Display	<i>off</i>	<i>on/off</i>
24	<i>PCtd</i>	Cycle Time Display	<i>off</i>	<i>on/off</i>
25	<i>SdAd</i>	Slow Drain Detection Adjust	0	0-255
26	<i>SPAU</i>	Pause/Resume Mode	<i>off</i>	<i>on/off</i>

Table 1 continues...

Option Number	Option Display	Description	Default Value	Value Range
27	<i>RL52</i>	NORMAL/WARM Vend Price	200	0-65535
28	<i>RL53</i>	NORMAL/COLD Vend Price	200	0-65535
29	<i>RL54</i>	PERM PRESS/HOT Vend Price	200	0-65535
30	<i>RL55</i>	PERM PRESS/WARM Vend Price	200	0-65535
31	<i>RL56</i>	PERM PRESS/COLD Vend Price	200	0-65535
32	<i>RL57</i>	DELICATES/HOT Vend Price	200	0-65535
33	<i>RL58</i>	DELICATES/WARM Vend Price	200	0-65535
34	<i>RL59</i>	DELICATES/COLD Vend Price	200	0-65535
35	<i>rLC-</i>	Real Time Clock	—	Press START (enter) keypad to access options
a.	<i>rLC1</i>	Set Real Time Clock Minutes	—	00-59
b.	<i>rLC2</i>	Set Real Time Clock Hours	—	00-23
c.	<i>rLC3</i>	Set Real Time Clock Day	—	1 (Sunday)-7 (Saturday)
d.	<i>rLC4</i>	Set Real Time Clock Date	—	1-31
e.	<i>rLC5</i>	Set Real Time Clock Month	—	1-12
f.	<i>rLC6</i>	Set Real Time Clock Year	—	0 (2000)-99
g.	<i>rLC7</i>	Daylight Saving Option	<i>on</i>	<i>on/off</i>
36	<i>SPA-</i>	Special Vend A Data	—	Press START (enter) keypad to access options
a.	<i>SA01</i>	Special Vend A Days Enable	<i>off*</i>	<i>off*/1-255</i>
b.	<i>SA02</i>	Special Vend A Start Hour	—	0-23
c.	<i>SA03</i>	Special Vend A Start Minute	—	0-59
d.	<i>SA04</i>	Special Vend A Length in Hours	—	0-24
e.	<i>SA05</i>	Special Vend A Start Month	—	0-12
f.	<i>SA06</i>	Special Vend A Start Date	—	0-31
g.	<i>SA07</i>	Special Vend A Start Year	—	0-99
h.	<i>SA08</i>	Special Vend A End Month	—	0-12

Table 1 *continues...*

Option Number	Option Display	Description	Default Value	Value Range
i.	<i>SA09</i>	Special Vend A End Date	—	0-31
j.	<i>SA 10</i>	Special Vend A End Year	—	0-99
k.	<i>SA 11</i>	Special Vend A NORMAL/HOT Vend Price	—	0-65535
l.	<i>SA 12</i>	Special Vend A NORMAL/WARM Vend Price	—	0-65535
m.	<i>SA 13</i>	Special Vend A NORMAL/COLD Vend Price	—	0-65535
n.	<i>SA 14</i>	Special Vend A PERM PRESS/HOT Vend Price	—	0-65535
o.	<i>SA 15</i>	Special Vend A PERM PRESS/WARM Vend Price	—	0-65535
p.	<i>SA 16</i>	Special Vend A PERM PRESS/COLD Vend Price	—	0-65535
q.	<i>SA 17</i>	Special Vend A DELICATES/HOT Vend Price	—	0-65535
r.	<i>SA 18</i>	Special Vend A DELICATES/WARM Vend Price	—	0-65535
s.	<i>SA 19</i>	Special Vend A DELICATES/COLD Vend Price	—	0-65535
t.	<i>SA20</i>	Special Vend A Wash Agitate Step Added Minutes	—	0-15
u.	<i>SA21</i>	Special Vend A Wash Agitate Step Subtracted Minutes	—	0-15
v.	<i>SA22</i>	Time of Day Extract (Design 2 and 3 models only)	6	1-6
37	<i>SPb-</i>	Special Vend B Days	<i>aFF</i>	<i>an/aFF</i>
38	<i>SPc-</i>	Special Vend C Days	<i>aFF</i>	<i>an/aFF</i>
39	<i>SPd-</i>	Special Vend D Days	<i>aFF</i>	<i>an/aFF</i>
40	<i>[nP-</i>	Cycle Modifier Programming	—	Press START (enter) keypad to access options
a.	<i>[nP1</i>	Cycle Modifier Medium Vend Price Adder	25	0-65535
b.	<i>[nP2</i>	Cycle Modifier Heavy Vend Price Adder	50	0-65535
c.	<i>[nP3</i>	Cycle Modifier Medium Options	1*	0-15

Table 1 continues...

Option Number	Option Display	Description	Default Value	Value Range
d.	<i>CnP4</i>	Cycle Modifier Heavy Options	3*	0-15
e.	<i>CnP5</i>	Cycle Modifier Wash Segment Added Agitate Time (min.) (Design 1 models)	2 (2 min.)	0-15
		Cycle Modifier Medium Wash Segment Added Agitate Time (min.) (Design 2 and 3 models)		
f.	<i>CnP6</i>	Cycle Modifier Default Soil Level	0*	0-2
g.	<i>CnP7</i>	Cycle, Modifier Heavy Wash Segment Added Agitate Time (min.) (Design 2 and 3 models)	2 (2 min.)	0-15
41	<i>drOP</i>	Drop Off Mode	<i>oFF</i>	<i>on/oFF</i>
42	<i>LP5A</i>	Low Power/Auto Shutdown A Days	<i>oFF</i>	<i>on/oFF</i>
43	<i>LP5b</i>	Low Power/Auto Shutdown B Days	<i>oFF</i>	<i>on/oFF</i>
44	<i>LP5C</i>	Low Power/Auto Shutdown C Days	<i>oFF</i>	<i>on/oFF</i>
45	<i>LP5d</i>	Low Power/Auto Shutdown D Days	<i>oFF</i>	<i>on/oFF</i>
46	<i>PFr</i>	Power Fail Reset	<i>oFF</i> /5 min*	<i>oFF</i> /133-255
47	<i>dREn</i>	Manual Diagnostics (On/Off)	<i>on</i>	<i>on/oFF</i>
48	<i>FLo</i>	Low Water Level	3	1-10
49	<i>FnEd</i>	Medium Water Level	15	11-20
50	<i>FHI</i>	High Water Level	27	21-30
51	<i>tCF</i>	Temperature Controlled Fill (Models with Heat)	<i>oFF</i>	<i>on/oFF</i>
52	<i>RLd-</i>	Auto-Water Leak Detection	—	Press START (enter) keypad to access options
a.	<i>RLd1</i>	Auto-Water Leak Detection (On/Off and cycles)	<i>oFF</i>	<i>oFF</i> /0-127 (Cycles)
b.	<i>RLd2</i>	Auto-Water Leak Detection Hour	0	0-23

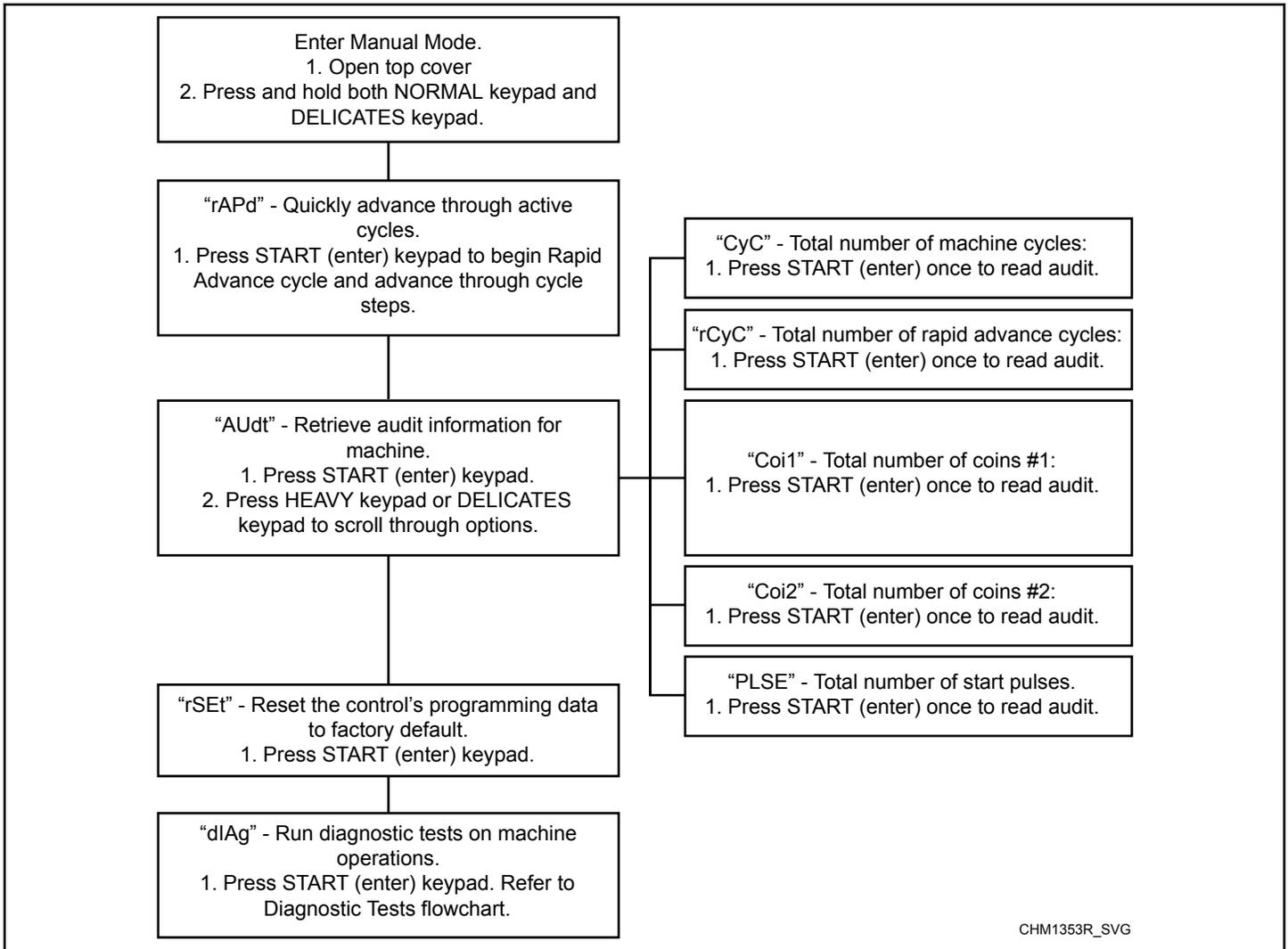
Table 1 continues...

Option Number	Option Display	Description	Default Value	Value Range
c.	<i>RLd3</i>	Auto-Water Leak Detection Day of Week	127*	0-127*
<p>*Refer to programming section for value definition.</p> <p>**Refer to the Cycle Charts for default cycle setting information.</p>				

Table 1

Programming Flowcharts

Entering Manual Mode



CHM1353R_SVG

Figure 3

Manual Programming

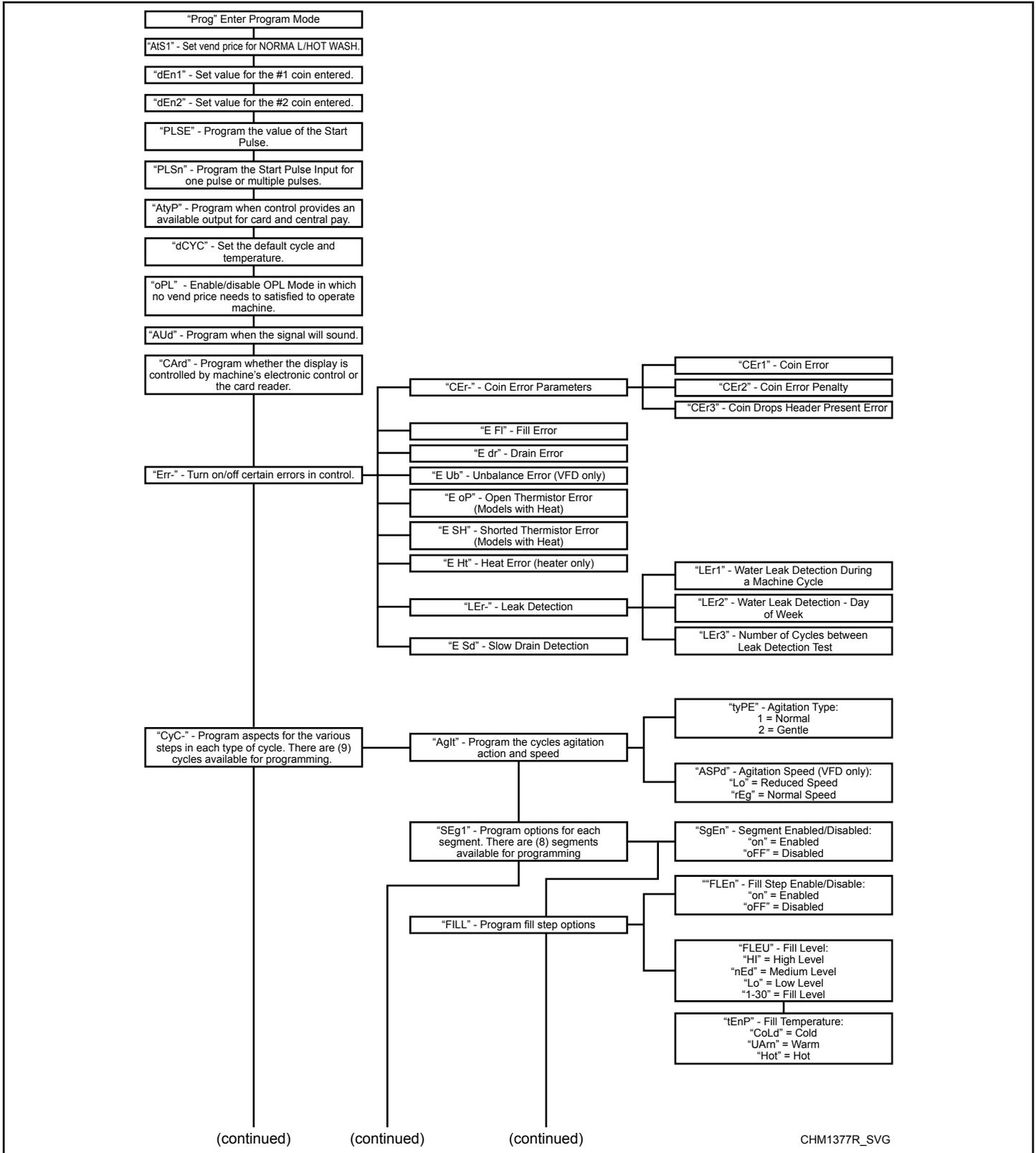


Figure 4

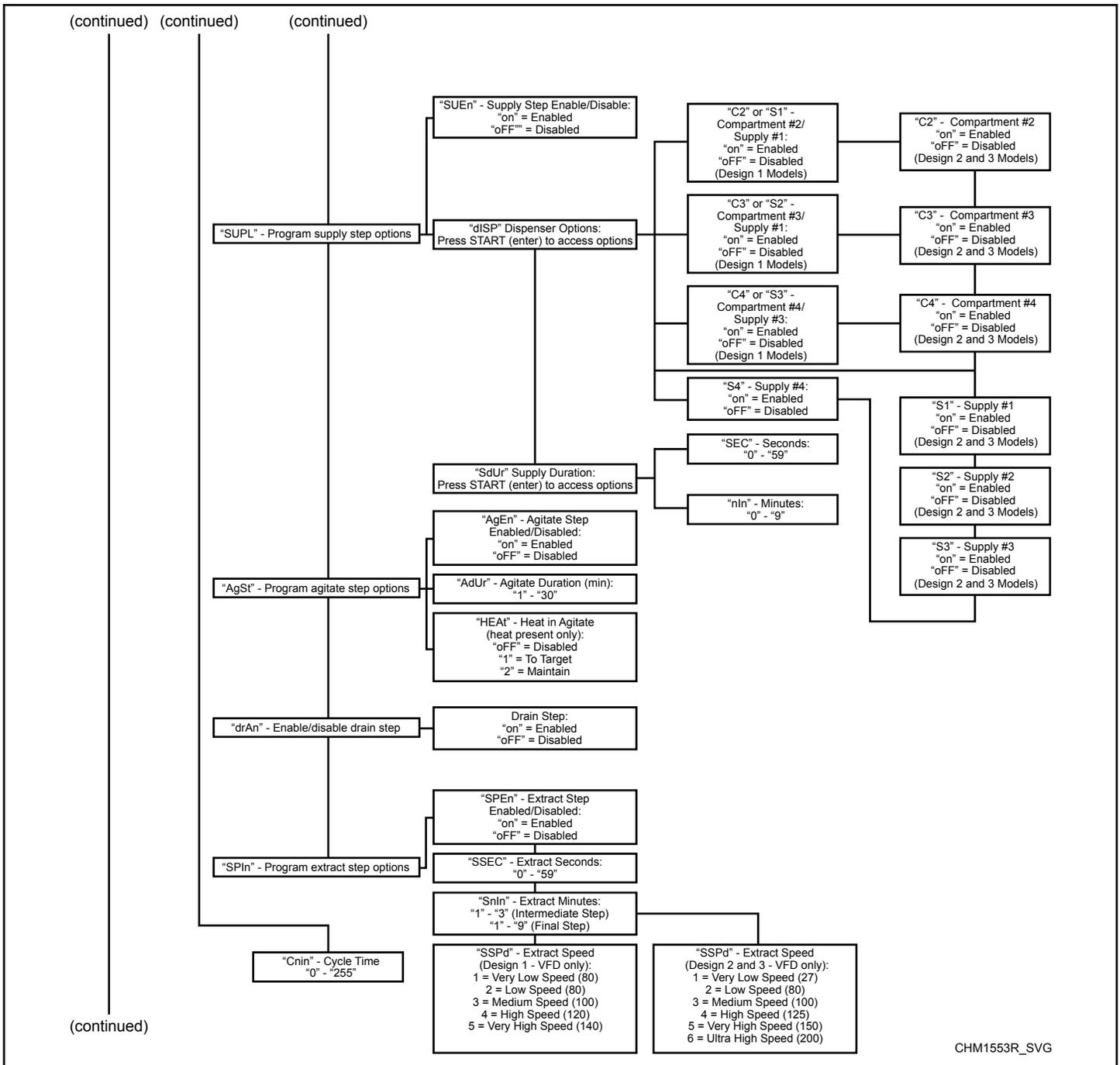


Figure 5

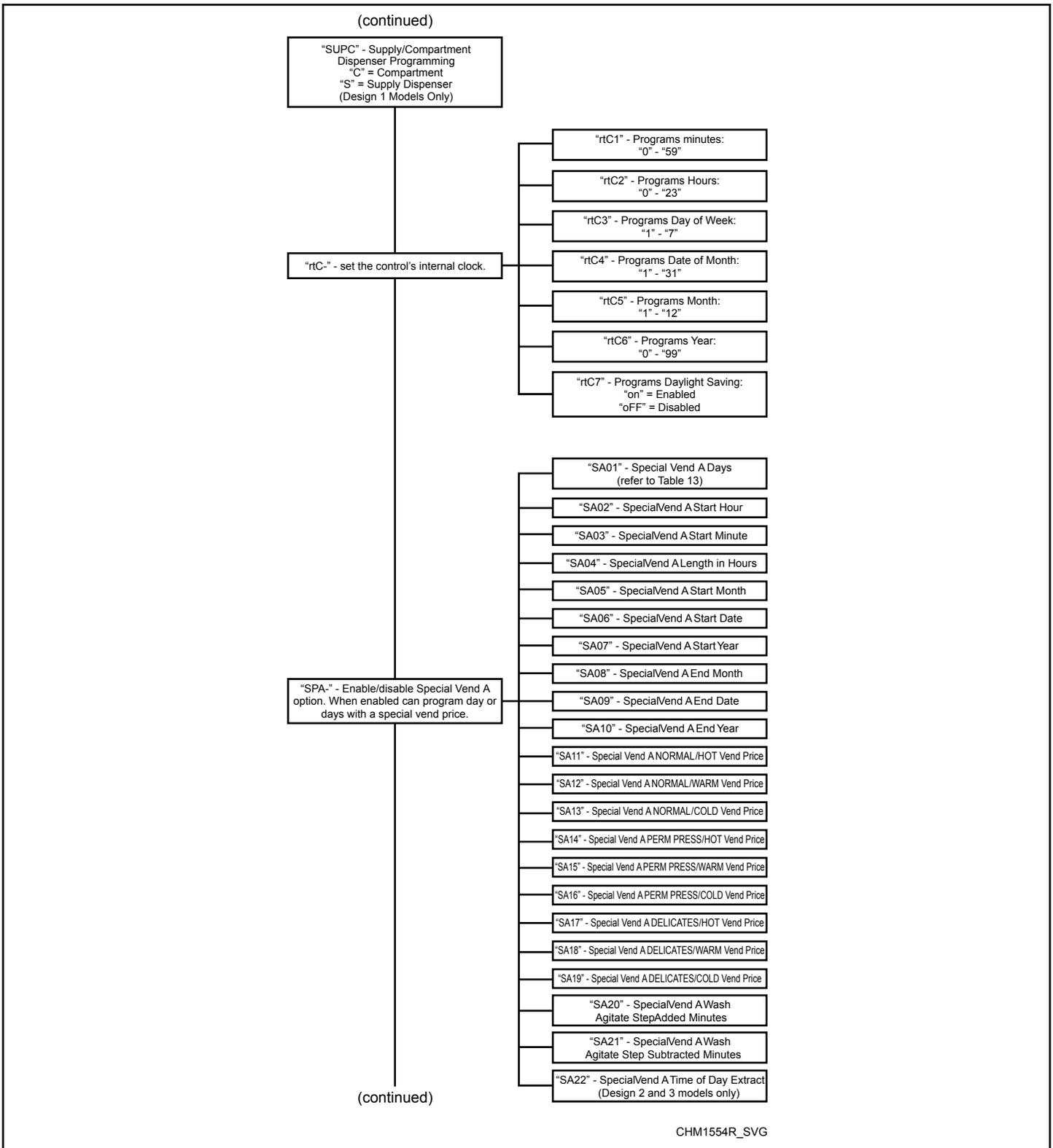
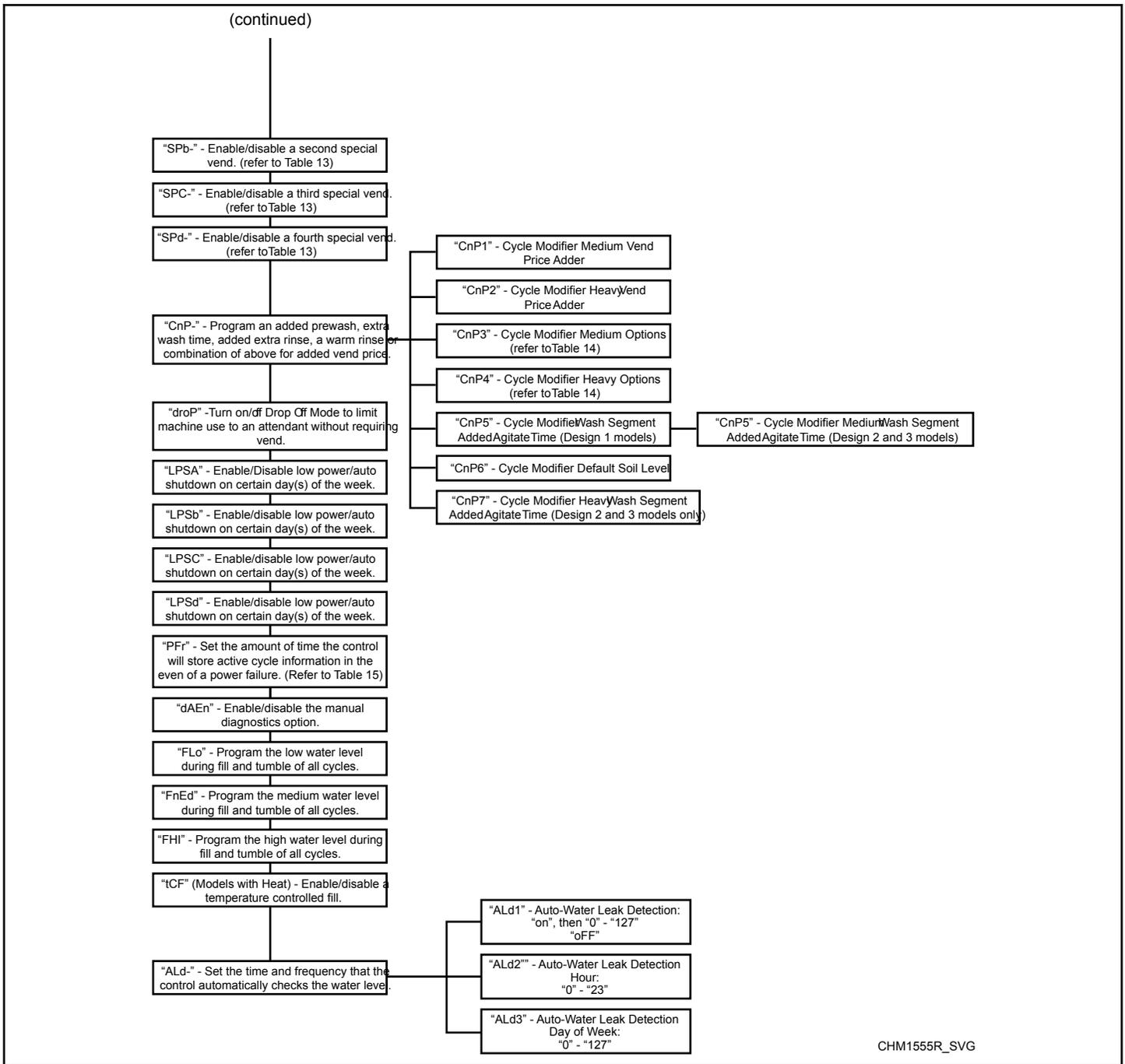


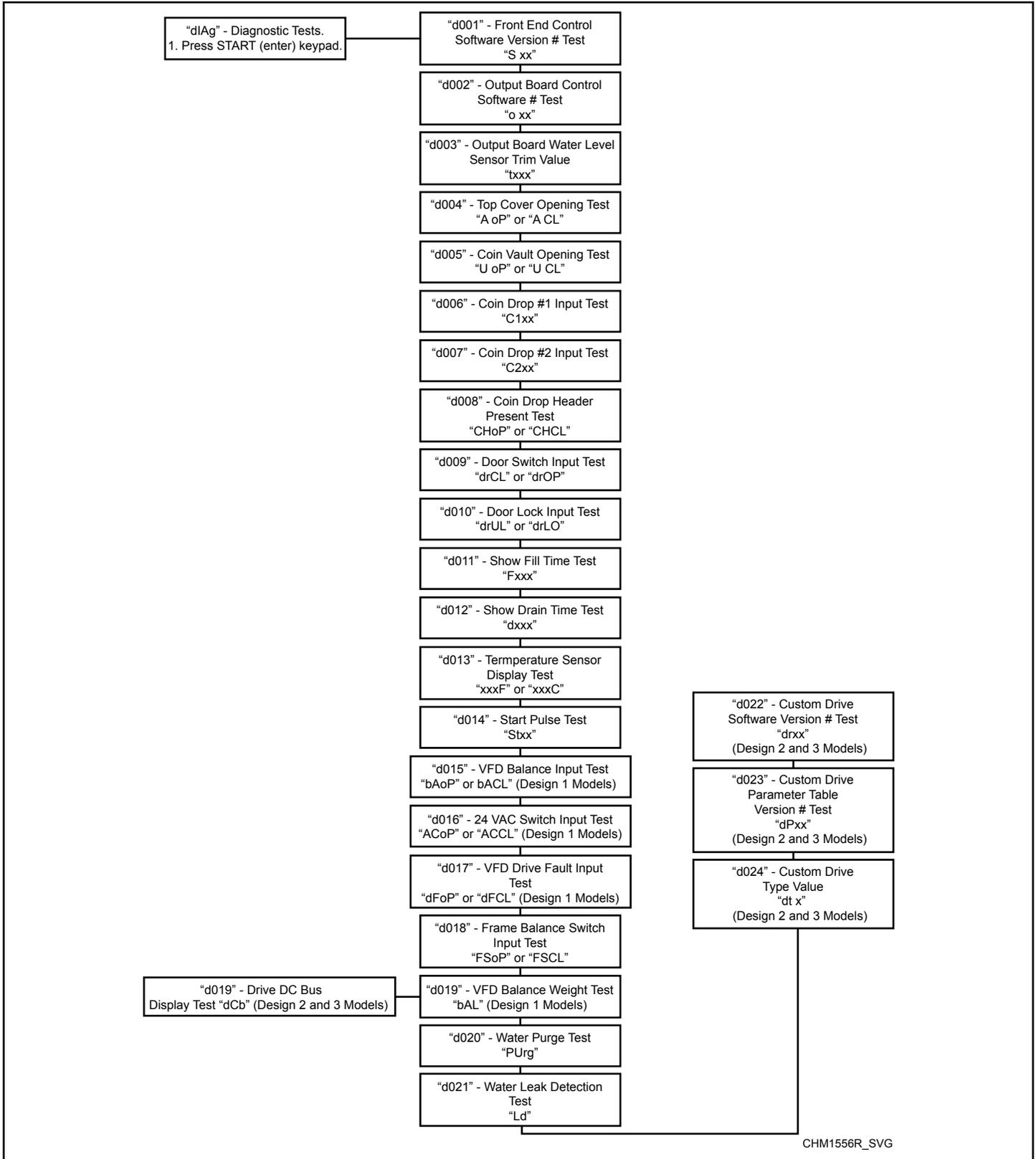
Figure 6



CHM1555R_SVG

Figure 7

Diagnostics



CHM1556R_SVG

Figure 8

LIGHT Vend Price *RL5 I*

This option allows the owner to set the vend price for a Normal Hot wash. This vend price will be shown in the display when NORMAL and HOT are selected.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Prog* appears in the display. Press the START (enter) keypad.
3. *RL5 I* will appear in the display. Press the START (enter) keypad. The NORMAL and HOT LEDs will be lit to show which cycle/temperature price is being programmed.
4. There are five (5) digits in LIGHT Vend Price. The fifth digit will appear in the display and will flash one (1) second on, one (1) second off. Refer to *Figure 9*.

NOTE: If the vend price is \$100.00 or more, the fifth (5) digit is *I-5*. If the vend price is \$99.99 or less, the fifth digit is *0*.



Figure 9

5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the fifth digit.

NOTE: The vend price can be set from 0 to 65,535. The default vend price is 200.
6. Press the START (enter) keypad to enter the fifth (5) digit and display remaining four (4) digits. The active digit will flash one (1) second on and one (1) second off.

NOTE: To go back to the current programmable option without changing the value of the active digit, press the PERM PRESS (\leftarrow) keypad.
7. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
8. Press the START (enter) keypad with the last active digit. The next option, *dEn I*, will appear in the display.

NOTE: To program *dEn I* (Coin #1 Value), refer to *Coin #1 Value dEn1*. To program other options, refer to the appropriate section.

Coin #1 Value *dEn1*

This option allows the owner to set a specific numerical value for a coin entered. For example, in the United States the coin value for one quarter would be measured in cents (25). Therefore, the coin value entered for one quarter would be **00025**.

If the *LIGHT Vend Price AtSI* is set for **.75**, and the Coin Value is set for **00025**, the vend price displayed will decrease by **.25** for each coin entered.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until **Prog** appears in the display. Press the START (enter) keypad and **Alt51** will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until **dEn1** appears in the display.
4. When **dEn1** appears in the display, press the START (enter) keypad. There are five (5) digits in the Coin #1 Value. The fifth (5) digit will appear in the display and will flash one (1) second on, one (1) second off. Refer to *Figure 10*.

NOTE: If the vend price is \$100.00 or more, the fifth (5) digit is 1-5. If the vend price is \$99.99 or less, the fifth digit is 0.



Figure 10

5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the fifth (5) digit.

NOTE: The coin value can be set from 1 to 65,535. The default coin value is 25.
6. Press the START (enter) keypad to enter the fifth (5) digit and display remaining four (4) digits. The active digit will flash one (1) second on and one (1) second off.

NOTE: To go back to the current programmable Special Vend A option without changing the value of the active digit, press the PERM PRESS (<) keypad.
7. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
8. Press the START (enter) keypad with the last active digit. The next option, **dEn2**, will appear in the display.

NOTE: To program dEn2 (Coin #2 Value), refer to Coin #2 Value dEn2. To program other options, refer to the appropriate section.

Coin #2 Value *dEn2*

This option allows the owner to set a specific numerical value for a coin entered when using the dual coin drop. For example, the coin value for a dollar coin would be measured in cents (100). Therefore, the coin value entered for one dollar coin would be **00 100**.

If the *LIGHT Vend Price AtSI* is set for **200**, and the Coin Value is set for **00 100**, the vend price displayed will decrease by 1.00 for each dollar coin entered.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (Λ) or the DELICATES (v) keypad until **Prog** appears in the display. Press the START (enter) keypad and **Alt 1** will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable options until **dEn2** appears in the display.
4. When **dEn2** appears in the display, press the START (enter) keypad. There are five (5) digits in the Coin #2 Value. The fifth (5) digit will appear in the display and will flash one (1) second on and one (1) second off. Refer to *Figure 11*.

NOTE: If the vend price is \$100.00 or more, the fifth (5) digit is 1-5. If the vend price is \$99.99 or less, the fifth digit is 0.



Figure 11

5. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the value of the fifth (5) digit.

NOTE: The coin value can be set from 1 to 65,535. The default coin value is 100.

6. Press the START (enter) keypad to enter the fifth (5) digit and display remaining four (4) digits. The active digit will flash one (1) second on and one (1) second off.

NOTE: To go back to the current programmable Special Vend A option without changing the value of the active digit, press the PERM PRESS (<) keypad.

7. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
8. Press the START (enter) keypad with the last active digit. The next option, **PLSE**, will appear in the display.

NOTE: To program *PLSE* (Start Pulse Value), refer to *Start Pulse Value PLSE*. To program other options, refer to the appropriate section.

Start Pulse Value *PL5E*

This option allows the owner to program the value of the Start Pulse if used for multiple pulses with an after-market central card reader or pay system. Refer to *Start Pulse Mode PLSn* for additional information.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Prog* appears in the display. Press the START (enter) keypad and *PL51* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *PL5E* appears in the display.
4. When *PL5E* appears in the display, press the START (enter) keypad. There are five (5) digits in the Start Pulse Value. The fifth (5) digit will appear in the display and will flash one (1) second on and one (1) second off. Refer to *Figure 12*.

NOTE: If the Start Pulse Value is \$100.00 or more, the fifth digit is 1-5. If the Start Pulse Value is \$99.99 or less, the fifth digit is 0.



Figure 12

5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the fifth (5) digit.

NOTE: The Start Pulse Value can be set from 1 to 65,535. The default Start Pulse Value value is 25.
6. Press the START (enter) keypad to enter the fifth (5) digit and display remaining four (4) digits. The active digit will flash one (1) second on and one (1) second off.

NOTE: To go back to the current programmable Special Vend A option without changing the value of the active digit, press the PERM PRESS (<) keypad.
7. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
8. Press the START (enter) keypad with the last active digit. The next option, *PL5n*, will appear in the display.

NOTE: To program *PL5n* (Start Pulse Mode), refer to *Start Pulse Mode PLSn*. To program other options, refer to the appropriate section.

Start Pulse Mode *PL5n*

This option allows the owner to program the Start Pulse Input. The Start Pulse Mode can be used for after-market central pay or card systems. The central system sends the start pulse to the Start Pulse Input of the control to start the cycle. If set for single pulse, one (1) start pulse from the central system will start the cycle. If set for multiple pulses, each pulse will deduct from the vend price value set up in *Start Pulse Value PLSE* until the vend is satisfied.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (Λ) or the DELICATES (v) keypad until *Prog* appears in the display. Press the START (enter) keypad and *PL5 1* will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable options until *PL5n* appears in the display.
4. When *PL5n* appears in the display, press the START (enter) keypad. *OFF* or a number will appear in the display. This number corresponds to the current Start Pulse Mode Programming Value.
5. Locate the desired number in the first column of *Table 2* below.

<i>PL5n</i>		
Start Pulse Mode Value	Start Pulse ON/OFF	Single Pulse/ Multiple Pulses
<i>OFF</i>	OFF	OFF
128*	ON	Single Pulse
192	ON	Multiple Pulses
*Factory Default Setting		

Table 2

6. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the current number until correct.

NOTE: To go back to the current programmable option without changing the current value, press the PERM PRESS (<) keypad.
7. Press the START (enter) keypad when the correct number appears in the display.

NOTE: To program *AtyP* (Available Type), refer to *Available Type AtyP*. To program other options, refer to the appropriate section.

Available Type *AEYP*

This option allows the owner to program when the control provides an available output for card and central pay systems.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Prog* appears in the display. Press the START (enter) keypad and *AE51* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *AEYP* appears in the display.
4. When *AEYP* appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current Available Type Value.
5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the current number to the desired number selected from *Table 3*.

Available Type Value	Mode(s) in Which Available Signal is Active
0*	Ready Mode only
1	Ready Mode, Partial Vend Mode
2	Ready Mode, End of Cycle Mode
3	Ready Mode, End of Cycle Mode, Partial Vend Mode
*Factory default setting	

Table 3

6. Press the START (enter) keypad when the correct number appears in the display. The next option, *dEPC*, will appear in the display.

NOTE: To program *dEPC* (Default Cycle), refer to *Default Cycle dCYC*. To program other options, refer to the appropriate section.

Default Cycle *dCPL*

This option allows the owner to set the default cycle and temperature the machine will enter when in the Ready Mode. When programming the default cycle, refer to *Table 4*

- Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
- Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Pr o g* appears in the display. Press the START (enter) keypad and *Rt 5 I* will appear in the display.
- Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *dCPL* appears in the display.
- When *dCPL* appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current default cycle value. Refer to *Table 4*.

NOTE: The default cycle can be set from 1-30. The default cycle is *Rt 5 I*.

- Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the current number to the desired number selected from *Table 4*.
- Press the START (enter) keypad when the correct number appears in the display. The next option, *oPL*, will appear in the display.

NOTE: To program *oPL* (OPL Mode), refer to *OPL Mode Enable/Disable oPL*. To program other options, refer to the appropriate section.

How to Read Default Cycle Chart

To determine the correct number required to program Default Cycle, use the following table. The Default Value column contains the number required in step 5. The other columns correspond to cycle type and wash temperature.

Default Cycle (<i>dCPL</i>) Chart		
Default Value	Cycle Type	Wash Temperature
1	Normal	Hot
2	Normal	Warm
3	Normal	Cold
4	Perm Press	Hot
5*	Perm Press	Warm
6	Perm Press	Cold
7	Delicates	Hot

Table 4 *continues...*

Default Cycle (<i>dCPL</i>) Chart		
Default Value	Cycle Type	Wash Temperature
8	Delicates	Warm
9	Delicates	Cold
*Factory default setting		

Table 4

OPL Mode Enable/Disable *oPL*

This option allows the owner to enable or disable the OPL Mode in which no vend price needs to be satisfied to operate the machine.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Pr o g* appears in the display. Press the START (enter) keypad and *Rt 5 1* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *oPL* appears in the display.
4. When *oPL* appears in the display, press the START (enter) keypad. The current OPL Mode Enable/Disable status will appear in the display.

on = Option Enabled

oFF = Option Disabled (Default Setting)

5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, *AUd*, will appear in the display.

NOTE: To program *AUd* (Audio Signal), refer to *Audio Signal AUd*. To program other options, refer to the appropriate section.

Audio Signal *AUD*

This option allows the owner to program when the signal will sound.

The occasions when a signal may sound during operation are listed below:

- **End of Cycle Signal** - By default, the signal is turned off. If turned on, the signal will sound for three (3) seconds at the end of a cycle.
- **Keypad Depression Signal** - By default, this signal is turned on and will sound for a quarter of a second. This signal will sound each time a keypad is pressed.
- **Coin Input/Card Insertion Signal** - By default, this signal is turned on and will sound for a quarter of a second each time a coin or card is entered.
- **Remove Card Signal (Card Models Only)** - By default, this signal is turned on and will sound one (1) second on and one (1) second off when the control is prompting for card removal.
- **Signal for Start** - By default, this signal is turned on and will sound one (1) second on and one (1) second off for 10 seconds after vend price has been satisfied.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *PRG* appears in the display. Press the START (enter) keypad and *ALS 1* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *AUD* appears in the display.

4. When *AUD* appears in the display press the START (enter) keypad. A number will appear in the display. This number corresponds to the current Audio Signal Programming Value.
5. Locate the desired number in the first column of *Table 5*.
6. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the current number until correct.

For Example: A user might wish to have the signal sound only when a keypad is pressed. Entering the number 1 in step 5 would turn off all the options except KEYPAD. In this instance, the signal would sound only when a keypad is pressed.

7. Press the START (enter) keypad when the correct number appears in the display. The next option, *CRd*, will appear in the display.

NOTE: To program *CRd* (Card Reader Display Control), refer to *Card Reader Display Control Card*. To program other options, refer to the appropriate section.

How to Read Audio Signal Chart

To determine the correct number required to program the Audio Signal, use the following chart. The Signal Value column contains the number required in step 6. The other columns correspond to individual options.

Each column of options contains a unique combination of the words ON and OFF that indicates if that column's option is turned on or off when the Signal Value is entered. Select the desired combination of options and enter the number found in the Signal Value column.

Audio Signal (<i>AUD</i>) Chart					
Signal Value	Start Mode	Remove Card	Coin/Card Input	End of Cycle	Key Pressed
0	OFF	OFF	OFF	OFF	OFF
1	OFF	OFF	OFF	OFF	ON
2	OFF	OFF	OFF	ON	OFF
3	OFF	OFF	OFF	ON	ON
4	OFF	OFF	ON	OFF	OFF
5	OFF	OFF	ON	OFF	ON
6	OFF	OFF	ON	ON	OFF
7	OFF	OFF	ON	ON	ON
8	OFF	ON	OFF	OFF	OFF

Table 5 continues...

Audio Signal (AUD) Chart					
Signal Value	Start Mode	Remove Card	Coin/Card Input	End of Cycle	Key Pressed
9	OFF	ON	OFF	OFF	ON
10	OFF	ON	OFF	ON	OFF
11	OFF	ON	OFF	ON	ON
12	OFF	ON	ON	OFF	OFF
13	OFF	ON	ON	OFF	ON
14	OFF	ON	ON	ON	OFF
15	OFF	ON	ON	ON	ON
16	ON	OFF	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON
18	ON	OFF	OFF	ON	OFF
19	ON	OFF	OFF	ON	ON
20	ON	OFF	ON	OFF	OFF
21	ON	OFF	ON	OFF	ON
22	ON	OFF	ON	ON	OFF
23	ON	OFF	ON	ON	ON
24	ON	ON	OFF	OFF	OFF
25	ON	ON	OFF	OFF	ON
26	ON	ON	OFF	ON	OFF
27	ON	ON	OFF	ON	ON
28	ON	ON	ON	OFF	OFF
29*	ON	ON	ON	OFF	ON
30	ON	ON	ON	ON	OFF
31	ON	ON	ON	ON	ON
*Factory default setting					

Table 5

Card Reader Display Control CRd

This option allows the owner to program whether the display is controlled by the machine's electronic control or by the card reader.

NOTE: This feature does not need to be programmed manually. The card reader itself makes this determination.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until Prog appears in the display. Press the START (enter) keypad and Rt51 will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until CRd appears in the display.
4. When CRd appears in the display, press the START (enter) keypad. The current Card Reader Display Control Status will appear in the display.

on = Card Reader controls display

oFF = Machine Electronic Control controls display (default setting)

5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, Err- , will appear in the display.

NOTE: To program Err- (Error Code Programming), refer to *Error Code Programming Err-*. To program other options, refer to the appropriate section.

Error Code Programming *E r r -*

This option allows the owner to turn on or turn off certain errors in the control.

- Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
 - Press the HEAVY (Λ) or the DELICATES (V) keypad until *Prog* appears in the display. Press the START (enter) keypad and *HE51* will appear in the display.
 - Press the HEAVY (Λ) or the DELICATES (V) keypad to scroll through the programmable options until *E r r -* appears in the display.
 - When *E r r -* appears in the display, press the START (enter) keypad. Refer to *Table 6* for a list of programmable error code parameters.
 - Press the HEAVY (Λ) or the DELICATES (V) keypad to select error code.
 - Press the START (enter) keypad when the correct code appears in the display. The current status will appear in the display.
- on* = Option Enabled
oFF = Option Disabled
- Press the HEAVY (Λ) or the DELICATES (V) keypad to change the status.
 - Press the START (enter) keypad when the correct status appears in the display. The next Error Code Programming option will appear in the display.

NOTE: To program *LC-* (Cycle Programming), press the PERM PRESS (<) keypad, then the HEAVY (Λ) keypad and refer to *Cycle Programming CyC-*. To program other options, refer to the appropriate section.

<i>LCr-</i>	Coin Error Parameters	
	<i>LCr1</i>	Coin Error - Determines if display will show error.
	<i>LCr2</i>	Coin Error Penalty - If enabled, coin error will erase previous coins entered and reset the vend price.
	<i>LCr3</i>	Coin Drops Header Present Error - If enabled and coin drop header is unplugged, control ignores coin inputs.

Table 6 *continues...*

<i>LCr-</i>	Coin Error Parameters	
<i>E FL</i>	Fill Error	
<i>E dr</i>	Drain Error	
<i>E Ub</i>	Unbalance Error Display (VFD models only)	
<i>E oP</i>	Open Thermistor Error Display (models with heat)	
<i>E SH</i>	Shorted Thermistor Error Display (models with heat)	
<i>E Ht</i>	Heat Error Display (heater only)	
<i>LEr-</i>	Leak Detection Error If Water Leak Detection during a machine cycle is enabled, then, on the enabled day(s) of the week, the control will check for water leaks during running machine cycles. If a leak is detected, the control will display the <i>E Ld</i> error for one (1) minute after the cycle is completed. It will also light the right-most decimal point on the display. The Water Leak Detection diagnostic test can be used to verify the leak.	
	<i>LEr1</i>	Water Leak Detection During a Machine Cycle –Determines if water level drops below target level.
	<i>LEr2</i>	Water Leak Detection – Day of Week Enable (Refer to <i>Table 7</i>).
	<i>LEr3</i>	Number of cycles between Leak Detection Tests.
<i>E 5d</i>	Slow Drain Detection – Determines if machine is draining slower than normal. If Slow Drain Detection is enabled, the control will check for slow drain operation during running machine cycles. If a slow drain is detected, the control will display the <i>E 5d</i> error for one (1) minute after the cycle is completed. It will also light the right-most decimal point on the display.	

Table 6

Day(s) of the Week Enabled Values							
Day Of Week Value	SAT	FRI	THUR	WED	TUE	MON	SUN
0	OFF	OFF	OFF	OFF	OFF	OFF	OFF
1	OFF	OFF	OFF	OFF	OFF	OFF	ON
2	OFF	OFF	OFF	OFF	OFF	ON	OFF
3	OFF	OFF	OFF	OFF	OFF	ON	ON
4	OFF	OFF	OFF	OFF	ON	OFF	OFF
5	OFF	OFF	OFF	OFF	ON	OFF	ON
6	OFF	OFF	OFF	OFF	ON	ON	OFF
7	OFF	OFF	OFF	OFF	ON	ON	ON
8	OFF	OFF	OFF	ON	OFF	OFF	OFF
9	OFF	OFF	OFF	ON	OFF	OFF	ON
10	OFF	OFF	OFF	ON	OFF	ON	OFF
11	OFF	OFF	OFF	ON	OFF	ON	ON
12	OFF	OFF	OFF	ON	ON	OFF	OFF
13	OFF	OFF	OFF	ON	ON	OFF	ON
14	OFF	OFF	OFF	ON	ON	ON	OFF
15	OFF	OFF	OFF	ON	ON	ON	ON
16	OFF	OFF	ON	OFF	OFF	OFF	OFF
17	OFF	OFF	ON	OFF	OFF	OFF	ON
18	OFF	OFF	ON	OFF	OFF	ON	OFF
19	OFF	OFF	ON	OFF	OFF	ON	ON
20	OFF	OFF	ON	OFF	ON	OFF	OFF
21	OFF	OFF	ON	OFF	ON	OFF	ON
22	OFF	OFF	ON	OFF	ON	ON	OFF
23	OFF	OFF	ON	OFF	ON	ON	ON
24	OFF	OFF	ON	ON	OFF	OFF	OFF
25	OFF	OFF	ON	ON	OFF	OFF	ON
26	OFF	OFF	ON	ON	OFF	ON	OFF
27	OFF	OFF	ON	ON	OFF	ON	ON
28	OFF	OFF	ON	ON	ON	OFF	OFF
29	OFF	OFF	ON	ON	ON	OFF	ON
30	OFF	OFF	ON	ON	ON	ON	OFF

Table 7 continues...

Day(s) of the Week Enabled Values							
Day Of Week Value	SAT	FRI	THUR	WED	TUE	MON	SUN
31	OFF	OFF	ON	ON	ON	ON	ON
32	OFF	ON	OFF	OFF	OFF	OFF	OFF
33	OFF	ON	OFF	OFF	OFF	OFF	ON
34	OFF	ON	OFF	OFF	OFF	ON	OFF
35	OFF	ON	OFF	OFF	OFF	ON	ON
36	OFF	ON	OFF	OFF	ON	OFF	OFF
37	OFF	ON	OFF	OFF	ON	OFF	ON
38	OFF	ON	OFF	OFF	ON	ON	OFF
39	OFF	ON	OFF	OFF	ON	ON	ON
40	OFF	ON	OFF	ON	OFF	OFF	OFF
41	OFF	ON	OFF	ON	OFF	OFF	ON
42	OFF	ON	OFF	ON	OFF	ON	OFF
43	OFF	ON	OFF	ON	OFF	ON	ON
44	OFF	ON	OFF	ON	ON	OFF	OFF
45	OFF	ON	OFF	ON	ON	OFF	ON
46	OFF	ON	OFF	ON	ON	ON	OFF
47	OFF	ON	OFF	ON	ON	ON	ON
48	OFF	ON	ON	OFF	OFF	OFF	OFF
49	OFF	ON	ON	OFF	OFF	OFF	ON
50	OFF	ON	ON	OFF	OFF	ON	OFF
51	OFF	ON	ON	OFF	OFF	ON	ON
52	OFF	ON	ON	OFF	ON	OFF	OFF
53	OFF	ON	ON	OFF	ON	OFF	ON
54	OFF	ON	ON	OFF	ON	ON	OFF
55	OFF	ON	ON	OFF	ON	ON	ON
56	OFF	ON	ON	ON	OFF	OFF	OFF
57	OFF	ON	ON	ON	OFF	OFF	ON
58	OFF	ON	ON	ON	OFF	ON	OFF
59	OFF	ON	ON	ON	OFF	ON	ON
60	OFF	ON	ON	ON	ON	OFF	OFF
61	OFF	ON	ON	ON	ON	OFF	ON

Table 7 continues...

Day(s) of the Week Enabled Values							
Day Of Week Value	SAT	FRI	THUR	WED	TUE	MON	SUN
62	OFF	ON	ON	ON	ON	ON	OFF
63	OFF	ON	ON	ON	ON	ON	ON
64	ON	OFF	OFF	OFF	OFF	OFF	OFF
65	ON	OFF	OFF	OFF	OFF	OFF	ON
66	ON	OFF	OFF	OFF	OFF	ON	OFF
67	ON	OFF	OFF	OFF	OFF	ON	ON
68	ON	OFF	OFF	OFF	ON	OFF	OFF
69	ON	OFF	OFF	OFF	ON	OFF	ON
70	ON	OFF	OFF	OFF	ON	ON	OFF
71	ON	OFF	OFF	OFF	ON	ON	ON
72	ON	OFF	OFF	ON	OFF	OFF	OFF
73	ON	OFF	OFF	ON	OFF	OFF	ON
74	ON	OFF	OFF	ON	OFF	ON	OFF
75	ON	OFF	OFF	ON	OFF	ON	ON
76	ON	OFF	OFF	ON	ON	OFF	OFF
77	ON	OFF	OFF	ON	ON	OFF	ON
78	ON	OFF	OFF	ON	ON	ON	OFF
79	ON	OFF	OFF	ON	ON	ON	ON
80	ON	OFF	ON	OFF	OFF	OFF	OFF
81	ON	OFF	ON	OFF	OFF	OFF	ON
82	ON	OFF	ON	OFF	OFF	ON	OFF
83	ON	OFF	ON	OFF	OFF	ON	ON
84	ON	OFF	ON	OFF	ON	OFF	OFF
85	ON	OFF	ON	OFF	ON	OFF	ON
86	ON	OFF	ON	OFF	ON	ON	OFF
87	ON	OFF	ON	OFF	ON	ON	ON
88	ON	OFF	ON	ON	OFF	OFF	OFF
89	ON	OFF	ON	ON	OFF	OFF	ON
90	ON	OFF	ON	ON	OFF	ON	OFF
91	ON	OFF	ON	ON	OFF	ON	ON
92	ON	OFF	ON	ON	ON	OFF	OFF

Table 7 continues...

Day(s) of the Week Enabled Values							
Day Of Week Value	SAT	FRI	THUR	WED	TUE	MON	SUN
93	ON	OFF	ON	ON	ON	OFF	ON
94	ON	OFF	ON	ON	ON	ON	OFF
95	ON	OFF	ON	ON	ON	ON	ON
96	ON	ON	OFF	OFF	OFF	OFF	OFF
97	ON	ON	OFF	OFF	OFF	OFF	ON
98	ON	ON	OFF	OFF	OFF	ON	OFF
99	ON	ON	OFF	OFF	OFF	ON	ON
100	ON	ON	OFF	OFF	ON	OFF	OFF
101	ON	ON	OFF	OFF	ON	OFF	ON
102	ON	ON	OFF	OFF	ON	ON	OFF
103	ON	ON	OFF	OFF	ON	ON	ON
104	ON	ON	OFF	ON	OFF	OFF	OFF
105	ON	ON	OFF	ON	OFF	OFF	ON
106	ON	ON	OFF	ON	OFF	ON	OFF
107	ON	ON	OFF	ON	OFF	ON	ON
108	ON	ON	OFF	ON	ON	OFF	OFF
109	ON	ON	OFF	ON	ON	OFF	ON
110	ON	ON	OFF	ON	ON	ON	OFF
111	ON	ON	OFF	ON	ON	ON	ON
112	ON	ON	ON	OFF	OFF	OFF	OFF
113	ON	ON	ON	OFF	OFF	OFF	ON
114	ON	ON	ON	OFF	OFF	ON	OFF
115	ON	ON	ON	OFF	OFF	ON	ON
116	ON	ON	ON	OFF	ON	OFF	OFF
117	ON	ON	ON	OFF	ON	OFF	ON
118	ON	ON	ON	OFF	ON	ON	OFF
119	ON	ON	ON	OFF	ON	ON	ON
120	ON	ON	ON	ON	OFF	OFF	OFF
121	ON	ON	ON	ON	OFF	OFF	ON
122	ON	ON	ON	ON	OFF	ON	OFF
123	ON	ON	ON	ON	OFF	ON	ON

Table 7 continues...

Day(s) of the Week Enabled Values							
Day Of Week Value	SAT	FRI	THUR	WED	TUE	MON	SUN
124	ON	ON	ON	ON	ON	OFF	OFF
125	ON	ON	ON	ON	ON	OFF	ON
126	ON	ON	ON	ON	ON	ON	OFF
127*	ON	ON	ON	ON	ON	ON	ON
*Factory default setting							

Table 7

Cycle Programming *CYC* -

This option allows the owner to program different aspects for various steps in each type of cycle. There are nine (9) cycles available for programming.

- Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
- Press the HEAVY (Λ) or the DELICATES (v) keypad until *Prog* appears in the display. Press the START (enter) keypad and *HE5 I* will appear in the display.
- Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable options until *CYC* - appears in the display. Press the START (enter) keypad and *CYC I* will appear in the display.
- Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the cycles to program. Press the START (enter) keypad when the desired cycle appears in the display.
- The first Cycle Programming option, *AGI E*, will appear in the display.

NOTE: To program *AGI E* (Cycle Agitate), continue to next option. To program other options, press the HEAVY (Λ) or the DELICATES (v) keypads and refer to the appropriate section.

How to Program Cycle Agitate *AGI E*

This option allows the owner to program the cycle's agitation action and speed. These options apply to the entire cycle.

- Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Cycle Programming options until *AGI E* appears in the display.
- When *AGI E* appears in the display, press the START (enter) keypad. The first Cycle Agitate option will appear in the display.
- Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable options. Refer to *Table 8*.
- Press the START (enter) keypad when the desired programmable option appears in the display. The current status will appear in the display. Refer to *Table 8*.

Final Spin Step	Description	Status
<i>TYPE</i>	Agitate Type	1 = Normal 2 = Gentle
<i>RSPd</i>	Agitate Speed (VFD only)	<i>Lo</i> = Reduced Speed <i>REG</i> = Normal Speed

Table 8

- Press the HEAVY (Λ) or the DELICATES (v) keypad to change the current status.
- Press the START (enter) keypad when the desired status appears in the display. The next Cycle Agitate option will appear in the display.

NOTE: To program *HE9 I* (Cycle Segment 1) press the PERM PRESS (<) keypad and continue to next Cycle Programming option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Cycle Segment *HE9 I*

There are eight (8) programmable cycle segments. Within each segment, there are several programmable options.

- Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the eight (8) programmable Cycle Segments until the desired segment appears in the display.
- When the desired segment appears in the display, press the START (enter) keypad. *SEEn* (Segment Enable/Disable) will appear in the display.
- Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the Cycle Segment programmable options.

NOTE: If the Segment Enable/Disable is programmed *OFF*, the other Cycle Segment programming options can't be accessed.

- Press the START (enter) keypad when the desired Cycle Segment programmable option appears in the display.

Programming Segment Enable/Disable

- When *SEEn* appears in the display, press the START (enter) keypad. The current Segment Enable/Disable status will appear in the display.

On = Option Enabled

OFF = Option Disabled

- Press the HEAVY (Λ) or the DELICATES (v) keypad to change the current status.

NOTE: If the Segment Enable/Disable is programmed *OFF*, the other Cycle Segment programming options can't be accessed.

- Press the START (enter) keypad when the desired status appears in the display. The next Cycle Segment option, *FILL*, will appear in the display.

NOTE: To program *FILL* (Fill Step), continue to next Cycle Segment option. To program other options, press the HEAVY (Λ) or the DELICATES (v) keypads and refer to the appropriate section.

Programming Fill Step

- When *FILL* appears in the display, press the START (enter) keypad. The first Fill step programming option will appear in the display.

2. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Fill step options. Refer to *Table 9*.
- NOTE: Fill Step *FLEn* must be enabled to scroll through all Fill Step options.**
3. Press the START (enter) keypad when the desired option appears in the display. The current status will appear in the display. Refer to *Table 9*.

NOTE: For the Dispenser options, the display will show *CH* or *SH* depending whether or not the control is programmed as compartment-oriented or supply-oriented. Refer to *Supply Compartment Dispenser Programming SUPC (Design 1 Models Only)*.

Fill Step	Description	Status
<i>FLEn</i>	Fill Step Enable/ Disable	<i>on/off</i>
<i>FLEU</i>	Fill Level	<i>Hl</i> = High <i>nEd</i> = Medium <i>Lo</i> = Low <i>1-30</i>
<i>LENP</i>	Fill Temperature	<i>Cold</i> = Cold <i>URrn</i> = Warm <i>Hot</i> = Hot (35°F-194°F [2°C-90°C])

Table 9

4. Press the HEAVY (Λ) or the DELICATES (v) keypad to change the current status.
5. Press the START (enter) keypad when the desired status appears in the display. The next Fill step option will appear in the display.

NOTE: To program *SUPL* (Supply Step), continue to next Cycle Segment option. To program other options, press the HEAVY (Λ) or the DELICATES (v) keypads and refer to the appropriate section.

Programming Supply Step

1. When *SUPL* appears in the display, press the START (enter) keypad. The first Supply step programming option will appear in the display.
 2. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Supply step options. Refer to *Table 10*.
- NOTE: Supply Step *SUEn* must be enabled to scroll through all Supply Step options.**
3. Press the START (enter) keypad when the desired option appears in the display. The current status value will appear in the display. Refer to *Table 10*.

Supply Step	Description	Status/ Value	
<i>5UE_n</i>	Supply Step Enable/Disable	<i>on/off</i>	
<i>d, 5P</i>	Dispenser options (Design 1 models only)	Press START (enter) to access options	
	<i>2</i> or <i>5 1</i>	Compartment 2/ Supply #1	<i>on/off</i>
	<i>3</i> or <i>5 2</i>	Compartment 3/ Supply #2	<i>on/off</i>
	<i>4</i> or <i>5 3</i>	Compartment 4/ Supply #3	<i>on/off</i>
	<i>5 4</i>	Supply #4	<i>on/off</i>
	Dispenser options (Design 2 and 3 models only)	Press START (enter) to access options	
	<i>2</i>	Compartment 2	<i>on/off</i>
	<i>3</i>	Compartment 3	<i>on/off</i>
	<i>4</i>	Compartment 4	<i>on/off</i>
	<i>5 1</i>	Supply #1	<i>on/off</i>
	<i>5 2</i>	Supply #2	<i>on/off</i>
	<i>5 3</i>	Supply #3	<i>on/off</i>
	<i>5 4</i>	Supply #4	<i>on/off</i>
	<i>5dUr</i>	Supply Duration	Press START (enter) to access options
<i>5EC</i>		Seconds	0-59
<i>n/n</i>		Minutes	0-9

Table 10

- Press the HEAVY (Λ) or the DELICATES (v) keypad to change the current status/value.
- Press the START (enter) keypad when the desired status/value appears in the display. The next Supply step option will appear in the display.

NOTE: To program #95E (Agitate Step), continue to next Cycle Segment option. If in the Dispenser Options or Supply Duration programming option, press the PERM PRESS (<) keypad first. To program other options, press the HEAVY (Λ) or the DELICATES (v) keypads and refer to the appropriate section.

Programming Agitate Step

- When #95E appears in the display, press the START (enter) keypad. The first Agitate step programming option will appear in the display.
 - Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Agitate step options. Refer to Table 11 .
- NOTE: Agitate Step #9En must be enabled to scroll through all Agitate Step options.**
- Press the START (enter) keypad when the desired option appears in the display. The current status/value will appear in the display. Refer to Table 11 .

Agitate Step	Description	Status/Value
<i>#9En</i>	Agitate Step Enable/Disable	<i>on/off</i>
<i>#dUr</i>	Agitate Duration (in minutes)	<i>1-30</i>
<i>HEAL</i>	Heat in Agitate (if heater is present)	<i>off</i> <i>1</i> = To target <i>2</i> = Maintain

Table 11

- Press the HEAVY (Λ) or the DELICATES (v) keypad to change the current status/value.
- Press the START (enter) keypad when the desired status/value appears in the display. The next Agitate step option will appear in the display.

NOTE: To program #rAn (Drain Step), continue to next Cycle Segment option. To program other options, press the HEAVY (Λ) or the DELICATES (v) keypads and refer to the appropriate section.

Programming Drain Step

- When #rAn appears in the display, press the START (enter) keypad. The current status will be displayed.
- Press the HEAVY (Λ) or the DELICATES (v) keypad to change the current status.

on = Option Enabled

off = Option Disabled

NOTE: Drain must be enabled to activate Extract step.

- Press the START (enter) keypad when the desired status appears in the display. The next Cycle Segment option, *5P n*, will appear in the display.

NOTE: To program $5PI_n$ (Extract Step), continue to next Cycle Segment option. To program other options press the HEAVY (Λ) or the DELICATES (ν) keypads and refer to the appropriate section.

Programming Extract Step

1. When $5PI_n$ appears in the display, press the START (enter) keypad. The first Extract step programming option will appear in the display.
2. Press the HEAVY (Λ) or the DELICATES (ν) keypad to scroll through the programmable Extract step options. Refer to *Table 12*.

NOTE: Extract Step $5PE_n$ must be enabled to scroll through all Extract Step options.

3. Press the START (enter) keypad when the desired option appears in the display. The current status/value will appear in the display. Refer to *Table 12*.

Extract Step	Description	Status/Value
$5PE_n$	Extract Step Enable/Disable	on/off
$5SEC$	Extract Seconds	0-59
$5nl_n$	Extract Minutes	Intermediate Extract: Min. Step Time = 30 seconds Max. Step Time = 3:59 minutes Final Extract: Min. Step Time = 30 seconds Max. Step Time = 9:59 minutes

Table 12 continues...

Extract Step	Description	Status/Value
$5SP_d$	Extract Speed* (G) (Design 1-VFD only)	1 = Very low (80) 2 = Low (80) 3 = Medium (100) 4 = High (120) 5 = Very high (140)
	Extract Speed* (G) (Design 2 and 3-VFD only)	1 = Very low (27) 2 = Low (80) 3 = Medium (100) 4 = High (125) 5 = Very high (150) 6 = Ultra high (200)
*F-Speed machines have a maximum speed of 3 or Medium Speed.		
*F-speed models use speeds 1-3.		

Table 12

4. Press the HEAVY (Λ) or the DELICATES (ν) keypad to change the current status/value.
5. Press the START (enter) keypad when the desired status/value appears in the display. The next Cycle Segment step option, $5E92$ will appear in the display.

NOTE: To program EN_{in} (Cycle Time), continue to next Cycle Segment option. To program other options press the HEAVY (Λ) or the DELICATES (ν) keypads and refer to the appropriate section.

How to Program Cycle Time EN_{in}

This option allows the owner to program minutes to the cycle's display time

1. Press the HEAVY (Λ) or the DELICATES (ν) keypad to scroll through the programmable Cycle Programming options until EN_{in} appears in the display.

NOTE: The option $PCtd$ Programmable Cycle Time Display must be programmed on to access the EN_{in} option, refer to *Programmable Cycle Time Display $PCtd$* .

2. When EN_{in} appears in the display, press the START (enter) keypad. The first cycle time value will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (ν) keypad to change the current value.

NOTE: The Program Cycle Time can be set from 0 to 255 minutes. The default value is 0.

4. Press the START (enter) keypad when the desired cycle time value appears in the display.

NOTE: Programming display time (in minutes) does not actually change time in the cycle, only to the displayed cycle time for the user.

NOTE: To program another cycle, repeat Cycle Programming steps. To program other options, press the HEAVY (Λ) or the DELICATES (V) keypads and refer to the appropriate section.

Supply Compartment Dispenser Programming *SUPC* (Design 1 Models Only)

This option allows the owner to choose between the supply dispenser or compartment dispenser.

NOTE: Supply Dispenser must only be selected if machine is connected to an external chemical supply system.

- Control must be in Manual Mode. Refer to *Entering Manual Mode*.
- Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Prog* appears in the display. Press the START (enter) keypad and *ALS I* will appear in the display.
- Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *SUPC* appears in the display.
- When *SUPC* appears in the display, press the START (enter) keypad. The current dispenser option will appear in the display.

S = Supply Dispenser

C = Compartment Dispenser (default setting)

- Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to change the dispenser type.
- Press the START (enter) keypad when the desired dispenser type appears in the display. The next option, *bALr* (VFD models) or *IR* (2 speed models), will appear in the display.

NOTE: For VFD models: To program *bALr* (Number of Balance Retries), refer to *Number of Balance Retries bALr*. For 2 speed models: To program *IR* (IR Access [Enable/Disable]), refer to *IR Access (Enable/Disable) IrA*. To program other options, refer to the appropriate section.

Number of Balance Retries *bALr*

This option allows the owner to program how many times the control will retry balancing the load before moving into Extract step.

- Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
- Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Prog* appears in the display. Press the START (enter) keypad and *ALS I* will appear in the display.
- Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *bALr* appears in the display.
- When *bALr* appears in the display, press the START (enter) keypad. The current value will appear in the display.
- Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the current value.

NOTE: The number of balance retries can be set from 1-7. The default balance retries is set at 3 for Design 1 models and 1 for Design 2 and 3 models.

- Press the START (enter) keypad when the desired value appears in the display. The next option, *IR*, will appear in the display.

NOTE: To program *IR* (IR Access [Enable/Disable]), refer to *IR Access (Enable/Disable) IrA*. To program other options, refer to the appropriate section.

IR Access (Enable/Disable) *IR*

This option allows the owner to enable or disable allowing the control to be read by an external device.

- Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
- Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Prog* appears in the display. Press the START (enter) keypad and *ALS I* will appear in the display.
- Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *IR* appears in the display.
- When *IR* appears in the display, press the START (enter) keypad. The current IR Access status will appear in the display.

on = Option Enabled (default setting)

off = Option Disabled

- Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to change the current status.
- Press the START (enter) keypad when the desired status appears in the display. The next option, *tFC* (models with heat) or *PtEn* (non-heat models), will appear in the display.

NOTE: For Models with Heat: To program *tFC* (Fahrenheit/Celsius), refer to *Fahrenheit/Celsius tFC (Models with Heat)*. For Non-heat Models: To program *PtEn* (Production Test Cycle [Enable/Disable]), refer to *Production Test Cycle (Enable/Disable) PtEn*. To program other options, refer to the appropriate section.

Fahrenheit/Celsius \pm FL (Models with Heat)

This option allows the owner to set whether the display will be shown in Fahrenheit or Celsius.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until **Prog** appears in the display. Press the START (enter) keypad and **FL** will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until \pm FL appears in the display.
4. When \pm FL appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current Fahrenheit/Celsius setting.

CEL = Celsius

FHR = Fahrenheit (default setting)

5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the current number to the desired number.
6. Press the START (enter) keypad when the correct number of degrees appears in the display. The new value is saved and the next option, FH , will appear in the display.

NOTE: To program FH (Hot Water Temperature), refer to *Hot Water Temperature FH*. To program other options, refer to the appropriate section.

Hot Water Temperature *FH*

This option allows the owner to program the hot water temperature for models equipped with heat.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (Λ) or the DELICATES (v) keypad until *Prog* appears in the display. Press the START (enter) keypad and *Hot* will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable options until *FH* appears in the display.
4. When *FH* appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current Hot Water Temperature value.
5. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the current Hot Water Temperature value to the desired Hot Water Temperature value.

	WARNING
<p>To prevent personal injury, avoid contact with inlet water temperatures higher than 125° Fahrenheit [51° Celsius] and hot surfaces.</p>	
W748	

NOTE: Hot Water Temperature is selectable between 35° and 194° Fahrenheit [2° and 90° Celsius]. Default temperature is 140° Fahrenheit [60° Celsius].

NOTE: Refer to *Fahrenheit/Celsius t FC (Models with Heat)* to select Celsius or Fahrenheit display.

6. Press the START (enter) keypad when the correct number appears in the display. The next option, *FHC*, will appear in the display.

NOTE: To program *FHC* (Warm Water Temperature), refer to *Warm Water Temperature FHC*. To program other options, refer to the appropriate section.

4. When *FHC* appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current Warm Water Temperature value.
5. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the current Warm Water Temperature value to the desired Warm Water Temperature value.

NOTE: Warm Water Temperature is selectable between 35° and 194° Fahrenheit [2° and 90° Celsius]. Default temperature is 100° Fahrenheit [38° Celsius].

	WARNING
<p>To prevent personal injury, avoid contact with inlet water temperatures higher than 125° Fahrenheit [51° Celsius] and hot surfaces.</p>	
W748	

NOTE: Refer to *Fahrenheit/Celsius t FC (Models with Heat)* to select Celsius or Fahrenheit display.

6. Press the START (enter) keypad when the correct number appears in the display. The next option, *FL*, will appear in the display.

NOTE: To program *FL* (Cold Water Temperature), refer to *Cold Water Temperature FC*. To program other options, refer to the appropriate section.

Warm Water Temperature *FHC*

This option allows the owner to program the warm water temperature for models equipped with heat.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (Λ) or the DELICATES (v) keypad until *Prog* appears in the display. Press the START (enter) keypad and *Hot* will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable options until *FHC* appears in the display.

Cold Water Temperature *FC*

This option allows the owner to program the cold water temperature for models equipped with heat.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *PrG* appears in the display. Press the START (enter) keypad and *RL5 I* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *FC* appears in the display.
4. When *FC* appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current Cold Water Temperature value.
5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the current Cold Water Temperature value to the desired Cold Water Temperature value.

NOTE: Cold Water Temperature is selectable between 35° and 194° Fahrenheit [2° and 90° Celsius]. Default temperature value is 35° Fahrenheit [2° Celsius].

	WARNING
<p>To prevent personal injury, avoid contact with inlet water temperatures higher than 125° Fahrenheit [51° Celsius] and hot surfaces.</p>	
W748	

NOTE: Refer to *Fahrenheit/Celsius t FC (Models with Heat)* to select Celsius or Fahrenheit display.

6. Press the START (enter) keypad when the correct number appears in the display. The next option, *Codn*, will appear in the display.

NOTE: To program *Codn* (Cooldown Enable/Temperature), refer to *Cooldown Enable/Temperature Codn (Models with Heat)*. To program other options, refer to the appropriate section.

Cooldown Enable/Temperature *Codn* (Models with Heat)

This option allows the owner to enable or disable the Cooldown Water Temperature option. If enabled, the owner can also set the cooldown water temperature.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *PrG* appears in the display. Press the START (enter) keypad and *RL5 I* will appear in the display.

3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *Codn* appears in the display.
4. When *Codn* appears in the display, press the START (enter) keypad. A number or *oFF* will appear in the display. The number corresponds to the current Cooldown Water Temperature value, and *oFF* appears when cool down is disabled.
5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to change the current status.

NOTE: Cooldown Water Temperature is selectable between 50° and 160° Fahrenheit [10° and 71° Celsius]. Default is temperature value *oFF*.

6. Press the START (enter) keypad when the desired value appears in the display.
7. Press the START (enter) keypad when the correct number appears in the display. The next option, *PtEn*, will appear in the display.

NOTE: To program *PtEn* (Production Test Cycle [Enable/Disable]), refer to *Production Test Cycle (Enable/Disable) PtEn*. To program other options, refer to the appropriate section.

Production Test Cycle (Enable/Disable)

PTE n

This option allows the owner to enable or disable access to the production test cycle. Refer to *Production Test Cycle* section for more information.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Pr o g* appears in the display. Press the START (enter) keypad and *RE S I* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *PTE n* appears in the display.
4. When *PTE n* appears in the display, press the START (enter) keypad. The current Production Test Cycle status will appear in the display.

o n = Option Enabled (default setting)

o FF = Option Disabled

5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, *rREN*, will appear in the display.

NOTE: To program *rREN* (Manual Rapid Advance [Enable/ Disable]), refer to *Manual Rapid Advance (Enable/Disable) rAEn*. To program other options, refer to the appropriate section.

Manual Rapid Advance (Enable/Disable) *rREN*

This option allows the owner to enable or disable the rapid advance feature. Refer to *Rapid Advance Feature* section for more information.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Pr o g* appears in the display. Press the START (enter) keypad and *RE S I* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *rREN* appears in the display.
4. When *rREN* appears in the display, press the START (enter) keypad. The current Manual Rapid Advance status will appear in the display.

o n = Option Enabled (default setting)

o FF = Option Disabled

5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to change the current status.

6. Press the START (enter) keypad when the desired status appears in the display. The next option, *nCTd*, will appear in the display.

NOTE: To program *nCTd* (No Cycle Time Display), refer to *No Cycle Time Display nCtd*. To program other options, refer to the appropriate section.

No Cycle Time Display *nCtd*

This option allows the owner to enable or disable whether the cycle time will appear in the display.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Prog* appears in the display. Press the START (enter) keypad and *Alt 1* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *nCtd* appears in the display.
4. When *nCtd* appears in the display, press the START (enter) keypad. The current No Cycle Time Display status will appear in the display.

on = Option Enabled

off = Option Disabled (default setting)

5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, *PcTd*, will appear in the display.

NOTE: To program *PcTd* (Programmable Cycle Time Display), refer to *Programmable Cycle Time Display PCTd*. To program other options, refer to the appropriate section.

Programmable Cycle Time Display *PcTd*

This option allows the owner to program the displayed cycle time.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Prog* appears in the display. Press the START (enter) keypad and *Alt 1* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *PcTd* appears in the display.
4. When *PcTd* appears in the display, press the START (enter) keypad. The current Programmable Cycle Time Display status will appear in the display.

on = Option Enabled

off = Option Disabled (default setting)

NOTE: Enabling this option will not change the cycle time, only the display time for the user. Refer to option *CnIn* in Cycle Programming to program minutes to the cycle time display.

5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to change the current status.

6. Press the START (enter) keypad when the desired status appears in the display. The next option, *SdAd*, will appear in the display.

NOTE: To program *SdAd* (Slow Drain Detection Adjust Value), refer to *Slow Drain Detection Adjust Value SdAd*. To program other options, refer to the appropriate section.

Slow Drain Detection Adjust Value *SdRd*

This option allows the owner to increase or decrease the Slow Drain Detection threshold by adding additional seconds to the threshold value. When enabled it increases the time before a Slow Drain Error will occur.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (Λ) or the DELICATES (v) keypad until *PrOG* appears in the display. Press the START (enter) keypad and *RL51* will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable options until *SdRd* appears in the display.
4. When *SdRd* appears in the display, press the START (enter) keypad. The current Slow Drain Detection Adjust value will appear in the display.

on = Option Enabled

oFF = Option Disabled (default setting)

5. Press the HEAVY (Λ) or the DELICATES (v) keypad to change the current value.

NOTE: The Slow Drain Detection Adjust Value can be set from 0 to 255 seconds. The default Slow Drain Detection Adjust value is 0.

6. Press the START (enter) keypad when the desired value appears in the display. The next option, *SPAU*, will appear in the display.

NOTE: To program *SPAU* (Pause/Resume Mode), refer to *Pause/Resume Mode (Enabled/Disabled) SPAU*. To program other options, refer to the appropriate section.

Pause/Resume Mode (Enabled/Disabled) *SPAU*

This option allows the owner to enable or disable Pause/Resume Mode. When enabled, users can press the START (enter) keypad three times (during first three [3] minutes of cycle) to pause the cycle.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (Λ) or the DELICATES (v) keypad until *PrOG* appears in the display. Press the START (enter) keypad and *RL51* will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable options until *SPAU* appears in the display.
4. When *SPAU* appears in the display, press the START (enter) keypad. The current Pause/Resume status will appear in the display.

on = Option Enabled

oFF = Option Disabled (default setting)

5. Press the HEAVY (Λ) or the DELICATES (v) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, *RL52*, will appear in the display.

NOTE: To program *RL52* (MEDIUM Vend Price), refer to *MEDIUM Vend Price AtS2*. To program other options, refer to the appropriate section.

MEDIUM Vend Price *At 52*

This option allows the owner to set the vend price for a normal/warm wash. This vend price will be shown in the display when NORMAL and WARM are selected.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Prog* appears in the display. Press the START (enter) keypad and *At 51* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *At 52* appears in the display. The NORMAL and WARM LEDs will be lit to show which cycle/temperature price is being programmed.
4. When *At 52* appears in the display, press the START (enter) keypad. There are five (5) digits in the MEDIUM Vend Price. The fifth digit will appear in the display and will flash one (1) second on, one (1) second off. Refer to *Figure 13*.

NOTE: If the vend price is \$100.00 or more, the fifth digit is 1-5. If the vend price is \$99.99 or less, the fifth digit is 0.



Figure 13

5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the fifth (5) digit.

NOTE: The vend price can be set from 0 to 65,535. The default vend price is 200.
6. Press the START (enter) keypad to enter the fifth (5) digit and display remaining four (4) digits. The active digit will flash one (1) second on and one (1) second off.

NOTE: To go back to the current programmable option without changing the value of the active digit, press the PERM PRESS (<) keypad.
7. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
8. Press the START (enter) keypad with the last active digit. The next option, *At 53*, will appear in the display.

NOTE: To program *At 53* (HEAVY Vend Price), refer to *HEAVY Vend Price At 53*. To program other options, refer to the appropriate section.

HEAVY Vend Price *At53*

This option allows the owner to set the vend price for a normal/cold wash. This vend price will be shown in the display when NORMAL and COLD are selected.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Prog* appears in the display. Press the START (enter) keypad and *At51* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *At53* appears in the display. The NORMAL and COLD LEDs will be lit to show which cycle/temperature price is being programmed.
4. When *At53* appears in the display, press the START (enter) keypad. There are five (5) digits in the HEAVY Vend Price. The fifth digit will appear in the display and will flash one (1) second on, one (1) second off. Refer to *Figure 14*.

NOTE: If the vend price is \$100.00 or more, the fifth digit is 1-5. If the vend price is \$99.99 or less, the fifth digit is 0.



Figure 14

5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the fifth (5) digit.

NOTE: The vend price can be set from 0 to 65,535. The default vend price is 200.
6. Press the START (enter) keypad to enter the fifth (5) digit and display remaining four (4) digits. The active digit will flash one (1) second on and one (1) second off.

NOTE: To go back to the current programmable option without changing the value of the active digit, press the PERM PRESS (<) keypad.
7. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
8. Press the START (enter) keypad with the last active digit. The next option, *At54*, will appear in the display.

NOTE: To program *At54* (NORMAL Vend Price), refer to *NORMAL Vend Price At54*. To program other options, refer to the appropriate section.

NORMAL Vend Price *At 54*

This option allows the owner to set the vend price for a perm press/hot wash. This vend price will be shown in the display when PERM PRESS and HOT are selected.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *PrSS* appears in the display. Press the START (enter) keypad and *At 51* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *At 54* appears in the display. The PERM PRESS and HOT LEDs will be lit to show which cycle/temperature price is being programmed.
4. When *At 54* appears in the display, press the START (enter) keypad. There are five (5) digits in the NORMAL Vend Price. The fifth (5) digit will appear in the display and will flash one (1) second on, one (1) second off. Refer to *Figure 15*.

NOTE: If the vend price is \$100.00 or more, the fifth digit is 1-5. If the vend price is \$99.99 or less, the fifth digit is 0.



Figure 15

5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the fifth (5) digit.

NOTE: The vend price can be set from 0 to 65,535. The default vend price is 200.
6. Press the START (enter) keypad to enter the fifth (5) digit and display remaining four (4) digits. The active digit will flash one (1) second on and one (1) second off.

NOTE: To go back to the current programmable option without changing the value of the active digit, press the PERM PRESS (<) keypad.
7. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
8. Press the START (enter) keypad with the last active digit. The next option, *At 55*, will appear in the display.

NOTE: To program *At 55* (PERM PRESS Vend Price), refer to *PERM PRESS Vend Price At 55*. To program other options, refer to the appropriate section.

PERM PRESS Vend Price *At 55*

This option allows the owner to set the vend price for a perm press/warm wash. This vend price will be shown in the display when PERM PRESS and WARM are selected.

This option allows the owner to set the vend price for a perm press/warm wash. This vend price will be shown in the display when PERM PRESS is selected.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Pr09* appears in the display. Press the START (enter) keypad and *At 5 1* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *At 55* appears in the display. The PERM PRESS and WARM LEDs will be lit to show which cycle/temperature price is being programmed.
4. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *At 55* appears in the display. The PERM PRESS LED will be lit to show which cycle/temperature price is being programmed.
5. When *At 55* appears in the display, press the START (enter) keypad. There are five (5) digits in the PERM PRESS Vend Price. The fifth (5) digit will appear in the display and will flash one (1) second on, one (1) second off. Refer to *Figure 16*.

NOTE: If the vend price is \$100.00 or more, the fifth digit is 1-5. If the vend price is \$99.99 or less, the fifth digit is 0.



Figure 16

6. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the fifth (5) digit.

NOTE: The vend price can be set from 0 to 65,535. The default vend price is 200.
7. Press the START (enter) keypad to enter the fifth (5) digit and display remaining four (4) digits. The active digit will flash one (1) second on and one (1) second off.

NOTE: To go back to the current programmable option without changing the value of the active digit, press the PERM PRESS (\leftarrow) keypad.
8. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.

9. Press the START (enter) keypad with the last active digit. The next option, *At 55*, will appear in the display.

NOTE: To program *At 55* (DELICATES Vend Price), refer to *DELICATES Vend Price At 56*. To program other options, refer to the appropriate section.

DELICATES Vend Price *At 56*

This option allows the owner to set the vend price for a perm press/cold wash. This vend price will be shown in the display when PERM PRESS and COLD are selected.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Perm* appears in the display. Press the START (enter) keypad and *At 51* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *At 56* appears in the display. The PERM PRESS and COLD LEDs will be lit to show which cycle/temperature price is being programmed.
4. When *At 56* appears in the display, press the START (enter) keypad. There are five (5) digits in the DELICATES Vend Price. The fifth (5) digit will appear in the display and will flash one (1) second on, one (1) second off. Refer to *Figure 17*.

NOTE: If the vend price is \$100.00 or more, the fifth digit is 1-5. If the vend price is \$99.99 or less, the fifth digit is 0.



Figure 17

5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the fifth (5) digit.

NOTE: The vend price can be set from 0 to 65,535. The default vend price is 200.
6. Press the START (enter) keypad to enter the fifth (5) digit and display remaining four (4) digits. The active digit will flash one (1) second on and one (1) second off.

NOTE: To go back to the current programmable option without changing the value of the active digit, press the PERM PRESS (<) keypad.
7. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
8. Press the START (enter) keypad with the last active digit. The next option, *At 57*, will appear in the display.

NOTE: To program *At 57* (Delicate Hot Vend Price), refer to *Delicate Hot Vend Price At 57*. To program other options, refer to the appropriate section.

Delicate Hot Vend Price *AtS7*

This option allows the owner to set the vend price for a delicate/hot wash. This vend price will be shown in the display when DELICATES and HOT are selected.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Prsg* appears in the display. Press the START (enter) keypad and *AtS1* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *AtS7* appears in the display. The DELICATES and HOT LEDs will be lit to show which cycle/temperature price is being programmed.
4. When *AtS7* appears in the display, press the START (enter) keypad. There are five (5) digits in the Delicate Hot Vend Price. The fifth digit will appear in the display and will flash one (1) second on, one (1) second off. Refer to *Figure 18*.

NOTE: If the vend price is \$100.00 or more, the fifth digit is 1-5. If the vend price is \$99.99 or less, the fifth digit is 0.



Figure 18

5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the fifth (5) digit.

NOTE: The vend price can be set from 0 to 65,535. The default vend price is 200.
6. Press the START (enter) keypad to enter the fifth (5) digit and display remaining four (4) digits. The active digit will flash one (1) second on and one (1) second off.

NOTE: To go back to the current programmable option without changing the value of the active digit, press the PERM PRESS (<) keypad.
7. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
8. Press the START (enter) keypad with the last active digit. The next option, *AtS8*, will appear in the display.

NOTE: To program *AtS8* (Delicate Warm Vend Price), refer to *Delicate Warm Vend Price AtS8*. To program other options, refer to the appropriate section.

Delicate Warm Vend Price *At5B*

This option allows the owner to set the vend price for a delicate/warm wash. This vend price will be shown in the display when DELICATES and WARM are selected.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Pr09* appears in the display. Press the START (enter) keypad and *At51* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *At5B* appears in the display. The DELICATES and WARM LEDs will be lit to show which cycle/temperature price is being programmed.
4. When *At5B* appears in the display, press the START (enter) keypad. There are five (5) digits in the Delicate Warm Vend Price. The fifth digit will appear in the display and will flash one (1) second on, one (1) second off. Refer to *Figure 19*.

NOTE: If the vend price is \$100.00 or more, the fifth digit is 1-5. If the vend price is \$99.99 or less, the fifth digit is 0.



Figure 19

5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the fifth digit.

NOTE: The vend price can be set from 0 to 65,535. The default vend price is 200.
6. Press the START (enter) keypad to enter the fifth digit and display remaining four digits. The active digit will flash one (1) second on and one (1) second off.

NOTE: To go back to the current programmable option without changing the value of the active digit, press the PERM PRESS (<) keypad.
7. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
8. Press the START (enter) keypad with the last active digit. The next option, *At59*, will appear in the display.

NOTE: To program *At59* (Delicate Cold Vend Price, refer to *Delicate Cold Vend Price At59*. To program other options, refer to the appropriate section.

Delicate Cold Vend Price $\#L59$

This option allows the owner to set the vend price for a delicate/cold wash. This vend price will be shown in the display when DELICATES and COLD are selected.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until $\#r\#9$ appears in the display. Press the START (enter) keypad and $\#L51$ will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until $\#L59$ appears in the display. The DELICATES and COLD LEDs will be lit to show which cycle/temperature price is being programmed.
4. When $\#L59$ appears in the display, press the START (enter) keypad. There are five (5) digits in the Delicate Cold Vend Price. The fifth digit will appear in the display and will flash one (1) second on, one (1) second off. Refer to *Figure 20*.

NOTE: If the vend price is \$100.00 or more, the fifth digit is 1-5. If the vend price is \$99.99 or less, the fifth digit is 0.



Figure 20

5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the fifth digit.

NOTE: The vend price can be set from 0 to 65,535. The default vend price is 200.
6. Press the START (enter) keypad to enter the fifth digit and display remaining four digits. The active digit will flash one (1) second on and one (1) second off.

NOTE: To go back to the current programmable option without changing the value of the active digit, press the PERM PRESS (\leftarrow) keypad.
7. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
8. Press the START (enter) keypad with the last active digit. The next option, $\#L5-$, will appear in the display.

NOTE: To program $\#L5-$ (Real-Time Clock), refer to *Set Real-Time Clock rtC-*. To program other options, refer to the appropriate section.

Set Real-Time Clock *r t C -*

This option allows the owner to set the control's internal clock to the correct time and date.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *PROG* appears in the display. Press the START (enter) keypad and *RT5 1* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *r t C -* appears in the display. Press the START (enter) keypad and *r t C 1* will appear in the display.
4. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options. Refer to *Table 13*.

Programmable Options	
<i>r t C 1</i>	Programs Minutes (0-59)
<i>r t C 2</i>	Programs Hours (0-23)
<i>r t C 3</i>	Programs Day of Week (1-7)
<i>r t C 4</i>	Programs Date of Month (1-31)
<i>r t C 5</i>	Programs Month (1-12)
<i>r t C 6</i>	Programs Year (0-99)
<i>r t C 7</i>	Programs Daylight Saving (<i>on</i> */ <i>oFF</i>)
*Factory default setting	

Table 13

5. When the desired option appears in the display, press the START (enter) keypad. The current value will appear in the display.
6. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the minutes, hours, day of week, date of the month, month, year to the correct time or date.

NOTE: The hours will be displayed in military time. For day of week, Sunday is considered day one 00 1, Monday is day two 00 2 and so on. For year, the year 2000 is 00, the year 2001 is 0 1 and so on.

If programming Daylight Saving, *r t C 7, on* enables Daylight Saving Time and *oFF* disables Daylight Saving Time.

7. Press the START (enter) keypad when the correct time or date appears in the display. The next Set Real-Time Clock option will appear in the display.

NOTE: To program 5PA- (Special Vend A Data), press the PERM PRESS (<) keypad and refer to *Special Vend A Data SPA-*. To program other options, refer to the appropriate section.

Special Vend A Data *SPR-*

This option allows the owner to set the day or days of a special vend.

Special Vend A is used to change the standard vend prices for special occasions. The special vend can be programmed to start and end on a specific day or days of the week.

The owner may also turn the Special Vend A option on or off if desired.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (Λ) or the DELICATES (V) keypad until *Prog* appears in the display. Press the START (enter) keypad and *RL5 I* will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (V) keypad to scroll through the programmable options until *SPR-* appears in the display. Press the START (enter) keypad and *SAD 1* will appear in the display.
4. When *SAD 1* appears in the display, press the START (enter) keypad. A number will appear in the display that corresponds to the current Special Vend A Days Enable Programming Value.

5. Locate the desired number in the first column of *Table 14* on the following pages.
6. Press the HEAVY (Λ) or the DELICATES (V) keypad to increase or decrease the current number until correct.
7. Press the START (enter) keypad when the correct number appears in the display. The next Special Vend A option, *SAD2*, will appear in the display.

NOTE: To program *SAD2* (Special Vend A Start Hour), continue to the next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Read Special Vended A Days Chart

To determine the correct number required to program the Special Vend Days Enable, use the following table. The Special Vend Value column contains the number required in step 6. The other columns correspond to individual days.

Each column of days contains a unique combination of the words *on* and *off* that indicates if that column's day is turned on or off when the value is entered. Select the desired combination of days and enter the number found in the value column.

Special Vended A Days (<i>SAD 1</i>) Chart								
SPECIAL VEND VALUE	SAT	FRI	THUR	WED	TUE	MON	SUN	ON/OFF
0*	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
3	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON
5	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON
7	OFF	OFF	OFF	OFF	OFF	ON	ON	ON
9	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON
11	OFF	OFF	OFF	OFF	ON	OFF	ON	ON
13	OFF	OFF	OFF	OFF	ON	ON	OFF	ON
15	OFF	OFF	OFF	OFF	ON	ON	ON	ON
17	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON
19	OFF	OFF	OFF	ON	OFF	OFF	ON	ON
21	OFF	OFF	OFF	ON	OFF	ON	OFF	ON
23	OFF	OFF	OFF	ON	OFF	ON	ON	ON
25	OFF	OFF	OFF	ON	ON	OFF	OFF	ON
27	OFF	OFF	OFF	ON	ON	OFF	ON	ON
29	OFF	OFF	OFF	ON	ON	ON	OFF	ON

Table 14 *continues...*

Special Vended A Days (SAD 1) Chart								
SPECIAL VEND VALUE	SAT	FRI	THUR	WED	TUE	MON	SUN	ON/OFF
31	OFF	OFF	OFF	ON	ON	ON	ON	ON
33	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON
35	OFF	OFF	ON	OFF	OFF	OFF	ON	ON
37	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
39	OFF	OFF	ON	OFF	OFF	ON	ON	ON
41	OFF	OFF	ON	OFF	ON	OFF	OFF	ON
43	OFF	OFF	ON	OFF	ON	OFF	ON	ON
45	OFF	OFF	ON	OFF	ON	ON	OFF	ON
47	OFF	OFF	ON	OFF	ON	ON	ON	ON
49	OFF	OFF	ON	ON	OFF	OFF	OFF	ON
51	OFF	OFF	ON	ON	OFF	OFF	ON	ON
53	OFF	OFF	ON	ON	OFF	ON	OFF	ON
55	OFF	OFF	ON	ON	OFF	ON	ON	ON
57	OFF	OFF	ON	ON	ON	OFF	OFF	ON
59	OFF	OFF	ON	ON	ON	OFF	ON	ON
61	OFF	OFF	ON	ON	ON	ON	OFF	ON
63	OFF	OFF	ON	ON	ON	ON	ON	ON
65	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON
67	OFF	ON	OFF	OFF	OFF	OFF	ON	ON
69	OFF	ON	OFF	OFF	OFF	ON	OFF	ON
71	OFF	ON	OFF	OFF	OFF	ON	ON	ON
73	OFF	ON	OFF	OFF	ON	OFF	OFF	ON
75	OFF	ON	OFF	OFF	ON	OFF	ON	ON
77	OFF	ON	OFF	OFF	ON	ON	OFF	ON
79	OFF	ON	OFF	OFF	ON	ON	ON	ON
81	OFF	ON	OFF	ON	OFF	OFF	OFF	ON
83	OFF	ON	OFF	ON	OFF	OFF	ON	ON
85	OFF	ON	OFF	ON	OFF	ON	OFF	ON
87	OFF	ON	OFF	ON	OFF	ON	ON	ON
89	OFF	ON	OFF	ON	ON	OFF	OFF	ON

Table 14 continues...

Special Vended A Days (SAD 1) Chart								
SPECIAL VEND VALUE	SAT	FRI	THUR	WED	TUE	MON	SUN	ON/OFF
91	OFF	ON	OFF	ON	ON	OFF	ON	ON
93	OFF	ON	OFF	ON	ON	ON	OFF	ON
95	OFF	ON	OFF	ON	ON	ON	ON	ON
97	OFF	ON	ON	OFF	OFF	OFF	OFF	ON
99	OFF	ON	ON	OFF	OFF	OFF	ON	ON
101	OFF	ON	ON	OFF	OFF	ON	OFF	ON
103	OFF	ON	ON	OFF	OFF	ON	ON	ON
105	OFF	ON	ON	OFF	ON	OFF	OFF	ON
107	OFF	ON	ON	OFF	ON	OFF	ON	ON
109	OFF	ON	ON	OFF	ON	ON	OFF	ON
111	OFF	ON	ON	OFF	ON	ON	ON	ON
113	OFF	ON	ON	ON	OFF	OFF	OFF	ON
115	OFF	ON	ON	ON	OFF	OFF	ON	ON
117	OFF	ON	ON	ON	OFF	ON	OFF	ON
119	OFF	ON	ON	ON	OFF	ON	ON	ON
121	OFF	ON	ON	ON	ON	OFF	OFF	ON
123	OFF	ON	ON	ON	ON	OFF	ON	ON
125	OFF	ON	ON	ON	ON	ON	OFF	ON
127	OFF	ON	ON	ON	ON	ON	ON	ON
129	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON
131	ON	OFF	OFF	OFF	OFF	OFF	ON	ON
133	ON	OFF	OFF	OFF	OFF	ON	OFF	ON
135	ON	OFF	OFF	OFF	OFF	ON	ON	ON
137	ON	OFF	OFF	OFF	ON	OFF	OFF	ON
139	ON	OFF	OFF	OFF	ON	OFF	ON	ON
141	ON	OFF	OFF	OFF	ON	ON	OFF	ON
143	ON	OFF	OFF	OFF	ON	ON	ON	ON
145	ON	OFF	OFF	ON	OFF	OFF	OFF	ON
147	ON	OFF	OFF	ON	OFF	OFF	ON	ON
149	ON	OFF	OFF	ON	OFF	ON	OFF	ON

Table 14 continues...

Special Vended A Days (SAD 1) Chart								
SPECIAL VEND VALUE	SAT	FRI	THUR	WED	TUE	MON	SUN	ON/OFF
151	ON	OFF	OFF	ON	OFF	ON	ON	ON
153	ON	OFF	OFF	ON	ON	OFF	OFF	ON
155	ON	OFF	OFF	ON	ON	OFF	ON	ON
157	ON	OFF	OFF	ON	ON	ON	OFF	ON
159	ON	OFF	OFF	ON	ON	ON	ON	ON
161	ON	OFF	ON	OFF	OFF	OFF	OFF	ON
163	ON	OFF	ON	OFF	OFF	OFF	ON	ON
165	ON	OFF	ON	OFF	OFF	ON	OFF	ON
167	ON	OFF	ON	OFF	OFF	ON	ON	ON
169	ON	OFF	ON	OFF	ON	OFF	OFF	ON
171	ON	OFF	ON	OFF	ON	OFF	ON	ON
173	ON	OFF	ON	OFF	ON	ON	OFF	ON
175	ON	OFF	ON	OFF	ON	ON	ON	ON
177	ON	OFF	ON	ON	OFF	OFF	OFF	ON
179	ON	OFF	ON	ON	OFF	OFF	ON	ON
181	ON	OFF	ON	ON	OFF	ON	OFF	ON
183	ON	OFF	ON	ON	OFF	ON	ON	ON
185	ON	OFF	ON	ON	ON	OFF	OFF	ON
187	ON	OFF	ON	ON	ON	OFF	ON	ON
189	ON	OFF	ON	ON	ON	ON	OFF	ON
191	ON	OFF	ON	ON	ON	ON	ON	ON
193	ON	ON	OFF	OFF	OFF	OFF	OFF	ON
195	ON	ON	OFF	OFF	OFF	OFF	ON	ON
197	ON	ON	OFF	OFF	OFF	ON	OFF	ON
199	ON	ON	OFF	OFF	OFF	ON	ON	ON
201	ON	ON	OFF	OFF	ON	OFF	OFF	ON
203	ON	ON	OFF	OFF	ON	OFF	ON	ON
205	ON	ON	OFF	OFF	ON	ON	OFF	ON
207	ON	ON	OFF	OFF	ON	ON	ON	ON
209	ON	ON	OFF	ON	OFF	OFF	OFF	ON

Table 14 continues...

Special Vended A Days (SAD 1) Chart								
SPECIAL VEND VALUE	SAT	FRI	THUR	WED	TUE	MON	SUN	ON/OFF
211	ON	ON	OFF	ON	OFF	OFF	ON	ON
213	ON	ON	OFF	ON	OFF	ON	OFF	ON
215	ON	ON	OFF	ON	OFF	ON	ON	ON
217	ON	ON	OFF	ON	ON	OFF	OFF	ON
219	ON	ON	OFF	ON	ON	OFF	ON	ON
221	ON	ON	OFF	ON	ON	ON	OFF	ON
223	ON	ON	OFF	ON	ON	ON	ON	ON
225	ON	ON	ON	OFF	OFF	OFF	OFF	ON
227	ON	ON	ON	OFF	OFF	OFF	ON	ON
229	ON	ON	ON	OFF	OFF	ON	OFF	ON
231	ON	ON	ON	OFF	OFF	ON	ON	ON
233	ON	ON	ON	OFF	ON	OFF	OFF	ON
235	ON	ON	ON	OFF	ON	OFF	ON	ON
237	ON	ON	ON	OFF	ON	ON	OFF	ON
239	ON	ON	ON	OFF	ON	ON	ON	ON
241	ON	ON	ON	ON	OFF	OFF	OFF	ON
243	ON	ON	ON	ON	OFF	OFF	ON	ON
245	ON	ON	ON	ON	OFF	ON	OFF	ON
247	ON	ON	ON	ON	OFF	ON	ON	ON
249	ON	ON	ON	ON	ON	OFF	OFF	ON
251	ON	ON	ON	ON	ON	OFF	ON	ON
253	ON	ON	ON	ON	ON	ON	OFF	ON
255	ON	ON	ON	ON	ON	ON	ON	ON
*Factory Default Setting								

Table 14

How to Program Special Vend A Start Hour SAD2

This option allows the owner to set the hour that Special Vend A will begin.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Special Vend A options until **SAD2** appears in the display.

2. When **SAD2** appears in the display, press the START (enter) keypad. The current start time (in military time) will appear in the display.

NOTE: The hours will be displayed in military time (0-23). The default value is 0.

3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the start hour to the desired hour.

4. Press the START (enter) keypad when the correct hour appears in the display. The next Special Vend A option, **5A03**, will appear in the display.

NOTE: To program 5A03 (Special Vend A Start Minute), continue to next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Special Vend A Start Minute 5A03

This option allows the owner to set the minute that Special Vend A will begin.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Special Vend A options until **5A03** appears in the display.
2. When **5A03** appears in the display, press the START (enter) keypad. The current start minute will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the start minute to the desired minute.
4. Press the START (enter) keypad when the correct minute appears in the display. The next Special Vend A option, **5A04**, will appear in the display.

NOTE: To program 5A04 (Special Vend A Length in Hours), continue to next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Special Vend A Length in Hours 5A04

This option allows the owner to set the length in hours for Special Vend A.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Special Vend A options until **5A04** appears in the display.
2. When **5A04** appears in the display, press the START (enter) keypad. The current length in hours will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the current length of hours to the desired number of hours.
4. Press the START (enter) keypad when the correct hour appears in the display. The next Special Vend A option, **5A05**, will appear in the display.

NOTE: To program 5A05 (Special Vend A Start Month), continue to next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Special Vend A Start Month 5A05

This option allows the owner to set the month that Special Vend A will begin.

NOTE: If Special Vend A Start Month, Start Date, End Month, or End Date are programmed to zero (default is zero), the Special Vend A will be active every week on the days programmed in Table 14 .

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Special Vend A options until **5A05** appears in the display.
2. When **5A05** appears in the display, press the START (enter) keypad. The current start month will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the start month to the desired month.

If **0** is selected and Special Vend A is on, Special Vend A will occur at the time and days of week selected, regardless of the month.

4. Press the START (enter) keypad when the correct month appears in the display. The next Special Vend A option, **5A06**, will appear in the display.

NOTE: To program 5A06 (Special Vend A Start Date), continue to next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Special Vend A Start Date 5A06

This option allows the owner to set the date that Special Vend A will begin.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Special Vend A options until **5A06** appears in the display.
2. When **5A06** appears in the display, press the START (enter) keypad. The current start date will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the start date to the desired date.

If **0** is selected and Special Vend A is on, Special Vend A will occur at the time and days of week selected, regardless of the date.

4. Press the START (enter) keypad when the correct date appears in the display. The next Special Vend A option, **5A07**, will appear in the display.

NOTE: To program 5A07 (Special Vend A Start Year), continue to next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Special Vend A Start Year 5A07

This option allows the owner to set the year that Special Vend A will begin.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Special Vend A options until **5A07** appears in the display.
2. When **5A07** appears in the display, press the START (enter) keypad. The current start year will appear in the display.

3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the start year to the desired year.

If 0 is selected and Special Vend A is on, Special Vend A will occur at the time or days of week selected, regardless of the year. 01 is year 2001, 02 is year 2002, and so on.

4. Press the START (enter) keypad when the correct year appears in the display. The next Special Vend A option, SA0B, will appear in the display.

NOTE: To program SA0B (Special Vend A End Month), continue to next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Special Vend A End Month SA0B

This option allows the owner to set the month that Special Vend A will end.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Special Vend A options until SA0B appears in the display.
2. When SA0B appears in the display, press the START (enter) keypad. The current end month will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the end month to the desired month.

If 0 is selected and Special Vend A is on, Special Vend A will occur at the time and day of week selected, regardless of the month.

4. Press the START (enter) keypad when the correct month appears in the display. The next Special Vend A option, SA09, will appear in the display.

NOTE: To program SA09 (Special Vend A End Date), continue to next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Special Vend A End Date SA09

This option allows the owner to set the date that Special Vend A will end.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Special Vend A options until SA09 appears in the display.
2. When SA09 appears in the display, press the START (enter) keypad. The current end date will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the end date to the desired date.

If 0 is selected and Special Vend A is on, Special Vend A will occur at the time or days of week selected, regardless of the date.

4. Press the START (enter) keypad when the correct date appears in the display. The next Special Vend A option, SA10, will appear in the display.

NOTE: To program SA10 (Special Vend A End Year), continue to next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Special Vend A End Year SA10

This option allows the owner to set the year that Special Vend A will end.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Special Vend A options until SA10 appears in the display.
2. When SA10 appears in the display, press the START (enter) keypad. The current end year will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the end year to the desired year.

If 0 is selected and Special Vend A is on, Special Vend A will occur at the time or days of week selected, regardless of the year. 01 is year 2001, 02 is year 2002 and so on.

4. Press the START (enter) keypad when the correct year appears in the display. The next Special Vend A option, SA11, will appear in the display.

NOTE: To program SA11 (Special Vend A Normal Hot Vend Price), continue to next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Special Vend A LIGHT Vend Price SA11

This option allows the owner to set the vend price for a Normal Hot wash in Special Vend A. The corresponding LEDs will be lit while programming.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Special Vend A options until SA11 appears in the display.
2. When SA11 appears in the display, press the START (enter) keypad. There are five (5) digits in the Special Vend A LIGHT Vend Price. The fifth (5) digit will appear in the display and will flash one (1) second on and one (1) second off. Refer to Figure 21.

NOTE: If the vend price is \$100.00 or more, the fifth digit is 1-5. If the vend price is \$99.99 or less, the fifth (5) digit is 0.



Figure 21

3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the value of the fifth (5) digit.

NOTE: The vend price can be set from 0 to 65,535.

4. Press the START (enter) keypad to enter the fifth (5) digit and display remaining four (4) digits. The active digit will flash one (1) second on and one (1) second off.

NOTE: To go back to the current programmable Special Vend A option without changing the value of the active digit, press the PERM PRESS (<) keypad.

5. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
6. Press the START (enter) keypad with the last active digit. The next Special Vend A option, *5A 12*, will appear in the display.

NOTE: To program 5A 12 (Special Vend A MEDIUM Vend Price), continue to next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Special Vend A MEDIUM Vend Price 5A 12

This option allows the owner to set the vend price for a Normal Warm wash in Special Vend A. The corresponding LEDs will be lit while programming.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Special Vend A options until 5A 12 appears in the display.
2. When 5A 12 appears in the display, press the START (enter) keypad. There are five (5) digits in the Special Vend A MEDIUM Vend Price. The fifth (5) digit will appear in the display and will flash one (1) second on and one (1) second off. Refer to Figure 22 .

NOTE: If the vend price is \$100.00 or more, the fifth digit is 1-5. If the vend price is \$99.99 or less, the fifth digit is 0.



Figure 22

3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the value of the fifth (5) digit.
NOTE: The vend price can be set from 0 to 65,535.
4. Press the START (enter) keypad to enter the fifth (5) digit and display remaining four (4) digits. The active digit will flash one (1) second on and one (1) second off.
NOTE: To go back to the current programmable Special Vend A option without changing the value of the active digit, press the PERM PRESS (<) keypad.
5. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
6. Press the START (enter) keypad with the last active digit. The next Special Vend A option, 5A 13, will appear in the display.
NOTE: To program 5A 13 (Special Vend A HEAVY Vend Price), continue to next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Special Vend A HEAVY Vend Price 5A 13

This option allows the owner to set the vend price for a Normal Cold wash in Special Vend A. The corresponding LEDs will be lit while programming.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Special Vend A options until 5A 13 appears in the display.
2. When 5A 13 appears in the display, press the START (enter) keypad. There are five (5) digits in the Special Vend A HEAVY Vend Price. The fifth (5) digit will appear in the display and will flash one (1) second on and one (1) second off. Refer to Figure 23 .

NOTE: If the vend price is \$100.00 or more, the fifth (5) digit is 1-5. If the vend price is \$99.99 or less, the fifth digit is 0.



Figure 23

3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the value of the fifth (5) digit.
NOTE: The vend price can be set from 0 to 65,535.
4. Press the START (enter) keypad to enter the fifth (5) digit and display remaining four (4) digits. The active digit will flash one (1) second on and one (1) second off.
NOTE: To go back to the current programmable Special Vend A option without changing the value of the active digit, press the PERM PRESS (<) keypad.
5. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
6. Press the START (enter) keypad with the last active digit. The next Special Vend A option, 5A 14, will appear in the display.
NOTE: To program 5A 14 (Special Vend A NORMAL Vend Price), continue to next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Special Vend A NORMAL Vend Price 5A 14

This option allows the owner to set the vend price for a Perm Press Hot wash in Special Vend A. The corresponding LEDs will be lit while programming.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Special Vend A options until 5A 14 appears in the display.
2. When 5A 14 appears in the display, press the START (enter) keypad. There are five (5) digits in the Special Vend A NORMAL Vend Price. The fifth (5) digit will appear in the display and will flash one (1) second on and one (1) second off. Refer to Figure 24 .

NOTE: If the vend price is \$100.00 or more, the fifth (5) digit is 1-5. If the vend price is \$99.99 or less, the fifth digit is 0.



Figure 24

3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the value of the fifth (5) digit.

NOTE: The vend price can be set from 0 to 65,535.

4. Press the START (enter) keypad to enter the fifth (5) digit and display remaining four (4) digits. The active digit will flash one (1) second on and one (1) second off.

NOTE: To go back to the current programmable Special Vend A option without changing the value of the active digit, press the PERM PRESS (<) keypad.

5. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
6. Press the START (enter) keypad with the last active digit. The next Special Vend A option, *5A 15*, will appear in the display.

NOTE: To program 5A 15 (Special Vend A PERM PRESS Vend Price), continue to next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Special Vend A PERM PRESS Vend Price 5A 15

This option allows the owner to set the vend price for a Perm Press Warm wash in Special Vend A. The corresponding LEDs will be lit while programming.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Special Vend A options until *5A 15* appears in the display.
2. When *5A 15* appears in the display, press the START (enter) keypad. There are five (5) digits in the Special Vend A PERM PRESS Vend Price. The fifth (5) digit will appear in the display and will flash one (1) second on and one (1) second off. Refer to *Figure 25*.

NOTE: If the vend price is \$100.00 or more, the fifth (5) digit is 1-5. If the vend price is \$99.99 or less, the fifth digit is 0.



Figure 25

3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the value of the fifth (5) digit.

NOTE: The vend price can be set from 0 to 65,535.

4. Press the START (enter) keypad to enter the fifth (5) digit and display remaining four (4) digits. The active digit will flash one (1) second on and one (1) second off.

NOTE: To go back to the current programmable Special Vend A option without changing the value of the active digit, press the PERM PRESS (<) keypad.

5. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
6. Press the START (enter) keypad with the last active digit. The next Special Vend A option, *5A 15*, will appear in the display.

NOTE: To program 5A 15 (Special Vend A DELICATES Vend Price), continue to next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Special Vend A DELICATES Vend Price 5A 15

This option allows the owner to set the vend price for a Perm Press Cold wash in Special Vend A. The corresponding LEDs will be lit while programming.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Special Vend A options until *5A 15* appears in the display.
2. When *5A 15* appears in the display, press the START (enter) keypad. There are five (5) digits in the Special Vend A DELICATES Vend Price. The fifth (5) digit will appear in the display and will flash one (1) second on and one (1) second off. Refer to *Figure 26*.

NOTE: If the vend price is \$100.00 or more, the fifth (5) digit is 1-5. If the vend price is \$99.99 or less, the fifth digit is 0.

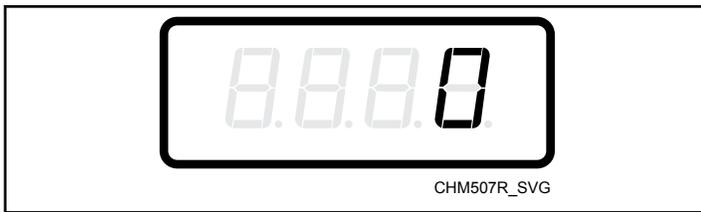


Figure 26

3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the value of the fifth (5) digit.

NOTE: The vend price can be set from 0 to 65,535.

4. Press the START (enter) keypad to enter the fifth (5) digit and display remaining four (4) digits. The active digit will flash one (1) second on and one (1) second off.

NOTE: To go back to the current programmable Special Vend A option without changing the value of the active digit, press the PERM PRESS (<) keypad.

5. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
6. Press the START (enter) keypad with the last active digit. The next Special Vend A option, *5A 17*, will appear in the display.

NOTE: To program 5A 17 (Special Vend A Delicates Hot Vend Price), continue to next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Special Vend A Delicates Hot Vend Price *5A 17*

This option allows the owner to set the vend price for a Delicates Hot wash in Special Vend A. The corresponding LEDs will be lit while programming.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Special Vend A options until *5A 17* appears in the display.
2. When *5A 17* appears in the display, press the START (enter) keypad. There are five (5) digits in the Special Vend A Delicates Hot Vend Price. The fifth digit will appear in the display and will flash one (1) second on and one (1) second off. Refer to *Figure 27*.

NOTE: If the vend price is \$100.00 or more, the fifth (5) digit is 1-5. If the vend price is \$99.99 or less, the fifth digit is 0.



Figure 27

3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the value of the fifth (5) digit.

NOTE: The vend price can be set from 0 to 65,535.

4. Press the START (enter) keypad to enter the fifth (5) digit and display remaining four (4) digits. The active digit will flash one (1) second on and one (1) second off.

NOTE: To go back to the current programmable Special Vend A option without changing the value of the active digit, press the PERM PRESS (<) keypad.

5. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
6. Press the START (enter) keypad with the last active digit. The next Special Vend A option, *5A 1B*, will appear in the display.

NOTE: To program 5A 1B (Special Vend A Delicates Warm Vend Price), continue to next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Special Vend A Delicates Warm Vend Price *5A 1B*

This option allows the owner to set the vend price for a Delicates Warm wash in Special Vend A. The corresponding LEDs will be lit while programming.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Special Vend A options until *5A 1B* appears in the display.
2. When *5A 1B* appears in the display, press the START (enter) keypad. There are five (5) digits in the Special Vend A Delicates Warm Vend Price. The fifth digit will appear in the display and will flash one (1) second on and one (1) second off. Refer to *Figure 28*.

NOTE: If the vend price is \$100.00 or more, the fifth (5) digit is 1-5. If the vend price is \$99.99 or less, the fifth digit is 0.



Figure 28



Figure 29

3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the value of the fifth digit.

NOTE: The vend price can be set from 0 to 65,535.

4. Press the START (enter) keypad to enter the fifth digit and display remaining four digits. The active digit will flash one (1) second on and one (1) second off.

NOTE: To go back to the current programmable Special Vend A option without changing the value of the active digit, press the PERM PRESS (<) keypad.

5. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
6. Press the START (enter) keypad with the last active digit. The next Special Vend A option, *5A 19*, will appear in the display.

NOTE: To program 5A 19 (Special Vend A Delicates Cold Vend Price), continue to next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the value of the fifth digit.

NOTE: The vend price can be set from 0 to 65,535.

4. Press the START (enter) keypad to enter the fifth digit and display remaining four digits. The active digit will flash one (1) second on and one (1) second off.

NOTE: To go back to the current programmable Special Vend A option without changing the value of the active digit, press the PERM PRESS (<) keypad.

5. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
6. Press the START (enter) keypad with the last active digit. The next Special Vend A option, *5A20*, will appear in the display.

NOTE: To program 5A20 (Special Vend A Wash Agitate Step Added Minutes), continue to next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Special Vend A Delicates Cold Vend Price *5A 19*

This option allows the owner to set the vend price for a Delicates Cold wash in Special Vend A. The corresponding LEDs will be lit while programming.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Special Vend A options until *5A 19* appears in the display.
2. When *5A 19* appears in the display, press the START (enter) keypad. There are five (5) digits in the Special Vend A Delicates Cold Vend Price. The fifth digit will appear in the display and will flash one (1) second on and one (1) second off. Refer to *Figure 29*.

NOTE: If the vend price is \$100.00 or more, the fifth (5) digit is 1-5. If the vend price is \$99.99 or less, the fifth digit is 0.

How to Program Special Vend A Wash Agitate Step Added Minutes *5A20*

This option allows the owner to add time to the wash agitate part of the cycle in Special Vend A.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Special Vend A options until *5A20* appears in the display.
2. When *5A20* appears in the display, press the START (enter) keypad.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the number of minutes displayed to the desired number of added minutes.

NOTE: The Special Vend A Added Wash Agitate Time can be set from zero 0 to 15 minutes.

4. Press the START (enter) keypad when the correct number of minutes appears in the display. The next Special Vend A option, *5A21*, will appear in the display.

NOTE: To program 5A21 (Special Vend A Wash Agitate Step Subtracted Minutes), continue to next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Special Vend A Wash Agitate Step Subtracted Minutes *5A2 1*

This option allows the owner to subtract time from the wash agitate part of the cycle in Special Vend A.

1. Press the HEAVY (Λ) or the DELICATES (V) keypad to scroll through the programmable Special Vend A options until *5A2 1* appears in the display.
2. When *5A2 1* appears in the display, press the START (enter) keypad.
3. Press the HEAVY (Λ) or the DELICATES (V) keypad to increase or decrease the number of minutes displayed to the desired number of subtracted minutes.

NOTE: The Special Vend A Subtracted Wash Agitate Time can be set from zero 0 to 15 minutes.

4. Press the START (enter) keypad when the correct number of minutes appears in the display. The next Special Vend A option, *5A0 1* or *5A22* (Design 2 and 3 models only), will appear in the display.

NOTE: Design 1 models: To program *5Pb* - (Special Vend B Enable/Disable), press the PERM PRESS (<) keypad and refer to *Special Vend B Days Enable/Disable SPb*-. To program other options refer to the appropriate section.

NOTE: Design 2 and 3 models: To program *5A22* (Special Vend A Time of Day Extract), continue to next Special Vend A option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Special Vend A Time of Day Extract *5A22* (Design 2 and 3 models only)

This option allows the owner to increase or decrease extract speeds during the extract part of the cycle in Special Vend A.

1. Press the HEAVY (Λ) or the DELICATES (V) keypad to scroll through the programmable Special Vend A options until *5A22* appears in the display.
2. When *5A22* appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current extract speed.
3. Press the HEAVY (Λ) or the DELICATES (V) keypad to increase or decrease the current number to the desired number selected from *Table 15*.

Extract Speed Value	Extract Speed Description
1	Very low speed (27)
2	Low speed (80)
3	Medium speed (100)

Table 15 *continues...*

Extract Speed Value	Extract Speed Description
4	High speed (125)
5	Very high speed (150)
6*	Ultra high speed (200)
*Factory default setting	

Table 15

4. Press the START (enter) keypad when the correct extract speed value appears in the display. The next Special Vend A option, *5A0 1*, will appear in the display.

NOTE: To program *5Pb* - (Special Vend B Enable/Disable), press the PERM PRESS (<) keypad and refer to *Special Vend B Days Enable/Disable SPb*-. To program other options, refer to the appropriate section.

Special Vend B Days Enable/Disable

5Pb -

This option allows the owner to enable or disable a second special vend in Manual Mode.

Special Vend B can be further programmed using an external device or network.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (Λ) or the DELICATES (v) keypad until **Prø9** appears in the display. Press the START (enter) keypad and **RL5 I** will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable options until **5Pb -** appears in the display.
4. When **5Pb -** appears in the display, press the START (enter) keypad. The current Special Vend B Enable/Disable status will appear in the display.

on = Option Enabled

off = Option Disabled (default setting)

5. Press the HEAVY (Λ) or the DELICATES (v) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, **5PC -**, will appear in the display.

NOTE: To program 5PC - (Special Vend C Days Enable/Disable), refer to *Special Vend C Days Enable/Disable SPC-*. To program other options, refer to the appropriate section.

Special Vend C Days Enable/Disable

SPC-

This option allows the owner to enable or disable a third special vend in Manual Mode.

Special Vend C can be further programmed using an external device or network.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (Λ) or the DELICATES (v) keypad until *Prog* appears in the display. Press the START (enter) keypad and *RLS I* will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable options until *SPC-* appears in the display.
4. When *SPC-* appears in the display, press the START (enter) keypad. The current Special Vend C Enable/Disable status will appear in the display.

on = Option Enabled

off = Option Disabled (default setting)

5. Press the HEAVY (Λ) or the DELICATES (v) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, *SPD-*, will appear in the display.

NOTE: To program *SPD-* (Special Vend D Days Enable/Disable), refer to *Special Vend D Days Enable/Disable SPD-*. To program other options, refer to the appropriate section.

Special Vend D Days Enable/Disable

SPD-

This option allows the owner to enable or disable a fourth special vend in Manual Mode.

Special Vend D can be further programmed using an external device or network.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (Λ) or the DELICATES (v) keypad until *Prog* appears in the display. Press the START (enter) keypad and *RLS I* will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable options until *SPD-* appears in the display.
4. When *SPD-* appears in the display, press the START (enter) keypad. The current Special Vend D Enable/Disable status will appear in the display.

on = Option Enabled

off = Option Disabled (default setting)

5. Press the HEAVY (Λ) or the DELICATES (v) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, *CnP-*, will appear in the display.

NOTE: To program *CnP-* (Cycle Modifier Programming), refer to *Cycle Modifier Programming CnP-*. To program other options, refer to the appropriate section.

Cycle Modifier Programming [CP-

This option allows the owner to program the machine to offer an added prewash, extra wash time, an added extra rinse, a warm rinse, or any combination of the above to the customers for an added vend price. This option is selected when MEDIUM or HEAVY is selected using the Select Soil keypads.

How to Program Cycle Modifier Medium Vend Price Adder [CP1

This price setting will be added to the current vend price. For example, if the vend price is \$1.50 and Cycle Modifier Medium Vend Price Adder is set to .25, the total vend price when the Medium Soil is chosen will be \$1.75.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (Λ) or the DELICATES (V) keypad until **Prng** appears in the display. Press the START (enter) keypad and **1.51** will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (V) keypad to scroll through the programmable options until **[CP-** appears in the display. Press the START (enter) keypad and **[CP1** will appear in the display.
4. When **[CP1** appears in the display, press the START (enter) keypad. There are five (5) digits in the Cycle Modifier Medium Vend Price Adder. The fifth (5) digit will appear in the display and will flash for one (1) second on, one (1) second off. Refer to *Figure 30*.

NOTE: If the vend price is \$100.00 or more, the fifth (5) digit is 1-5. If the vend price is \$99.99 or less, the fifth digit is 0.



Figure 30

5. Press the HEAVY (Λ) or the DELICATES (V) keypad to increase or decrease the value of the fifth (5) digit.
NOTE: The vend price adder can be set from 1 to 65,535. The default vend price adder is 25.
6. Press the START (enter) keypad to enter the fifth (5) digit and display remaining four (4) digits. The active digit will flash one (1) second on and one (1) second off.
NOTE: To go back to the current programmable Special Vend A option without changing the value of the active digit, press the PERM PRESS (<) keypad.
7. Press the HEAVY (Λ) or the DELICATES (V) keypad to increase or decrease the value of the active digit and the START

(enter) keypad to enter the value of the digit and advance to the next digit.

8. Press the START (enter) keypad with the last active digit. The next Cycle Modifier option, **[CP2**, will appear in the display.

NOTE: To program [CP2 (Cycle Modifier Heavy Vend Price Adder), continue to next Cycle Modifier option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Cycle Modifier Heavy Vend Price Adder [CP2

This price setting will be added to the current vend price. For example, if the vend price is \$1.00 and Cycle Modifier Heavy Vend Price Adder is set to .25, the total vend price when the Heavy is chosen will be \$1.25.

1. Press the HEAVY (Λ) or the DELICATES (V) keypad to scroll through the programmable Cycle Modifier options until **[CP2** appears in the display.
2. When **[CP2** appears in the display, press the START (enter) keypad. There are five (5) digits in the Cycle Modifier Heavy Vend Price Adder. The fifth (5) digit will appear in the display and will flash for one (1) second on, one (1) second off. Refer to *Figure 31*.

NOTE: If the vend price is \$100.00 or more, the fifth (5) digit is 1-5. If the vend price is \$99.99 or less, the fifth digit is 0.



Figure 31

3. Press the HEAVY (Λ) or the DELICATES (V) keypad to increase or decrease the value of the fifth (5) digit.
NOTE: The vend price adder can be set from 1 to 65,535. The default vend price adder is 50.
4. Press the START (enter) keypad to enter the fifth (5) digit and display remaining four (4) digits. The active digit will flash one (1) second on and one (1) second off.
NOTE: To go back to the current programmable Special Vend A option without changing the value of the active digit, press the PERM PRESS (<) keypad.
5. Press the HEAVY (Λ) or the DELICATES (V) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.
6. Press the START (enter) keypad with the last active digit. The next Cycle Modifier option, **[CP3**, will appear in the display.

NOTE: To program $\llbracket nP3$ (Cycle Modifier Medium Options), continue to next Cycle Modifier option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Cycle Modifier Medium Options $\llbracket nP3$

This option allows the owner to enable or disable the Cycle Modifier Medium Option.

1. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable Cycle Modifier options until $\llbracket nP3$ appears in the display.
2. When $\llbracket nP3$ appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current Cycle Modifier Medium Option value. Refer to *Table 16*.
3. Locate the desired number in the first column of *Table 16*.
4. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the current number until correct.

5. Press the START (enter) keypad when the correct number appears in the display. The next Cycle Modifier option, $\llbracket nP4$, will appear in the display.

NOTE: To program $\llbracket nP4$ (Cycle Modifier Heavy Options), continue to next Cycle Modifier option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Read Cycle Modifier Medium Options Chart

To determine the correct number required to program the Cycle Modifier Option, use the following chart. The Cycle Modifier Value column contains the number required in step 3. The other columns correspond to individual options.

Each column of options contains a unique combination of the words **ON** and **OFF** that indicates if that column's option is turned on or off when the Cycle Modifier Value is entered. Select the desired combination of options and enter the number found in the Cycle Modifier Value column.

Cycle Modifier Medium Options $\llbracket nP3$ Chart				
Cycle Modifier Value	Prewash	Extra Rinse	Extra Wash Time	Warm Rinse
0	OFF	OFF	OFF	OFF
1*	ON	OFF	OFF	OFF
2	OFF	ON	OFF	OFF
3**	ON	ON	OFF	OFF
4	OFF	OFF	ON	OFF
5	ON	OFF	ON	OFF
6	OFF	ON	ON	OFF
7	ON	ON	ON	OFF
8	OFF	OFF	OFF	ON
9	ON	OFF	OFF	ON
10	OFF	ON	OFF	ON
11	ON	ON	OFF	ON
12	OFF	OFF	ON	ON
13	ON	OFF	ON	ON
14	OFF	ON	ON	ON
15	ON	ON	ON	ON

Table 16 *continues...*

Cycle Modifier Medium Options [CP3] Chart				
Cycle Modifier Value	Prewash	Extra Rinse	Extra Wash Time	Warm Rinse
*Factory Default Setting (Cycle Modifier Medium Option)				
**Factory Default Setting (Cycle Modifier Heavy Option)				

Table 16

How to Program Cycle Modifier Heavy Options [CP4]

This option allows the owner to enable or disable the Cycle Modifier Heavy Option.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Cycle Modifier options until [CP4] appears in the display.
2. When [CP4] appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current Cycle Modifier Heavy Options value. Refer to *Table 16*.
3. Locate the desired number in the first column of *Table 16*.
4. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the current number until correct.

NOTE: To go back to the current programmable option without changing the value of the active digit, press the PERM PRESS (<) keypad.

5. Press the START (enter) keypad when the correct number appears in the display. The next Cycle Modifier option, [CP5], will appear in the display.

NOTE: To program [CP5] (Cycle Modifier Wash Segment Added Agitate Time [Design 1 models] or Cycle Modifier Medium Wash Segment Added Agitate Time [Design 2 and 3 models]), continue to next Cycle Modifier option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Cycle Modifier Wash Segment Added Agitate Time (Design 1 Models) or Cycle Modifier Medium Wash Segment Added Agitate Time (Design 2 and 3 Models) [CP5]

This option allows the owner to set the amount of additional wash time for the Medium and Heavy Cycle Modifier Options (Design 1 models) or only the Medium Cycle Modifier Options (Design 2 and 3 models). The Extra Wash option needs to be turned on (refer to Cycle Modifier Medium and Heavy options) for the Cycle Modifier Wash Segment Added Agitate Time to take effect.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Cycle Modifier options until [CP5] appears in the display.
2. When [CP5] appears in the display, press the START (enter) keypad. The current number of minutes set for the Cycle Modifier Wash Segment Added Agitate Time will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the current number of minutes shown in the display to the desired number of minutes.

NOTE: The Cycle Modifier Wash Segment Added Agitate Time can be set from zero (0) to 15 minutes. The default added agitate time is 2 minutes.

4. Press the START (enter) keypad when the correct number of minutes appears in the display. The next Cycle Modifier option, [CP6], will appear in the display.

NOTE: To program [CP6] (Cycle Modifier Default Soil Level), continue to next Cycle Modifier option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Cycle Modifier Default Soil Level Options [CP6]

This option allows the owner to program the Cycle Modifier Default Soil Level Option.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Cycle Modifier options until [CP6] appears in the display.
2. When [CP6] appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current Cycle Modifier Default Soil Level Options value. Refer to *Table 17*.
3. Locate the desired number in the first column of *Table 17*.

Cycle Modifier Value	Soil Level
0*	Light
1	Medium

Table 17 continues...

Cycle Modifier Value	Soil Level
2	Heavy
*Factory default setting	

Table 17

4. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the current number until correct.

NOTE: To go back to the current programmable option without changing the value of the active digit, press the PERM PRESS (<) keypad.

5. Press the START (enter) keypad when the correct number appears in the display. The next Cycle Modifier option, $\text{CnP } 1$ (Design 1 models), or $\text{CnP } 7$ (Design 2 and 3 models) will appear in the display.

NOTE: For Design 1 models, to program *droP* (Drop Off Mode [on/off]), press the PERM PRESS (<) keypad then the HEAVY (Λ) keypad and refer to *Drop Off Mode (Enable/Disable) droP*. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

NOTE: For Design 2 and 3 models, to program $\text{CnP } 7$ (Cycle Modifier Heavy Wash Segment Added Agitate Time), continue to next Cycle Modifier option. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

How to Program Cycle Modifier Heavy Wash Segment Added Agitate Time $\text{CnP } 7$ (Design 2 and 3 Models Only)

This option allows the owner to set the amount of additional wash time for the Heavy Cycle Modifier Options. The Extra Wash option needs to be turned on (refer to Cycle Modifier Heavy options) for the Cycle Modifier Heavy Wash Segment Added Agitate Time to take effect.

1. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable Cycle Modifier options until $\text{CnP } 7$ appears in the display.
2. When $\text{CnP } 7$ appears in the display, press the START (enter) keypad. The current number of minutes set for the Cycle Modifier Heavy Wash Segment Added Agitate Time will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the current number of minutes shown in the display to the desired number of minutes.

NOTE: The Cycle Modifier Heavy Wash Segment Added Agitate Time can be set from zero (0) to 15 minutes. The default added agitate time is 2 minutes.

4. Press the START (enter) keypad when the correct number of minutes appears in the display. The next Cycle Modifier option, $\text{CnP } 1$, will appear in the display.

NOTE: To program *droP* Drop Off Mode (Enable/Disable), press the PERM PRESS (<) keypad then the HEAVY (Λ) keypad and refer to *Drop Off Mode (Enable/Disable) droP*. To program other options, press the PERM PRESS (<) keypad and refer to the appropriate section.

Drop Off Mode (Enable/Disable) *dr o P*

This option allows the owner to limit machine use to an attendant without requiring vend.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Pr o S* appears in the display. Press the START (enter) keypad and *Rt S I* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *dr o P* appears in the display.
4. When *dr o P* appears in the display, press the START (enter) keypad. The current Drop Off Mode (Enable/Disable) Status will appear in the display.

o n = Option Enabled

o F F = Option Disabled (default setting)

When the Drop Off Mode is enabled, starting the machine requires the correct sequence of four keypad presses as programmed with a PDA.

NOTE: Manual Mode or Production Test Cycle cannot be accessed when Drop Off Mode is enabled, to disable Drop Off Mode use an external device or enter the programmed keypress code. The default code is a sequence of five keypad presses: (1) LIGHT, (2) MEDIUM, (3) HEAVY, (4) NORMAL and (5) START.

5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, *L P S A*, will appear in the display.

NOTE: To program *L P S A* (Low Power/Auto Shutdown A Days Enable), refer to *Low Power/Auto Shutdown A Days Enable LPSA*. To program other options, refer to the appropriate section.

4. When *L P S A* appears in the display, press the START (enter) keypad. The current Low Power/Auto Shutdown A Days Enable status will appear in the display.

o n = Option Enabled

o F F = Option Disabled (Default Setting)

5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to change the current status.
6. Press the START (enter) keypad when the correct status appears in the display. The next option, *L P S b*, will appear in the display.

NOTE: To program *L P S b* (Low Power/Auto Shutdown B Days Enable), refer to *Low Power/Auto Shutdown B Days Enable LPSb*. To program other options, refer to the appropriate section.

Low Power/Auto Shutdown A Days Enable *L P S A*

This option allows the owner to set Low Power/Auto Shutdown on certain day(s) of the week. Low Power or Auto Shutdown duration are programmed using an external device or network.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Pr o S* appears in the display. Press the START (enter) keypad and *Rt S I* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *L P S A* appears in the display.

Low Power/Auto Shutdown B Days Enable LP5b

This option allows the owner to set Low Power/Auto Shutdown on certain day(s) of the week. Low Power or Auto Shutdown duration are programmed using an external device or network.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (Λ) or the DELICATES (v) keypad until **PrOG** appears in the display. Press the START (enter) keypad and **RLS I** will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES keypad to scroll through the programmable options until **LP5b** appears in the display.
4. When **LP5b** appears in the display, press the START (enter) keypad. The current Low Power/Auto Shutdown B Days Enable status will appear in the display.

o**n** = Option Enabled

o**FF** = Option Disabled (default setting)

5. Press the HEAVY (Λ) or the DELICATES (v) keypad to change the current status.
6. Press the START (enter) keypad when the correct status appears in the display. The next option, **LP5C** will appear in the display.

NOTE: To program LP5C (Low Power/Auto Shutdown C Days Enable), refer to *Low Power/Auto Shutdown C Days Enable LP5C*. To program other options, refer to the appropriate section.

Low Power/Auto Shutdown C Days Enable LP5C

This option allows the owner to set Low Power/Auto Shutdown on certain day(s) of the week. Low Power or Auto Shutdown duration are programmed using an external device or network.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (Λ) or the DELICATES (v) keypad until **PrOG** appears in the display. Press the START (enter) keypad and **RLS I** will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable options until **LP5C** appears in the display.
4. When **LP5C** appears in the display, press the START (enter) keypad. The current Low Power/Auto Shutdown C Days Enable status will appear in the display.

o**n** = Option Enabled

o**FF** = Option Disabled (default setting)

5. Press the HEAVY (Λ) or the DELICATES (v) keypad to change the current status.

6. Press the START (enter) keypad when the correct status appears in the display. The next option, **LP5d**, will appear in the display.

NOTE: To program LP5d (Low Power/Auto Shutdown D Days Enable), refer to *Low Power/Auto Shutdown D Days Enable LP5d*. To program other options, refer to the appropriate section.

Low Power/Auto Shutdown D Days Enable *LP5d*

This option allows the owner to set Low Power/Auto Shutdown on certain day(s) of the week. Low Power or Auto Shutdown duration are programmed using an external device or network.

- Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
- Press the HEAVY (Λ) or the DELICATES (v) keypad until *Pr09* appears in the display. Press the START (enter) keypad and *RL51* will appear in the display.
- Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable options until *LP5d* appears in the display.
- When *LP5d* appears in the display, press the START (enter) keypad. The current Low Power/Auto Shutdown D Days Enable status will appear in the display.

on = Option Enabled

oFF = Option Disabled (default setting)

- Press the HEAVY (Λ) or the DELICATES (v) keypad to change the current status.
- Press the START (enter) keypad when the correct status appears in the display. The next option, *PFr*, will appear in the display.

NOTE: To program *PFr* (Power Fail Reset), refer to *Power Fail Reset PFr*. To program other options, refer to the appropriate section.

Power Fail Reset *PFr*

This option allows the owner to set the amount of time the control will store active cycle information in the event of a power failure. The default setting for Power Fail Reset is *oFF*. If Power Fail Reset is turned *oFF*, the cycle will be saved.

- Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
- Press the HEAVY (Λ) or the DELICATES (v) keypad until *Pr09* appears in the display. Press the START (enter) keypad and *RL51* will appear in the display.
- Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable options until *PFr* appears in the display.
- When *PFr* appears in the display, press the START (enter) keypad. *oFF* or a number will appear in the display. This number corresponds to the current Power Fail Reset setting.
- Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the current number to the desired number selected from *Table 18*.
- Press the START (enter) keypad when the correct number appears in the display. The next option, *dREn*, will appear in the display.

NOTE: To program *dREn* (Manual Diagnostics [Enable/Disable]), refer to *Manual Diagnostics (Enable/Disable) dAEn*. To program other options, refer to the appropriate section.

How to Read Power Fail Reset Chart

Use this table to set the amount of time for Power Fail Reset.

oFF turns the option OFF. The current cycle status will be saved. When power is restored, the cycle will begin where it was interrupted.

If *133* is entered, the current cycle will be saved for up to five minutes. If power is not restored within five minutes, the control will erase the cycle status. The minimum power failure time is five minutes. The maximum power fail reset time is 127 minutes.

Power Fail Reset (<i>PFr</i>) Chart	
Display to Enter in Step 6	Power Fail Reset Time
<i>oFF</i> *	Turned OFF. Cycle will be saved.
<i>133</i>	5 minutes without power before cycle is lost
... add one minute for every number up to	
<i>255</i>	127 minutes without power before cycle is lost
*Factory Default Setting	

Table 18

Manual Diagnostics (Enable/Disable)

dREn

This option allows the owner to enable or disable the manual diagnostics option. Refer to *Testing Machine and Electronic Control Functions* section for more information.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (Λ) or the DELICATES (v) keypad until **PrOG** appears in the display. Press the START (enter) keypad and **RESt** will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable options until **dREn** appears in the display.
4. When **dREn** appears in the display, press the START (enter) keypad. The current Manual Diagnostics status will appear in the display.

oN = Option Enabled (default setting)

oFF = Option Disabled

5. Press the HEAVY (Λ) or the DELICATES (v) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, **FLo**, will appear in the display.

NOTE: To program FLo (Low Water Level), refer to Low Water Level FLo. To program other options, refer to the appropriate section.

Low Water Level FLo

This option allows the owner to program the low water level during fill and agitate of all cycles.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (Λ) or the DELICATES (v) keypad until **PrOG** appears in the display. Press the START (enter) keypad and **RESt** will appear in the display.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the programmable options until **FLo** appears in the display.
4. When **FLo** appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current low water level during agitate and fill of all cycles.
5. Press the HEAVY (Λ) or the DELICATES (v) keypad to increase or decrease the current water level to the desired water level.

NOTE: The Low Water Level value can be set from 1 to 10. The default Low Water Level value is 3.

6. Press the START (enter) keypad when the correct number appears in the display. The next option, **FnEd**, will appear in the display.

NOTE: To program FnEd (Medium Water Level), refer to Medium Water Level FnEd. To program other options, refer to the appropriate section.

Medium Water Level *FnEd*

This option allows the owner to program the medium water level during fill and agitate of all cycles.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Prog* appears in the display. Press the START (enter) keypad and *Alt 1* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *FnEd* appears in the display.
4. When *FnEd* appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current medium water level during agitate and fill of all cycles.
5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the current water level to the desired water level.

NOTE: The Medium Water Level value can be set from 11 to 20. The default Medium Water Level is 15.

6. Press the START (enter) keypad when the correct number appears in the display. The next option, *FHI*, will appear in the display.

NOTE: To program *FHI* (High Water Level), refer to *High Water Level FHI*. To program other options, refer to the appropriate section.

High Water Level *FHI*

This option allows the owner to program the high water level during fill and agitate of all cycles.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Prog* appears in the display. Press the START (enter) keypad and *Alt 1* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *FHI* appears in the display.
4. When *FHI* appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current high water level during agitate and fill of all cycles.
5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to increase or decrease the current water level to the desired water level.

NOTE: The High Water Level value can be set from 21 to 30. The default High Water Level is 27.

6. Press the START (enter) keypad when the correct number appears in the display. The next option, *ECF*, will appear in the display.

NOTE: To program *ECF* (Temperature Controlled Fill), refer to *Temperature Controlled Fill Enable/Disable tCF (Models with Heat)*. To program other options, refer to the appropriate section.

Temperature Controlled Fill Enable/ Disable TCF (Models with Heat)

This option allows the owner to enable or disable a Temperature Controlled Fill. When enabled, the control will regulate the temperature of the fill to the temperature programmed in *Hot Water Temperature FH*, *Warm Water Temperature FHC* and *Cold Water Temperature FC*.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until Prog appears in the display. Press the START (enter) keypad and TCF will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until TCF appears in the display.
4. When TCF appears in the display, press the START (enter) keypad. The current Temperature Controlled Fill status will appear in the display.

on = Option Enabled

off = Option Disabled (default setting)

5. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, ALd- , will appear in the display.

NOTE: To program ALd- (Auto-Water Leak Detection), refer to *Auto-Water Leak Detection ALd-*. To program other options, refer to the appropriate section.

Auto-Water Leak Detection *ALd-*

This option allows the owner to set the time and frequency that the control automatically checks the water level. The owner programs which day(s) of the week and hour of day(s) they want this test to occur. The owner may also program this test to only occur after *HH* number of machine cycles have been completed since the last time the test was run. In order for this Auto-Water Leak Detection test to occur, the machine's door must be closed.

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until *Prog* appears in the display. Press the START (enter) keypad and *AL5 1* will appear in the display.
3. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options until *ALd-* appears in the display. Press the START (enter) keypad and *ALd 1* will appear in the display.
4. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to scroll through the programmable options. Refer to *Table 19*.

Programmable Options	
<i>ALd 1</i>	Auto-Water Leak Detection (<i>OFF</i> * or <i>0-127</i> cycles [<i>on</i>] – Number of completed cycles after which this test will occur.)
<i>ALd 2</i>	Auto-Water Leak Detection Hour (<i>0*-23</i> – Hour of the day this test will occur.)
<i>ALd 3</i>	Auto-Water Leak Detection Day of Week (<i>0-127*</i> – Refer to <i>Table 7</i> .)
*Factory default setting	

Table 19

5. When the desired option appears in the display, press the START (enter) keypad. The current value will appear in the display.
6. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad to enable during cycles, disable, increase or decrease the hours or day.

NOTE: The hours will be displayed in military time. For day of week, Sunday is considered day one (00 1), Monday is day two (00 2) and so on. Refer to Table 7.

7. Press the START (enter) keypad when the correct value appears in the display. The next option, *AL5 1*, will appear in the display.

NOTE: To program *AL5 1* (LIGHT Vend Price), refer to *LIGHT Vend Price AtSI*. To program other options, refer to the appropriate section.

Collecting Audit Information

This feature allows the owner to retrieve audit information stored in the machine by pressing a sequence of pads on the control. For an explanation of the audit options available, refer to *Table 20*.

How to Enter Audit Feature

There are two (2) methods the owner can use to enter the Audit Feature.

Entering the Audit Feature by Manual Mode

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (Λ) or the DELICATES (v) keypad until **AUDt** appears.
3. Press the START (enter) keypad. **CYC** will appear.

Entering the Audit Feature with the Coin Vault Open

1. Open coin vault. Make sure top cover is closed.
2. Press the START (enter) keypad.

How to Read Audit Data

1. Use the HEAVY (Λ) or the DELICATES (v) keypad to scroll through various options until the desired option is shown in the display. Refer to the Audit Options List, *Table 20*, for an explanation of the audit options available.

Audit Options List		
#	Display	Description
1	CYC	Total # of machine cycles
2	rCYC	Total # of rapid advanced cycles
3	Co #1	Total # of coins #1
4	Co #2	Total # of coins #2
5	PLSE	Total # of start pulses

Table 20

2. Once the desired option appears in the display, press the START (enter) keypad **once** (1) to start the audit count. At this point, the display will show the first four (4) digit segment of the audit value. If the audit count is 10,000 or higher, press the START (enter) keypad again to view the last four (4) digits of the number.

NOTE: The display can show up to 4 digits at one time. Audit counts 10,000 or higher are separated into two 4-digit segments. Each time the START (enter) keypad is pressed in step 2, the display will show the next four (4) digit segment in the audit value. If the value is 9,999 or less, only one 4-digit segment will be shown.

For Example: In the Total Number of Coins #1 option with **Co #1** shown in the display, the audit has counted 10,009 coins. Pressing the START (enter) keypad one time will show **_ _ _ 1** to represent ten thousand. Pressing the START (enter) keypad a second time will display **0009** meaning nine. The total equals **000 10009** or 10,009.

3. Press the START (enter) keypad again. The control will go to the next audit option in the Audit Options List.
4. To select other audit options, repeat steps 1–4.

How to Exit Audit Feature

Press the PERM PRESS (<) keypad.

NOTE: To exit Audit Feature when using Coin Vault Open method, owner must close coin vault.

Manual Reset

This feature allows the owner to reset the machine control's programming data to the factory default settings by pressing a sequence of keypads on the control. For an explanation of the Factory Default Settings, refer to *Programming Control*.

How to Enter Manual Reset

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (\wedge) or the DELICATES (\vee) keypad until **r5Et** appears.
3. Press the START (enter) keypad. The control will be blank until the programming is complete. Once the program has been reset, the control will display the next Manual Mode option, **dI R9**.

Testing Machine and Electronic Control Functions

This feature allows the owner to run diagnostic tests on various machine operations without servicing the machine. The following tests are available:

- Front End Control Software Version Number
- Output Board Control Software Version Number
- Output Board Water Level Sensor Trim Value
- Top Cover Opening Test
- Coin Vault Opening Test
- Coin Drop #1 Input Test
- Coin Drop #2 Input Test
- Coin Drop Header Present Test
- Door Switch Input Test
- Door Lock Input Test
- Show Fill Time Test
- Show Drain Time Test
- Temperature Sensor Display Test
- Start Pulse Test
- VFD Balance Input Test (Design 1 models only)
- 24 VAC Switch Input Test (Design 1 models only)
- VFD Drive Fault Input Test (Design 1 models only)
- Frame Stability Switch Input Test
- VFD Balance Weight Test (Design 1 models only)
- Water Purge Test
- Water Leak Detection Test

The following tests are available on Design 2 and 3 models only:

- Drive Software Version Number

- Drive Parameter Table Version Number
- Drive Type Value
- Drive DC Bus Display Test

How to Enter Diagnostic Testing Feature

1. Control must be in Manual Mode. Refer to *Entering the Manual Mode*.
2. Press the HEAVY (Λ) or the DELICATES (v) keypad until **dI R9** appears.
3. Press the START (enter) keypad. Display will change to indicating the Front End Control Software Version Number test.
4. Press the HEAVY (Λ) or the DELICATES (v) keypad to scroll through the diagnostic test options.

How to Start Tests

To start a diagnostic test, refer to the quick reference chart (*Table 21*). Press the START (enter) keypad when the desired test number is displayed. For detailed information on each test, read the appropriate description.

How to Exit Diagnostic Testing Feature

Press the PERM PRESS (<) keypad. The display will return to the previous mode of operation.

Diagnostic (Testing) Mode – Quick Reference Chart		
Test Number	Diagnostic Mode	Display
d001	Front End Control Software Version # Test	5 HH
d002	Output Board Control Software # Test	o HH
d003	Output Board Water Level Sensor Trim Value	LHHH
d004	Top Cover Opening Test	R oP or R CL
d005	Coin Vault Opening Test	U oP or U CL
d006	Coin Drop #1 Input Test	C IHH
d007	Coin Drop #2 Input Test	C2HH
d008	Coin Drop Header Present Test	CHoP or CHCL

Table 21 continues...

Diagnostic (Testing) Mode – Quick Reference Chart		
Test Number	Diagnostic Mode	Display
<i>d009</i>	Door Switch Input Test	<i>drCL</i> or <i>drDP</i>
<i>d010</i>	Door Lock Input Test	<i>drUL</i> or <i>drLD</i>
<i>d011</i>	Show Fill Time Test	<i>FHHH</i>
<i>d012</i>	Show Drain Time Test	<i>dHHH</i>
<i>d013</i>	Temperature Sensor Display Test	<i>HHHF</i> or <i>HHHC</i>
<i>d014</i>	Start Pulse Test	<i>SEHH</i>
<i>d015</i> (Design 1 models only)	VFD Balance Input Test	<i>brAP</i> or <i>brCL</i>
<i>d016</i> (Design 1 models only)	24 VAC Switch Input Test	<i>rcAP</i> or <i>rcCL</i>
<i>d017</i> (Design 1 models only)	VFD Drive Fault Input Test	<i>drAP</i> or <i>drCL</i>
<i>d018</i>	Frame Stability Switch Input Test	<i>F5AP</i> or <i>F5CL</i>
<i>d019</i>	VFD Balance Weight Test (Design 1 models)	<i>brL</i>
<i>d019</i>	Drive DC Bus Display Test (Design 2 and 3 models)	<i>dcLb</i>
<i>d020</i>	Water Purge Test	<i>PUr9</i>
<i>d021</i>	Water Leak Detection Test	<i>Ld</i>
<i>d022</i> (Design 2 and 3 models only)	Drive Software Version Number	<i>drHH</i>
<i>d023</i> (Design 2 and 3 models only)	Drive Parameter Table Version Number	<i>dPHH</i>
<i>d024</i> (Design 2 and 3 models only)	Drive Type Value	<i>dt H</i>

Table 21

Diagnostic Test Descriptions

Front End Control Software Version Number Test

This option displays the front end control software version number. To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **5 HH** where **HH** is the front end control software version number.

To exit the Front End Control Software Version Number Test, press the PERM PRESS (<) keypad. The control will return to the Diagnostic Testing Mode.

Output Board Control Software Version Number

This option displays the output board control software version number. To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **0 HH** where **HH** is the output board control software version number.

To exit the Output Board Control Software Version Number Test, press the PERM PRESS (<) keypad. The control will return to the Diagnostic Testing Mode.

Output Board Water Level Sensor Trim Value

This option displays the output board water level sensor trim value. To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **LHHH** where **HHH** is the trim value sent from the output board to the front end control.

To exit the Output Board Water Level Sensor Trim Value, press the PERM PRESS (<) keypad. The control will return to the Diagnostic Testing Mode.

Top Cover Opening Test

This option tests the top cover switch. To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **A 0P** when the top cover switch is open and **A LL** when the top cover switch is closed.

The top cover switch has to be closed for at least one (1) second and opened for at least a half a second for the display to change. This test will add a count to the top cover opening counter for the audit and save the date/time for every opening of the test.

To exit the Top Cover Opening Test, press the PERM PRESS (<) keypad. The control will return to the Diagnostic Testing Mode.

Coin Vault Opening Test

This option tests the coin vault switch. To start test, the control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **U 0P** when the coin vault switch is open and **U LL** when the coin vault switch is closed.

The coin vault switch has to be closed for at least one (1) second and opened for at least a half a second for the display to change. This test will add a count to the coin vault opening counter for the audit and save the time/date for every opening of the test.

To exit the Coin Vault Opening Test, press the PERM PRESS (<) keypad. The control will return to the Diagnostic Testing Mode.

Coin Drop #1 Input Test

This option tests coin drop #1. To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Exit Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **L IHH**. The **HH** will show the number of coins entered and will increment one for each coin entered in coin drop #1.

NOTE: Coins entered in Test Mode will not increment the total # of coins counter that is accessed in the audit feature.

To exit the Coin Drop #1 Input Test, press the PERM PRESS (<) keypad. The control will return to the Diagnostic Testing Mode.

Coin Drop #2 Input Test

This option tests coin drop #2. To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **L2HH**. The **HH** will show the number of coins entered and will increment one for each coin entered in coin drop #2.

NOTE: Coins entered in Test Mode will not increment the total # of coins counter that is accessed in the audit feature.

To exit the Coin Drop #2 Input Test, press the PERM PRESS (<) keypad. The control will return to the Diagnostic Testing Mode.

Coin Drop Header Present Test

This option tests the coin drop header connection. To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **CHoP** when the wiring connection is open and **CHCL** when the connection is closed.

To exit the Coin Drop Header Present Test, press the PERM PRESS (<) keypad. The control will return to the Diagnostic Testing Mode.

Door Switch Input Test

This test will display whether the machine door is open or closed.

To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To exit the test, press the PERM PRESS (<) keypad. The control will return to the testing mode.

Door Lock Input Test

This test will display whether the door is locked or unlocked.

To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, close the door and press the START (enter) keypad. The control will lock the door. The door must be closed to enter test.

If the door is unlocked, the display will show **drUL**. After the door is locked, the display shows **drL0** and turns off power to the door lock. The door will take approximately five (5) seconds to unlock. This sequence is repeated every time the START (enter) keypad is pressed.

To exit the test, press the PERM PRESS (<) keypad. The control will return to the testing mode.

Machines with 24 VDC Door Lock Solenoid

To enter, close the door and press the START (enter) keypad. The control will lock the door. The door must be closed to enter test.

If the door is unlocked, the display will show **drUL**. After the door is locked, the display shows **drL0** and turns off power to the door lock. The door will take approximately five seconds to unlock. This sequence is repeated every time the START (enter) keypad is pressed.

To exit the test, press the PERM PRESS (<) keypad. The control will return to the Diagnostic Testing Mode.

Show Fill Time Test

This test will display the average low level fill time. This average will be calculated by taking the average of the last 10 fill times from the start of the fill until the low level is reached.

To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **FHHH**. The **HHH** will be the average fill time in seconds.

To exit the Show Fill Time Test, press the PERM PRESS (<) keypad. The control will return to the Diagnostic Testing Mode.

Show Drain Time Test

This test will display the average drain time. This average will be calculated by taking the average of the last 10 drain times.

To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **dHHH**. The **HHH** will be the average drain time in seconds.

To exit the Show Drain Time Test, press the PERM PRESS (<) keypad. The control will return to the Diagnostic Testing Mode.

Temperature Sensor Display Test

This test is only available on machines equipped with heat. This option displays the temperature sensed at the sensor.

To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **HHHF** for the temperature in degrees Fahrenheit or **HHHC** for the temperature in degrees Celcius. The display will show **SH** if the sensor is shorted or **oP** if the control senses an open sensor.

To exit the Temperature Sensor Display Test, press the PERM PRESS (<) keypad. The control will return to the Diagnostic Testing Mode.

Start Pulse Test

To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **SEHH**. The **HH** will show the number of pulses entered. This test will add counts to the total number of Start Pulses counter. Refer to *Collecting Audit Information*.

To exit the Start Pulse Test, press the PERM PRESS (<) keypad. The control will return to the Diagnostic Testing Mode.

VFD Balance Input Test (Design 1 models)

This option tests the VFD balance switch.

To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. If the VFD balance switch is open, indicating poor balance, the display will show **bRAL**. If the switch is closed, indicating good balance, the display will show **bRCL**.

To exit the test, press the PERM PRESS (<) keypad. The control will return to the Diagnostic Testing Mode.

24 VAC Switch Input Test (Design 1 models)

This option tests the 24 VAC switch.

To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. If the 24 VAC switch is open, the display will show **ACOP**. If the switch is closed, the display will show **ACCL**.

To exit the test, press the PERM PRESS (<) keypad. The control will return to the Diagnostic Testing Mode.

VFD Drive Fault Input Test (Design 1 models)

This option tests the drive fault input.

To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. If the drive fault input is open, the display will show **dFOP**. If the switch is closed, the display will show **dFCL**.

To exit the test, press the PERM PRESS (<) keypad. The control will return to the Diagnostic Testing Mode.

Frame Stability Switch Input Test

This option tests the frame balance switch.

To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. If the frame balance switch is open, the display will show **F5OP**. If the switch is closed, the display will show **F5CL**.

To exit the test, press the PERM PRESS (<) keypad. The control will return to the Diagnostic Testing Mode.

VFD Balance Weight Test (Design 1 models)

This test is only available on machines equipped with a variable frequency motor drive.

To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **bRAL** and the START (enter) keypad LED will flash. Close the door. Press the START (enter) keypad. The door will lock. The motor will turn at distribution speed. The control monitors the VFD balance switch for frequency and displays a corresponding message. Refer to *Table 22*.

VFD Balance Switch Frequency	Description	Display
0	Switch is always closed	CLo5
1 Hz		1 H
2 Hz		2 H
3 Hz		3 H
	Switch is always open	oPEn

Table 22

Press the START (enter) keypad to stop the test. The door will not unlock until the basket stops or the coast time has expired.

Drive DC Bus Display Test (Design 2 and 3 models)

This test is only available on machines equipped with a custom drive.

To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **dCb** and the START (enter) keypad LED will flash. Close the door. Press the START (enter) keypad. The door will lock. The control will turn on the drive and ramp up the motor to distribution speed. The drive's DC Bus Voltage will display.

Water Purge Test

This option empties all water from the machine.

To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **PUr-9** and the START (enter) keypad LED will flash. Close the door. Press the START (enter) keypad. The door will lock. The display will show **FL5H**. The control will energize all water valves and supply outputs while keeping the drain valves open.

The test will end, return to Water Purge Test start prompt, and door will unlock if any keypad is pressed, the door is unlocked or opened, if an end test communication is received or if two (2) mi-

minutes has occurred since the test began. The control will prevent the door from being unlocked until there is no water in the machine.

Water Leak Detection Test

This option allows the owner to test for a water leak in the machine.

To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **Ld** and the START (enter) keypad LED will flash if the door is closed. Press the START (enter) keypad. The door will lock. The control closes the drain valve, turns the pump off and fills the machine with cold water to low level. The water level is monitored for two (2) minutes and the display shows an alternating horizontal segment while the control is monitoring the water level. If after two (2) minutes the water level is the same, control will display **PASS**, water will drain, door will unlock and control will return to Ready Mode. If water level is lower, indicating a leak in the drain, control will display **FAIL**, water will drain, door will unlock and water leak detection error will display as **ELd**.

On Design 2 and 3 models, if water level is higher, indicating a leak in the fill valve, control will display **FAIL**, water will drain, door will unlock and water leak detection error will display as **ELF**.

Drive Software Version Number Test (Design 2 and 3 models)

This option displays the custom drive software version number.

To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **drHH** where **HH** is the custom drive software version number.

To exit the Custom Drive Software Version Number Test, press the PERM PRESS (<) keypad. The control will return to the Diagnostic Testing Mode.

Drive Parameter Table Version Number (Design 2 and 3 models)

This option displays the custom drive parameter table version number.

To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **dPHH** where **HH** is the custom drive parameter table version number.

To exit the Custom Drive Parameter Table Version Number Test, press the PERM PRESS (<) keypad. The control will return to the Diagnostic Testing Mode.

Drive Type Value (Design 2 and 3 models)

This option displays the custom drive type value.

To start test, control must be in the Diagnostic Testing Mode. Refer to *How to Enter Diagnostic Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **dt HH** where **HH** is the custom drive type value. Refer to *Table 23*.

Display	Drive Type
dt 1	2 HP drive
dt 2	3 HP drive
dt 3	5 HP 280V drive
dt 4	5 HP 480V drive

Table 23

To exit the Custom Drive Type Value, press the PERM PRESS (<) keypad. The control will return to the Diagnostic Testing Mode.

Production Test Cycle

NOTE: Machine should be empty of water before starting Production Test Cycle.

To Enter Production Test Cycle

1. Be certain control is in Ready Mode and top cover or coin vault is open.
2. While pressing and holding the HEAVY (Λ) keypad with one hand, press the HOT keypad with the other hand.
3. When the control enters the Production Test Cycle, it will first display **5 HH** with the **HH** showing the software version of the front end control.
4. The control will advance through the sequence of test steps whenever any key is pressed. Refer to *Table 24* for all tests in the *Production Test Cycle*.

To Exit Production Test Cycle

To exit a test step, power down the machine.

Production Test Cycle - Quick Reference Chart		
Display	Test Cycle Step	Comments
5 HH	FEC Control Software Version	HH is the software version number.
o HH	Output Board Software Version	HH is the software version number.
Ct 4	Control Type	4 is the control type.
COn	Control Type	Coin
drAn or PUnP	Drain Type	Drain or pump
tEnP	Temp Sensor	Step skipped if not equipped with temp sensor.
HEAt	Heater	Step skipped if not heater-equipped.
L dC	Door Lock Type	L dC for 24 VDC lock
dr oP or dr CL	Door Status	Door status open or closed.
dr UL or dr Lo	Door Lock Status	Door will lock.
BBBB + all LEDs	Display Test	All display elements are lit.
PAHH where HH = 1-12	Keypad Test Step	Advance after all keypads are pressed.
A HH	Top Cover Switch Test	HH is either CL for closed or oP for open.
U HH	Coin Vault Switch Test	HH is either CL for closed or oP for open.
CHCH	Coin Drop Test	1st H is number of Coin Drop #1 coins. 2nd H is number of Coin Drop #2 coins.
CHHH or PHHH	Machine Type/Size	HHH is machine capacity.
drHH	Drive Software Version Number	HH is the drive software version number. Design 2 and 3 models only.
dPHH	Drive Parameter Table Version Number	HH is the drive parameter table version number. Design 2 and 3 models only.
dt HH	Drive Type Value	HH is the drive type value. Design 2 and 3 models only.
HFI L	Hot Fill to Low Level	All water outputs turned off when Low Level reached.
CFI L	Cold Fill to Low Level	All water outputs turned off when Low Level reached.
bFI L	Warm Fill to Low Level	All water outputs turned off when Low Level reached.
bFI H	Warm Fill to High Level	All water outputs turned off when High Level reached.

Table 24 continues...

Production Test Cycle - Quick Reference Chart		
Display	Test Cycle Step	Comments
<i>5 1</i> for supply or <i>C2C0</i> for compartment	Supply #1 or Compartment #2 Cold Fill	External supply #1. Design 2 and 3 models only.
<i>5 2</i> for supply or <i>C2H0</i> for compartment	Supply #2 or Compartment #2 Hot Fill	External supply #4. Design 2 and 3 models only.
<i>5 3</i> for supply or <i>C3C0</i> for compartment	Supply #3 or Compartment #3 Cold Fill	External supply #2. Design 2 and 3 models only.
<i>5 4</i> for supply or <i>C4H0</i> for compartment	Supply #4 or Compartment #4 Hot Fill	External supply #3. Design 2 and 3 models only.
<i>HHHF</i> degrees F or <i>HHHC</i> degrees C depending on the Fahrenheit/Celsius programming parameter	Heat water to 110°F [43°C] or display temperature	<i>HHH</i> is degree temperature. This step skipped if not heat model. Heater turned off when temperature reached.
<i>L0R9</i> then <i>HHH</i>	Reduced Wash Speed Forward with No Agitation Action	This step skipped on 2 speed models.
<i>R9</i> then <i>HHH</i>	Wash Speed Forward with No Agitation Action	
<i>rR9</i> then <i>HHH</i>	Wash Speed Reverse with No Agitation Action	
<i>dRAl</i> then <i>HHH</i>	Drain Distribution Speed	
<i>PUr9</i>	Factory Valve Purge	
<i>SP 1</i> then <i>HHH</i>	Extract Speed #1 “very low”	This step skipped on 2 speed models.
<i>SP 2</i> then <i>HHH</i>	Extract Speed #2 “low”	This step skipped on 2 speed models.
<i>SP 3</i> then <i>HHH</i>	Extract Speed #3 “medium”	This step skipped on 2 speed models.
<i>SP 4</i> (VFD models) or <i>SPIn</i> (2 speed models) then <i>HHH</i>	Extract Speed #4 “high”	This step skipped on F-speed models.
<i>SP 5</i>	Extract Speed #5 “very high”	This step skipped on 2 speed and F-speed models.
<i>SP 6</i> then <i>HHH</i>	Extract Speed #6 “ultra high”	Design 2 and 3 models only.
<i>Prdn</i>	End of Test	Turn power off.

Table 24

Error Codes

Following is a list of possible error codes for an electronic control. Errors beginning with *EI* refer to external device Infra-red

communication errors. Errors beginning with *EC* refer to card reader errors. All other errors refer to machine errors.

Display	Description	Cause/Corrective Action
<i>EI 01</i>	Transmission Failure	Communication failure. Re-aim external device and try again.
<i>EI 02</i>	Time-out Error	Communication failure. Re-aim external device and try again.
<i>EI 03</i>	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
<i>EI 04</i>	Expecting Upload Request	Communication failure. Re-aim external device and try again.
<i>EI 05</i>	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Recheck the programming option's value and try again.
<i>EI 09</i>	CRC-16 Error	Communication failure. Re-aim external device and try again.
<i>EI 0A</i>	Framing Error	Communication error. Re-aim external device and try again.
<i>EI 0C</i>	Time-out Exceeded	Communication error. Re-aim external device and try again.
<i>EI 0E</i>	Encryption Error	Communication error. Re-aim external device and try again. If the problem persists, check that the security code is correct.
<i>EI 0F</i>	Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
<i>EC02</i>	Time-out Error	Communication failure. Try card again.
<i>EC03</i>	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
<i>EC05</i>	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Recheck the programming option's value and try again.
<i>EC 11</i>	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
<i>EC 1B</i>	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
<i>EC 19</i>	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
Right most decimal point Lit†	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. If error persists, replace control or network board.

Table 25 *continues...*

Display	Description	Cause/Corrective Action
<i>ALrn</i>	Break-in Alarm Error	Access panel or coin vault switches. Power down machine to clear if Auto-Shutdown on.
<i>aFF</i>	Break-in Alarm Shutdown Error	Access panel or coin vault switches. Opened with Break-In Alarm enabled.
<i>E FL</i>	Fill Error	Programmed water level not reached within 10 minutes (or other programmed length of time) in any fill agitate cycle. End cycle. Power down machine to clear.
<i>E 5P</i>	SPI Communications Error	Front End control cannot communicate with output board. Power down the machine, power up and try again.
<i>E dL</i>	Door Lock Error	Door does not lock immediately upon closing (open and re-close door) or doesn't unlock 5 seconds after cycle completion. Power down machine and retry.
<i>E do</i>	Door Open Error	Control detects door open. Caused by pulling on door while locked or about to lock. Correct inoperative door locking system. End cycle. Power down machine to clear.
<i>E Ub</i>	Unbalance Error	Unable to balance load. Redistribute load and run cycle.
<i>door</i>	Door Open Indicator	Door is not closed in Start Mode. If door is closed, check for improper wiring or faulty door switch.
<i>Err</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E dr</i>	Drain Alarm Error	Machine not drained within 15 minutes (or other programmed length of time) in any drain step. End cycle. Power down machine to clear.
<i>E Ht</i>	Heat Alarm Error	Programmed heat alarm time of 120 minutes or other programmed length of time is exceeded. Turns off heater output for remainder of cycle.
<i>E aP</i>	Open Temperature Sensor Error	Control senses temperature less than 0°F [-18°C] in machine equipped with temperature sensor. Heater and thermistor related operations are disabled for remainder of cycle.
<i>E 5H</i>	Shorted Temperature Sensor Error	Control senses temperature greater than 220°F [104°C] in machine equipped with temperature sensor. Heater and thermistor related operations are disabled for remainder of cycle.
<i>E ro</i>	Rotation Sensor Error	Invalid signal received from Rotation Sensor. Control will activate coast times to complete cycle.
<i>E F5</i>	Frame Stability Switch Error	Control detects Frame Stability Switch open. End cycle.
<i>E db</i>	Drive Balance Switch Error	Control detects VFD Balance Switch input closed at start of drain step. End cycle. Power down machine to clear.

Table 25 *continues...*

Display	Description	Cause/Corrective Action
<i>E Ld</i>	Water Leak Detection Error (Drain Valve)	Control senses a drop in water level during diagnostic testing. Power down machine to clear. Control shows error after door is open (when cycle is completed) for one (1) minute or after test has been completed, the right-most decimal point on display lights* and the error information will be logged in audit data.
<i>E LF**</i>	Water Leak Detection Error	Control senses an increase in water level during diagnostic testing. Power down machine to clear. Control shows error after door is open (when cycle is completed) for one minute or after test has been completed, the right-most decimal point on display lights* and the error information will be logged in audit data.
<i>E 5d</i>	Slow Drain Error	Control senses the time required to drain the water is too long, the control shows error after door is open (when cycle is completed) for one (1) minute, the right-most decimal point on display lights* and the error information will be logged in audit data.
<i>E 5d</i>	Slow Drain Error	Control shows error after door is open (when cycle is completed) for one (1) minute, the error information will be logged in audit data.
<i>E Pr</i>	Low Level Pressure Switch Error	Control detects improper operation of low level pressure switch during the Production Test Cycle. The Production Test Cycle is aborted. Power down machine to clear.
<i>E d01**</i>	SPI Communication Error	Front End control cannot communicate with motor drive. Power down, verify input power and 6-pin communication connection on drive and Front End control, power up and try again.
<i>E d02**</i>	DC Bus Error	The control detects the DC bus is too high. Power down, verify line voltage is within specification, power up and try again.
<i>E d03**</i>	Tachometer Error	The drive detects the tachometer input is damaged during power up or no tachometer signal is detected after initiating motor output. Power down, verify H3 on drive and tachometer connections on motor, power up and try again.
<i>E d04**</i>	Locked Rotor Error	Motor does not reach speed at startup. Power down, verify motor mounting and look for obstructions, power up and try again.
<i>E d05**</i>	IGBT Overcurrent Error	The drive detects an overcurrent shunt condition. Power down machine for a minimum of two minutes, verify the motor is not shorted phase to phase or phase to ground. Power up and try again. If problem persists, replace drive.
<i>E d06**</i>	Thermal Error	The control detects a high IPM temperature. Power down, verify convection around drive heat sink, power up and try again.
<i>E d07**</i>	No Setup Error	The drive receives movement commands without receiving a setup packet. Power down, power up and try again.
<i>E d08**</i>	Max Over Current Error	The drive detects motor output overcurrent condition. Power down, power up and try again.

Table 25 *continues...*

Display	Description	Cause/Corrective Action
<i>E d 0 9</i> **	Current Sensor Error	The drive detects a current sensor is not operating properly at startup. Power down, power up and try again. If problem persists, replace drive.
<p>†The right-most decimal point will also light for Water Leak Detection and Slow Drain Detection errors, refer to <i>E L d</i> and <i>E 5 d</i>.</p> <p>*To clear the decimal point on display, press the START (enter) keypad 3 times in succession (within 5 seconds).</p> <p>**Design 2 and 3 models only.</p>		

Table 25

Rapid Advance Feature

The Rapid Advance feature allows the user to quickly advance through active cycles or advance into a cycle from the Ready Mode.

How to Enter Rapid Advance

1. If control is in Ready Mode, control must be put into Manual Mode. Refer to *Entering Manual Mode*.
2. Press the HEAVY (Λ) or the DELICATES (v) keypad until *rRPd* appears in the display.
3. Press the START (enter) keypad. The display will show cycle time and the START (enter) keypad LED will flash.
4. Press the START (enter) keypad to start cycle.

NOTE: Door must be closed to start cycle.

How to Enter Rapid Advance During an Active Cycle

1. Be certain top cover is open and coin vault switch is closed.
2. While pressing and holding the NORMAL keypad with one hand, press the LIGHT keypad with the other hand.
3. Press the HEAVY (Λ) or the DELICATES (v) keypad until *rRPd* appears in the display.
4. Press START (enter) to activate Rapid Advance cycle.

How to Use Rapid Advance

Control may be in an active cycle or in the Ready Mode to use the Rapid Advance feature.

While in the Rapid Advance Mode, pressing the START (enter) keypad will advance the machine to the next cycle step. The cycle indicator lights will tell which cycle step the machine is in.

For Example: If the machine is in the first Fill cycle step, pressing the START (enter) keypad will advance the machine into the Agitate cycle step.

Continue pressing the START (enter) keypad until the cycle is completed.

How to Exit Rapid Advance Feature

Advance through the cycles until reaching the Ready Mode.

NOTE: The Manual Rapid Advance option must be turned on for Rapid Advance to work. Refer to *Manual Rapid Advance (Enable/Disable) rAEn in Programming Control*.

Clear Vend Feature

This feature allows the owner to clear a control which is in the middle of satisfying a vend price, and set it back to the Ready Mode.

For more information on using the Clear Vend feature, refer to *How to Clear Vend*.

How to Clear Vend

1. Open the top cover. Refer to *Opening the Top Cover*.
2. While pressing and holding the NORMAL keypad with one hand, press the MEDIUM keypad with the other hand. The control will reset to the Ready Mode.

Power Fail Recovery

The Power Fail Recovery feature allows the cycle status to be saved in memory in the event of a power failure.

If the power failure lasted less than 2 minutes, the cycle will resume without requiring the user to press the START (enter) keypad to restart.

If the power failure lasted longer than 2 minutes, the Power Fail Reset option is turned **on** and the duration of the power failure is less than or equal to the time programmed in the Power Fail Reset option or the Power Fail Reset option is disabled, the START (enter) keypad will flash until it is pressed and the cycle will restart from the point it left off.

If the power failure lasted longer than 2 minutes, the Power Fail Reset option is turned **on** and if the duration of the power failure lasted longer than the time programmed in the Power Fail Reset option, the control will return to Ready Mode.

Communications Mode

This feature allows the control to communicate with an external device, card reader or network. This allows the control to be programmed and have its data read without using the keypad.

For more detailed information on using the Communications Mode feature, refer to *Communications*.

Infra-red Communications

The Infra-red Communications feature allows the control to communicate with an external device. The control can be programmed and have its data read without using the keypad. It may also be used to start and stop various diagnostic tests.

How to Begin Communications with an External Device

The control will go blank and the display will show **-E-** until the communication is complete. The display will return to the previous mode. If an error occurs that terminates communication, the display will show **EI HH** (**HH** represents the error code).

NOTE: The Infra-red Communications option must be turned on. Refer to *IR Access (Enable/Disable) IrA in Programming the Control*.

Card Reader Communications (Card Models Only)

The Card Reader Communications feature allows the control to communicate with the card reader. The control can be programmed and have its data read without using the keypad.

Network Communications

The Network Communications feature allows the control to communicate with a network. The control can be programmed and have its data read without using the keypad.

Default Cycles

Cycle Chart									
Cycle Steps	Normal Hot	Normal Warm	Normal Cold	Perm-Press Hot	Perm-Press Warm	Perm-Press Cold	Delicate Hot	Delicate Warm	Delicate Cold
Cycle reference (display in Program Mode)	CYC1	CYC2	CYC3	CYC4	CYC5	CYC6	CYC7	CYC8	CYC9
Agitation type	18/3/1 8 Normal	3/12/3 Gentle	3/12/3 Gentle	3/12/3 Gentle					
Wash 1 (ON/OFF)	OFF								
Time for agitation (min.)	2	2	2	2	2	2	5	5	5
Fill Temperature	Warm	Warm	Cold	Warm	Warm	Cold	Warm	Warm	Cold
Fill Level	High								
Supply	C1 (S1)								
Heat (if enabled)	2	2	2	2	2	2	2	2	2
Drain	Yes								
Spin (min.)	0	0	0	0	0	0	0	0	0
Wash 2 (ON/OFF)	ON								
Time for agitation (min.)	6	6	6	5	5	5	4	4	4
Fill Temperature	Hot	Warm	Cold	Hot	Warm	Cold	Hot	Warm	Cold
Fill Level	Low								
Supply	C1, C2, C3 (S1, S2)								
Heat (if enabled)	2	2	2	2	2	2	2	2	2
Drain	Yes								
Spin (min.)	0	0	0	0	0	0	0	0	0
Wash 3 (ON/OFF)	OFF								
Time for agitation (min.)	2	2	2	2	2	2	2	2	2

Table 26 continues...

Cycle Chart									
Cycle Steps	Normal Hot	Normal Warm	Normal Cold	Perm-Press Hot	Perm-Press Warm	Perm-Press Cold	Delicate Hot	Delicate Warm	Delicate Cold
Cycle reference (display in Program Mode)	CYC1	CYC2	CYC3	CYC4	CYC5	CYC6	CYC7	CYC8	CYC9
Agitation type	18/3/1 8 Normal	3/12/3 Gentle	3/12/3 Gentle	3/12/3 Gentle					
Fill Temperature	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold
Fill Level	Low	Low	Low	Low	Low	Low	Low	Low	Low
Supply	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3					
Heat (if enabled)	2	2	2	2	2	2	2	2	2
Drain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.)	0	0	0	0	0	0	0	0	0
Wash 4 (ON/OFF)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Time for agitation (min.)	2	2	2	2	2	2	2	2	2
Fill Temperature	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold
Fill Level	Low	Low	Low	Low	Low	Low	Low	Low	Low
Supply	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3					
Heat (if enabled)	2	2	2	2	2	2	2	2	2
Drain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.)	0	0	0	0	0	0	0	0	0
Rinse 1 (ON/OFF)	ON	ON	ON	ON	ON	ON	ON	ON	ON
Time for agitation (min.)	2	2	2	2	2	2	2	2	2
Fill Temperature	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold
Fill Level	Low	Low	Low	Low	Low	Low	High	High	High
Supply	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3					
Heat (if enabled)	0	0	0	0	0	0	0	0	0

Table 26 continues...

Cycle Chart									
Cycle Steps	Normal Hot	Normal Warm	Normal Cold	Perm-Press Hot	Perm-Press Warm	Perm-Press Cold	Delicate Hot	Delicate Warm	Delicate Cold
Cycle reference (display in Program Mode)	CYC1	CYC2	CYC3	CYC4	CYC5	CYC6	CYC7	CYC8	CYC9
Agitation type	18/3/1 8 Normal	3/12/3 Gentle	3/12/3 Gentle	3/12/3 Gentle					
Drain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.)	0	0	0	0	0	0	0	0	0
Rinse 2 (ON/OFF)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Time for agitation (min.)	2	2	2	2	2	2	2	2	2
Fill Temperature	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold
Fill Level	Low	Low	Low	Low	Low	Low	Low	Low	Low
Supply	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3					
Heat (if enabled)	0	0	0	0	0	0	0	0	0
Drain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.)	0	0	0	0	0	0	0	0	0
Rinse 3 (ON/OFF)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Time for agitation (min.)	2	2	2	2	2	2	4	4	4
Fill Temperature	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold
Fill Level	High	High	High	High	High	High	High	High	High
Supply	C1, C2, C3	C1, C2, C3	C1, C2, C3	C1, C2, C3					
Heat (if enabled)	0	0	0	0	0	0	0	0	0
Drain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spin (min.)	1 (High)	1 (High)	1 (High)	1 (High)					
Rinse 4 (ON/OFF)	ON	ON	ON	ON	ON	ON	ON	ON	ON
Time for agitation (min.)	4	4	4	4	4	4	4	4	4

Table 26 continues...

Cycle Chart										
Cycle Steps	Normal Hot	Normal Warm	Normal Cold	Perm-Press Hot	Perm-Press Warm	Perm-Press Cold	Delicate Hot	Delicate Warm	Delicate Cold	
Cycle reference (display in Program Mode)	CYC1	CYC2	CYC3	CYC4	CYC5	CYC6	CYC7	CYC8	CYC9	
Agitation type	18/3/1 8 Normal	3/12/3 Gentle	3/12/3 Gentle	3/12/3 Gentle						
Fill Temperature	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	Cold	
Fill Level	Low	Low	Low	Low	Low	Low	Low	Low	Low	
Supply	C1, C2, C3, C4 (S3, S4)	C1, C2, C3, C4 (S3, S4)	C1, C2, C3, C4 (S3, S4)	C1, C2, C3 (S3, S4)	C1, C2, C3 (S3, S4)	C1, C2, C3 (S3, S4)	C1, C2, C3 (S3, S4)	C1, C2, C3 (S3, S4)	C1, C2, C3 (S3, S4)	
Heat (if enabled)	0	0	0	0	0	0	0	0	0	
Drain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Spin (min.) (spin speed)	4 (Design 1: Very High) (Design 2 and 3: Ultra High)	4 (Design 1: Very High) (Design 2 and 3: Ultra High)	4 (Design 1: Very High) (Design 2 and 3: Ultra High)	3 (Design 1: Very High) (Design 2 and 3: Ultra High)	3 (Design 1: Very High) (Design 2 and 3: Ultra High)	3 (Design 1: Very High) (Design 2 and 3: Ultra High)	2 (High)	2 (High)	2 (High)	
Default Cycle Time (hh:mm:ss)	2 speed	00:22:20	00:22:20	00:22:20	00:20:20	00:20:20	00:20:20	00:18:20	00:18:20	00:18:20
	F and V-speed (Design 1)	00:23:05	00:23:05	00:23:05	00:21:05	00:21:05	00:21:05	00:19:05	00:19:05	00:19:05
	F and V-speed (Design 2 and 3)	00:23:17	00:23:17	00:23:17	00:21:17	00:21:17	00:21:17	00:19:17	00:19:17	00:19:17

Table 26

Blank Cycle Chart									
Cycle Steps	Normal Hot	Normal Warm	Normal Cold	Perm-Press Hot	Perm-Press Warm	Perm-Press Cold	Delicate Hot	Delicate Warm	Delicate Cold
Cycle reference (display in Program Mode)	CYC1	CYC2	CYC3	CYC4	CYC5	CYC6	CYC7	CYC8	CYC9
Agitation type	18/3/1 8 Normal	3/12/3 Gentle	3/12/3 Gentle	3/12/3 Gentle					
Wash 1 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Wash 2 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Wash 3 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									

Table 27 continues...

Blank Cycle Chart									
Cycle Steps	Normal Hot	Normal Warm	Normal Cold	Perm-Press Hot	Perm-Press Warm	Perm-Press Cold	Delicate Hot	Delicate Warm	Delicate Cold
Cycle reference (display in Program Mode)	CYC1	CYC2	CYC3	CYC4	CYC5	CYC6	CYC7	CYC8	CYC9
Agitation type	18/3/1 8 Normal	3/12/3 Gentle	3/12/3 Gentle	3/12/3 Gentle					
Heat (if enabled)									
Drain									
Spin (min.)									
Wash 4 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Rinse 1 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Rinse 2 (ON/OFF)									
Time for agitation (min.)									

Table 27 continues...

Blank Cycle Chart									
Cycle Steps	Normal Hot	Normal Warm	Normal Cold	Perm-Press Hot	Perm-Press Warm	Perm-Press Cold	Delicate Hot	Delicate Warm	Delicate Cold
Cycle reference (display in Program Mode)	CYC1	CYC2	CYC3	CYC4	CYC5	CYC6	CYC7	CYC8	CYC9
Agitation type	18/3/1 8 Normal	3/12/3 Gentle	3/12/3 Gentle	3/12/3 Gentle					
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Rinse 3 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Rinse 4 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									

Table 27 continues...

Blank Cycle Chart									
Cycle Steps	Normal Hot	Normal Warm	Normal Cold	Perm-Press Hot	Perm-Press Warm	Perm-Press Cold	Delicate Hot	Delicate Warm	Delicate Cold
Cycle reference (display in Program Mode)	CYC1	CYC2	CYC3	CYC4	CYC5	CYC6	CYC7	CYC8	CYC9
Agitation type	18/3/1 8 Normal	18/3/1 8 Normal	18/3/1 8 Normal	18/3/1 8 Normal	18/3/1 8 Normal	18/3/1 8 Normal	3/12/3 Gentle	3/12/3 Gentle	3/12/3 Gentle
Spin (min.) (spin speed)									
Default Cycle Time (hh:mm:ss)	2 speed								
	F and V-speed (Design 1)								
	F and V-speed (Design 2 and 3)								
Wash 1 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Wash 2 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									

Table 27 continues...

Blank Cycle Chart									
Cycle Steps	Normal Hot	Normal Warm	Normal Cold	Perm-Press Hot	Perm-Press Warm	Perm-Press Cold	Delicate Hot	Delicate Warm	Delicate Cold
Cycle reference (display in Program Mode)	CYC1	CYC2	CYC3	CYC4	CYC5	CYC6	CYC7	CYC8	CYC9
Agitation type	18/3/1 8 Normal	3/12/3 Gentle	3/12/3 Gentle	3/12/3 Gentle					
Heat (if enabled)									
Drain									
Spin (min.)									
Wash 3 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Wash 4 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Rinse 1 (ON/OFF)									
Time for agitation (min.)									

Table 27 continues...

Blank Cycle Chart									
Cycle Steps	Normal Hot	Normal Warm	Normal Cold	Perm-Press Hot	Perm-Press Warm	Perm-Press Cold	Delicate Hot	Delicate Warm	Delicate Cold
Cycle reference (display in Program Mode)	CYC1	CYC2	CYC3	CYC4	CYC5	CYC6	CYC7	CYC8	CYC9
Agitation type	18/3/1 8 Normal	3/12/3 Gentle	3/12/3 Gentle	3/12/3 Gentle					
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Rinse 2 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Rinse 3 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									

Table 27 continues...

Blank Cycle Chart									
Cycle Steps	Normal Hot	Normal Warm	Normal Cold	Perm-Press Hot	Perm-Press Warm	Perm-Press Cold	Delicate Hot	Delicate Warm	Delicate Cold
Cycle reference (display in Program Mode)	CYC1	CYC2	CYC3	CYC4	CYC5	CYC6	CYC7	CYC8	CYC9
Agitation type	18/3/1 8 Normal	18/3/1 8 Normal	18/3/1 8 Normal	18/3/1 8 Normal	18/3/1 8 Normal	18/3/1 8 Normal	3/12/3 Gentle	3/12/3 Gentle	3/12/3 Gentle
Rinse 4 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.) (spin speed)									
Default Cycle Time (hh:mm:ss)	2 speed								
	F and V-speed (Design 1)								
	F and V-speed (Design 2 and 3)								
Wash 1 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									

Table 27 continues...

Blank Cycle Chart									
Cycle Steps	Normal Hot	Normal Warm	Normal Cold	Perm-Press Hot	Perm-Press Warm	Perm-Press Cold	Delicate Hot	Delicate Warm	Delicate Cold
Cycle reference (display in Program Mode)	CYC1	CYC2	CYC3	CYC4	CYC5	CYC6	CYC7	CYC8	CYC9
Agitation type	18/3/1 8 Normal	3/12/3 Gentle	3/12/3 Gentle	3/12/3 Gentle					
Spin (min.)									
Wash 2 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Wash 3 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Wash 4 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									

Table 27 continues...

Blank Cycle Chart									
Cycle Steps	Normal Hot	Normal Warm	Normal Cold	Perm-Press Hot	Perm-Press Warm	Perm-Press Cold	Delicate Hot	Delicate Warm	Delicate Cold
Cycle reference (display in Program Mode)	CYC1	CYC2	CYC3	CYC4	CYC5	CYC6	CYC7	CYC8	CYC9
Agitation type	18/3/1 8 Normal	3/12/3 Gentle	3/12/3 Gentle	3/12/3 Gentle					
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Rinse 1 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Rinse 2 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Rinse 3 (ON/OFF)									

Table 27 continues...

Blank Cycle Chart									
Cycle Steps	Normal Hot	Normal Warm	Normal Cold	Perm-Press Hot	Perm-Press Warm	Perm-Press Cold	Delicate Hot	Delicate Warm	Delicate Cold
Cycle reference (display in Program Mode)	CYC1	CYC2	CYC3	CYC4	CYC5	CYC6	CYC7	CYC8	CYC9
Agitation type	18/3/1 8 Normal	3/12/3 Gentle	3/12/3 Gentle	3/12/3 Gentle					
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.)									
Rinse 4 (ON/OFF)									
Time for agitation (min.)									
Fill Temperature									
Fill Level									
Supply									
Heat (if enabled)									
Drain									
Spin (min.) (spin speed)									

Table 27 continues...

Blank Cycle Chart										
Cycle Steps		Normal Hot	Normal Warm	Normal Cold	Perm-Press Hot	Perm-Press Warm	Perm-Press Cold	Delicate Hot	Delicate Warm	Delicate Cold
Cycle reference (display in Program Mode)		CYC1	CYC2	CYC3	CYC4	CYC5	CYC6	CYC7	CYC8	CYC9
Agitation type		18/3/1 8 Normal	3/12/3 Gentle	3/12/3 Gentle	3/12/3 Gentle					
Default Cycle Time (hh:mm:ss)	2 speed									
	F and V-speed (Design 1)									
	F and V-speed (Design 2 and 3)									

Table 27