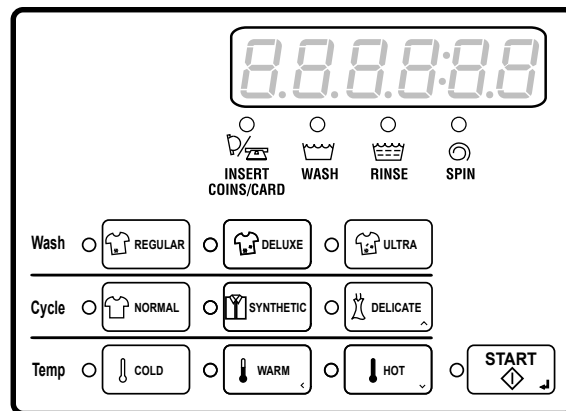


# Topload Washer

Refer to Page 9 for Model Identification



TLW27C\_SVG

## Original Instructions

Keep These Instructions for Future Reference.

**CAUTION:** Read the instructions before using the machine.

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





## WARNING

Failure to install, maintain, and/or operate this machine according to the manufacturer's instructions may result in conditions which can produce bodily injury and/or property damage.

W030



## WARNING

For your safety and to reduce the risk of fire or an explosion, do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

W022

**NOTE:** The **WARNING** and **IMPORTANT** instructions appearing in this manual are not meant to cover all possible conditions and situations that may occur. It must be understood that common sense, caution, and carefulness are factors which cannot be built into these washers. These factors **MUST BE** supplied by the person(s) installing, maintaining, or operating the unit.

Always contact the distributor, service agent, or the manufacturer about any problems or conditions you do not understand.



Read all instructions before using unit.



Hazardous voltage inside. Disconnect power before servicing.

This product uses FreeRTOS V7.2.0 ([www.freertos.org](http://www.freertos.org)).

# Table of Contents

<b>Model Identification.....</b>	<b>9</b>
<b>Preliminary Information.....</b>	<b>10</b>
About the Control.....	10
Glossary of Terms.....	10
Power Failure Recovery.....	10
Communications.....	10
Serial Card Reader Communications (Card Models Only).....	10
Network Communications.....	10
Near Field Communications.....	10
<b>Control Identification.....</b>	<b>11</b>
Select Cycle Pads.....	11
Select Wash Temp Pads.....	11
Select Cycle Modifier Pads.....	11
<b>Display Identification.....</b>	<b>12</b>
Light Emitting Diodes (LEDs).....	12
CYCLE LED.....	12
WASH TEMP LED.....	12
WASH LED.....	12
RINSE LED.....	12
SPIN LED.....	12
INSERT COINS/CARD/CARD LED.....	12
REGULAR LED.....	12
DELUXE LED.....	12
ULTRA LED.....	12
7-Segment Digits.....	12
<b>Washer Operation.....</b>	<b>13</b>
Power Up.....	13
Ready Mode.....	13
Partial Vend Mode.....	13
Additional Vend Mode.....	13
Start Mode.....	13
End of Cycle Mode.....	13
Cycle Sequence.....	13
Signals.....	13
Opening the Washer Lid.....	13
Changing Cycles.....	13

Delayed Start Setup (OPL Only).....	14
Delayed Start (OPL Only).....	14
Lockout Mode.....	14
Shutdown Mode.....	14
Power Failure Display Mode.....	14
<b>Special Features.....</b>	<b>15</b>
Programming Control.....	15
Collecting Audit Information.....	15
Testing Machine and Control Functions.....	15
Rapid Advance Feature.....	15
Clearing the Vend Feature.....	15
Coin Drop.....	15
Start Pulse Operation.....	15
Service Door and Coin Vault Openings.....	15
Break-In Alarm.....	15
Special Vend.....	16
OPL Mode.....	16
Drop-Off Mode.....	16
Low Power/Auto-Shutdown Option.....	16
Out of Order Mode.....	16
Network Node Number Display Mode.....	16
Error Display Mode.....	16
<b>Opening the Service Door.....</b>	<b>17</b>
Coin Models.....	17
Card Reader Models.....	17
<b>Entering the Manual Mode.....</b>	<b>18</b>
How to Enter the Manual Mode.....	18
Manual Mode Navigation.....	18
<b>Programming Control.....</b>	<b>21</b>
What Can Be Programmed.....	21
Programmable Options Available.....	21
Vend Price 1 AtS 1 .....	36
Vend Price 2 AtS 2 .....	37
Vend Price 3 AtS 3 .....	37
Vend Price 4 AtS 4 .....	37
Vend Price 5 AtS 5 .....	37
Vend Price 6 AtS 6 .....	38
Vend Price 7 AtS 7 .....	38
Vend Price 8 AtS 8 .....	38
Vend Price 9 AtS 9 .....	39
Cycle Modifier Key 1 DELUXE Vend Price Adder ACNP 1 .....	39
Cycle Modifier Key 2 ULTRA Vend Price Adder ACNP 2 .....	39
Vend Price Decimal Point Ats dP .....	39
Coin 1 Value dEn 1 .....	40
Coin 2 Value dEn 2 .....	40

Serial Payment Configuration SerPAY .....	40
Card Enable CardEn .....	41
Start Pulse Value PLSdEn .....	41
Start Pulse Mode PLSnod .....	41
Programmable Output Type AtYPE .....	42
Default Cycle dFtCyC .....	43
Card Reader Display Control CArD .....	43
Audio Signal AUdio .....	43
How to Program the Audio Signal.....	43
How to Read Audio Signal Table.....	44
Network Node Number nodeE .....	45
Error Code Programming Error- .....	45
Set Real-Time Clock rtC- .....	48
Set Daylight Savings Time dLS- .....	49
Special Vend 1 Days Enable SP1 1 .....	49
How to Read the Days Enable Value Table.....	50
How to Program Special Vend 1 Start Minute SP1 2 .....	55
How to Program Special Vend 1 Start Hour SP1 3 .....	55
How to Program Special Vend 1 Start Date SP1 4 .....	55
How to Program Special Vend 1 Start Month SP1 5 .....	55
How to Program Special Vend 1 Start Year SP1 6 .....	56
How to Program Special Vend 1 Length in Hours SP1 7 .....	56
How to Program Special Vend 1 End Date SP1 8 .....	56
How to Program Special Vend 1 End Month SP1 9 .....	56
How to Program Special Vend 1 End Year SP1 10 .....	56
How to Program Special Vend 1 Vend Price 1 SP1 11 .....	56
How to Program Special Vend 1 Vend Price 2 SP1 12 .....	57
How to Program Special Vend 1 Vend Price 3 SP1 13 .....	57
How to Program Special Vend 1 Vend Price 4 SP1 14 .....	57
How to Program Special Vend 1 Vend Price 5 SP1 15 .....	57
How to Program Special Vend 1 Vend Price 6 SP1 16 .....	57
How to Program Special Vend 1 Vend Price 7 SP1 17 .....	58
How to Program Special Vend 1 Vend Price 8 SP1 18 .....	58
How to Program Special Vend 1 Vend Price 9 SP1 19 .....	58
How to Program Special Vend 1 Wash Status Agitate Steps Added Minutes SP1 20 .....	58
How to Program Special Vend 1 Wash Status Agitate Steps Subtracted Minutes SP1 21 .....	59
How to Program Special Vend 1 Cycle Modifier Default Value SP1 22 .....	59
How to Program Special Vend 1 Cycle Modifier DELUXE Key #1 Vend Price SP1 23 .....	59
How to Program Special Vend 1 Cycle Modifier ULTRA Key #2 Vend Price SP1 24 .....	59
How to Program Special Vend 1 Cycle Modifier DELUXE Key #1 Options SP1 25 .....	59
How to Program Special Vend 1 Cycle Modifier ULTRA Key #2 Options SP1 26 .....	59
Special Vend 2 Days Enable SP2 .....	60
Special Vend 3 Days Enable SP3 .....	60
Special Vend 4 Days Enable SP4 .....	60
Cycle Modifier Programming CNP- .....	60

How to Program Default Cycle Modifier CNP 1 .....	60
How to Program Cycle Modifier DELUXE Key #1 Options CNP 2 .....	61
How to Program Cycle Modifier ULTRA Key #2 Options CNP 3 .....	61
How to Program Cycle Modifier DELUXE Additional Wash Time CNP 4 .....	61
How to Program Cycle Modifier DELUXE Additional Extra Rinse Time CNP 5 .....	62
How to Program Cycle Modifier ULTRA Additional Wash Time CNP 6 .....	62
How to Program Cycle Modifier ULTRA Additional Extra Rinse Time CNP 7 .....	62
Cycle Parameters CyCP- .....	63
Low Power-Auto Shutdown 1 Days Enable LPAS 1 .....	63
Low Power-Auto Shutdown 2 Days Enable LPAS 2 .....	63
Low Power-Auto Shutdown 3 Days Enable LPAS 3 .....	64
Low Power-Auto Shutdown 4 Days Enable LPAS 4 .....	64
Power Fail Reset PF rst .....	64
How to Read Power Fail Reset Table.....	65
NFC Access (On/Off) NFC En .....	65
Manual Rapid Advance rAPdEn .....	65
Manual Diagnostics diAgEn .....	65
Factory Test Ft En .....	65
Lucky Cycle LUC- .....	66
Water Temperature Indicator tP ind .....	66
Programmable Close Lid Display PCdL .....	67
Programmable Push Start Display PPSt .....	67
Programmable Open Lid Display PodL .....	67
Vend Price Display Override AtS do .....	67
OPL Parameters oPL- .....	67
OPL Mode Enable oPL 1 .....	68
OPL Delayed Start oPL 2 .....	68
OPL Display Power Save oPL 3 .....	68
Drop Off Mode droP .....	69
Out of Order oUt .....	69
 <b>Collecting Audit Information.....</b>	 <b>70</b>
How to Enter Audit Feature.....	70
Entering the Audit Feature by Manual Mode.....	70
Entering the Audit Feature with the Coin Vault Open.....	70
How to Read Audit Data.....	70
How to Exit Audit Feature.....	70
 <b>Manual Reset.....</b>	 <b>71</b>
How to Enter Manual Reset.....	71
 <b>Testing Machine and Electronic Control Functions.....</b>	 <b>72</b>
How to Enter Testing Feature.....	72
How to Start Tests.....	72
How to Exit Testing Feature.....	72
Diagnostic (Testing) Mode – Quick Reference Chart.....	72
Diagnostic Test Descriptions.....	75

Control Software Version Number Test d 1 .....	75
Input/Output Software Version # Test d 2 .....	75
Service Door Opening Test d 8 .....	75
Coin Vault Opening Test d 9 .....	75
Coin Drop 1 Input Test d 10 .....	75
Coin Drop 2 Input Test d 11 .....	75
Vend Connection Header Present Test d 12 .....	75
Start Pulse Test d 13 .....	75
Lid Switch Input Test d 15 .....	75
Show Fill Time Test d 17 .....	76
Show Drain Time Test d 18 .....	76
External Outputs Test d 23 .....	76
Water Purge Test d 24 .....	76
Water Leak Detection Test d 25 .....	76
Water Level Test d 26 .....	76
Configuration 1 Display Test d 29 .....	77
Configuration 2 Display Test d 30 .....	80
Configuration 3 Display Test d 31 .....	80
Configuration 4 Display Test d 32 .....	80
Configuration 5 Display Test d 33 .....	80
Card Reader Communication Test d 47 .....	80
Factory Test.....	81
To Enter Factory Test.....	82
To Exit Factory Test.....	82
 <b>Error Codes .....</b>	 <b>84</b>
 <b>Rapid Advance Feature.....</b>	 <b>87</b>
How to Enter Rapid Advance.....	87
How to Exit Rapid Advance Feature.....	87
 <b>Clear Vend Feature.....</b>	 <b>88</b>
How to Clear Vend.....	88
 <b>Power Fail Recovery.....</b>	 <b>89</b>
 <b>Communications Mode.....</b>	 <b>90</b>
Near Field Communications.....	90
Card Reader Communications - Card Models Only.....	90
Network Communications.....	90
 <b>Default Cycle Time.....</b>	 <b>91</b>



# Model Identification

Information in this manual is applicable to these washer models:

SWNNC2HP116TW01
SWNNC2SP116TW01
SWNNC2SP116TWSS
SWNNX2HP116TW01
SWNNX2SP116TW01
SWNNY2HP116TW01
SWNNY2SP116TW01
SWNNY2SP116TWSS
HWNNE2HP116CW01
HWNNE2SP116CW01
HWNNX2HP116CW01
HWNNX2SP116CW01
HWNNY2HP116CW01
HWNNY2SP116CW01
HWNNY2SP116CWSS

# Preliminary Information

## About the Control

This control is an advanced, programmable computer that lets the owner control machine features by pressing a sequence of SELECT CYCLE, SELECT TEMP and SELECT WASH pads.

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 Control for a list of features. Washers shipped from the factory have a default cycle and wash temperature setting of NORMAL, HOT, REGULAR built in. However, the owner can change the default cycle, or any cycle, as needs permit.

**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 (for up to 10 years) until the electrical power is restored.**

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

## 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.

FEC – Front End Control

I/O Board – Input/Output Board

OPL – On Premises Laundry

NFC – Near Field Communications

## 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 washer 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 *Programming Control*.

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 the ready mode.

If the wash basket is full of water, the control will prompt to pump out water on power-up.

## Communications

The control may be programmed manually, by Near Field Communication with an external device or by a network. A limited number of features can be programmed by a card reader.

### 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

Network communications allow an owner to program, collect data and run diagnostics on any machine.

### Near Field Communications

The Near Field Communications (NFC) 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.

# Control Identification

## Select Cycle Pads

SELECT CYCLE pads are used to select the specific washer cycle. These pads include NORMAL, SYNTHETIC, and DELICATE. These pads allow the user to select a cycle other than the default cycle (REGULAR NORMAL HOT). The SELECT CYCLE keypads are not active after the first fill has been completed. The selected cycle is indicated by the light (LED) on the pad. Pressing the flashing START pad will confirm the selection and the cycle will begin.

## Select Wash Temp Pads

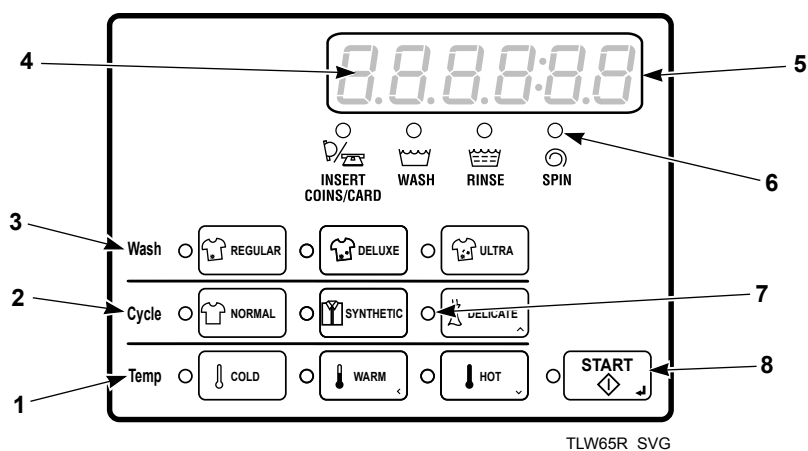
SELECT WASH TEMP pads are used to select the temperature of the water used for the wash fill. These pads include COLD,

WARM and HOT. These pads allow the user to select a water temperature other than the default setting (COLD).

**NOTE: Cycles are picked by selecting a Wash, Cycle and Temp pad.**

## Select Cycle Modifier Pads

The Cycle Modifier pad is used to select cycle modifier options. The REGULAR option is the default and indicates no cycle modifiers are active. The DELUXE and ULTRA options can be programmed to offer extra features for an added vend price.



1. SELECT WASH TEMP pads
2. SELECT CYCLE pads
3. SELECT Cycle Modifier pads
4. Six 7-Segment Digits
5. Display
6. LED Status Lights
7. LED Light
8. START pad

Figure 1

# Display Identification

## Light Emitting Diodes (LEDs)

LIGHT EMITTING DIODES (LEDs) are used to indicate the chosen cycle and cycle status. See below for information on each LED.

### **CYCLE LED**

CYCLE LED will remain lit the entire cycle.

### **WASH TEMP LED**

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

### **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.

### **INSERT COINS/CARD/CARD LED**

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

### **REGULAR LED**

REGULAR LED is lit when the Option REGULAR modifier is selected.

### **DELUXE LED**

DELUXE LED is lit when the Option DELUXE modifier is selected.

### **ULTRA LED**

ULTRA LED is lit when the Option ULTRA modifier is selected.

## 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.

# Washer Operation

## Power Up

When power is applied to the washer, the control will display its control type as **EL**, software version as **5---** (--- is the version number) and software subversion as **--** for one (1) second. If the control was not powered down during a running cycle, it will enter the Ready Mode.

## Ready Mode

In this mode of operation, the display shows the current selected cycle, modifier, temperature and the full current vend price for that cycle. The INSERT COINS/CARD/CARD LED is lit.

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

The user will be able to select a different cycle/wash water temperature or modifier by pressing a cycle pad when the machine is in the ready mode or before the first fill is complete.

## 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.

## Additional Vend Mode

The control enters this mode if a change is made before the first fill is complete. If the vend price is not satisfied within one (1) minute, the washer control will go back to the first selection and the cycle will continue. Pressing the START keypad will cancel cycle changes and exit this mode. After the first fill, all key presses will be ignored, allowing the washer 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, or the control is in OPL Mode. The START pad 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.

## End of Cycle Mode

When a cycle is complete, the control will display **00** until the washer is opened, a key is pressed, or a coin/card is entered. When one of these three options occurs, the display will revert back to the ready mode.

## 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 completes will be added to the total coin counter, but the user will not be able to change cycles.

## Signals

There are five options when a signal can be used during the washer operation. These five options 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 Serial or Network Vending Command** By default, this signal is turned on for a quarter of a second when the control receives a valid serial or network vend command.
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 Control* to program signal options.

## Opening the Washer Lid

If the washer lid is opened anytime except the final spin, the display will show **Lid** and the timer will stop. Once the lid is closed, the cycle will resume from the point of interruption. If the lid is opened in the final spin step, the timer will continue to count down to the end of the cycle. The cycle operation will stop and the display will show **Lid**. When the timer reaches 0 minutes, the control will display **00** until a key is pressed, or a coin/card is entered. When one of these options occur, the display will revert to the Ready Mode.

## Changing Cycles

Cycles and wash temperature can be changed before the first fill is complete. After the first fill, all key presses are ignored.

Selecting a higher priced cycle/wash temperature or modifier will pause the first fill step, and INSERT COINS/CARD/CARD LED 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 washer control will go back to the previously set cycle/wash temperature and modifier.

## Delayed Start Setup (OPL Only)

Delayed Start Setup Mode is entered by holding any key except for the START key for 5 seconds while in Start Mode. To prevent changing the selected cycle and options, the user should press and hold one of the actively selected keys.

The lid must be closed in order to enter this mode.

This mode is only manually accessible if the Delayed Start Mode (Enable/Disable) parameter is programmed to Enabled. While in the Delayed Start Setup Mode, pressing the DELICATE (Λ) or the HOT (V) keypads will alter the number of hours the cycle is delayed up to a maximum of 72 hours. The time will loop around when the maximum or minimum value is reached. The display will show **HH Hr5** while modifying time or **01 Hr** if 1 hour is set and this display will toggle 1 second on and 1 second off.

If the lid is opened while trying to program the delayed start time, the control will exit this mode and go back to Start Mode.

## Delayed Start (OPL Only)

Delayed Start is entered by pressing the Start keypad while in Delay Start Setup Mode. This mode is only manually accessible if the Delayed Start Mode (Enable/Disable) parameter is programmed to Enabled. The OPL Delay Start programming parameter can be programmed through NFC and Network commands. The display will show **HH Hr5** toggled with **DELAY** every 1 second while counting down the hours. The display will show **HH 01 in** toggled with **DELAY** every 1 second once the time is 1 hour or less (would transition from **02 Hr5** to **60 01 in**). The display will count down one hour or minute at a time showing a leading zero for one digit numbers.

Once the countdown time has expired the cycle will begin. Cycle selection related LEDs will be lit while in this mode.

This mode can be exited by pressing the Back keypad which will then place the control into Start Mode.

If the lid is opened at any point while in this mode, Delayed Start Mode will be exited and the control will enter Start Mode.

## Lockout Mode

If enabled in the Control Configuration, Lockout Mode is entered to prevent the machine from being used except by a particular user who has reserved the machine in advance. This mode is entered when the current time (in Hours and Minutes) falls within the time period set by the Lockout Mode Start Time Hour, Lockout Mode Start Time Minute, Lockout Duration, and when the control is in Ready Mode. The display will show **LES**. User access is ignored until Lockout Mode is exited. The control will be able to communicate with the Network, IR, or the Serial Payment System.

When entering the sequence of keypresses to exit Lockout Mode, pressing the START keypad signals the end of the keypress sequence. As each keypad is pressed the corresponding LED is lit. Anytime the START keypad is pressed the correct number of keys entered is verified and if not equal to four (4) the keypad sequence will be reset, all LED's will be turned off, and keypresses will be ignored for five (5) seconds while remaining in Lockout Mode. In addition, if five (5) keypads are pressed before the START keypad is pressed, the sequence will be reset, all LED's will be turned off, and keypresses will be ignored for five (5) seconds while remaining in Lockout Mode.

When the correct sequence of keypresses has been entered the control will enter Ready Mode. If the network programs the duration to zero, Lockout Mode will be exited.

## Shutdown Mode

Shutdown Mode is entered if a Low Power/Shutdown Option (1, 2, 3, or 4) becomes active with the Shutdown option enabled. To become active, the Low Power/Shutdown Option must be enabled in the Control Configuration and the current time, day-of-week, date, month, and year must match the programmed start requirements for the triggering Low Power/Shutdown Option.

If the control is in ready mode, drop-off mode, lockout mode, or start mode when no vend has been entered, shutdown mode can be entered. Shutdown Mode will automatically exit if the current time, day-of-week, date, month, and year satisfy an exit condition for the active Low Power/Shutdown Option. While in Shutdown Mode, the control will show **OFF** and all LEDs will be turned off.

Shutdown Mode can be exited by disabling the triggering Low Power/Shutdown Option (1, 2, 3, or 4) through Network and Ir-DA commands. In addition, the Low Power/Shutdown Option (1, 2, 3, or 4) can be disabled using manual programming.

## Power Failure Display Mode

In Power Failure Display Mode the control will show **PFAL**. This informs the user that a cycle was interrupted and did not complete normally. This mode is entered from Power-Up Mode if a power failure occurred during an OPL cycle and the cycle is not able to automatically resume. If the user presses any key, Start Mode is entered.

# Special Features

## Programming Control

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

## Collecting Audit Information

The control stores audit information in its memory that can be retrieved by pressing various combinations of Select Cycle pads.

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 service door and then pressing various sequences of Select Cycle pads, the owner may perform the following tests:

- Control Software Version # Test
- Input/Output Board Software Version # Test
- Service Door Switch Input Test
- Coin Vault Switch Input Test
- Coin Drop #1 Input Test
- Coin Drop #2 Input Test
- Vend Connection Header Present Input Test
- Start Pulse Input Test
- Lid Switch Input Test\*
- Show Fill Time Test
- Show Drain Time Test
- External Output Test\*
- Water Purge Test\*
- Water Leak Detection Test\*
- Water Level Test
- Machine Configuration #1 Display Test
- Machine Configuration #2 Display Test
- Machine Configuration #3 Display Test
- Machine Configuration #4 Display Test
- Machine Configuration #5 Display Test
- Card Communications Test

\* Tests can only be entered when in Start or Ready Mode.

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

## Rapid Advance Feature

This feature allows the user to quickly advance through an active cycle or advance into a cycle from the Ready Mode. This feature is useful when tests must be performed immediately on a machine currently in an active cycle. In this case, the user can quickly advance through the cycle to the Ready Mode. At this point, the user can perform the required tests and then return the machine to the active cycle.

## 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*.

## 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.

## Service Door and Coin Vault Openings

The control will capture the times and dates of the last seven openings of the Coin Vault and the Service Door. The information is saved in memory. An open service door and a closed coin vault 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, Diagnostics, Rapid Advance, and Reset to Factory Defaults.

## 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 service door 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 programmed keys.

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 followed by the START key as programmed by an external device. These keys can be programmed by an external device and are defaulted as modifier REGULAR, modifier DELUXE, modifier ULTRA and NORMAL.

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

## Out of Order Mode

This feature allows the owner to program Out of Order Mode which can be used to show the owner that the machine is not available to use. The control will accept coins and increment the appropriate audit counters but the vend entered will not count towards a cycle purchase, the coin audio will not work, and no cycle will run while Out of Order Mode is active.

Refer to *Out of Order oUt*.

## Network Node Number Display Mode

This feature allows the owner to program a command via IrDA or network that requests the control to display the network node number. The control will displays *nHHH* where *HHH* is the network node number.

## Error Display Mode

This feature is used to display a machine error. Only one error will be displayed at the time if there are multiple errors. Once the highest priority error is cleared, the next highest priority error will be displayed if multiple errors exist. Refer to *Error Codes* for more details on errors, their displays, and their priorities.



# Opening the Service Door

## Coin Models

Manual programming requires the user to unplug the bullet connector located between the “white/black” and “red/blue” wires. Reconnect the connector for normal operation.

After opening and closing the service door or unplugging the bullet connector, the programmer has 4.25 minutes to begin programming.

The service door is located on the top of the meter case. Refer to *Figure 2*.

## Card Reader Models

Manual programming requires the user to remove the control panel and unplug the bullet connector located between the “white/black” and “red/blue” wires. This will allow the user to access various programming options, diagnostics, and audit capabilities. Refer to *Figure 2*.

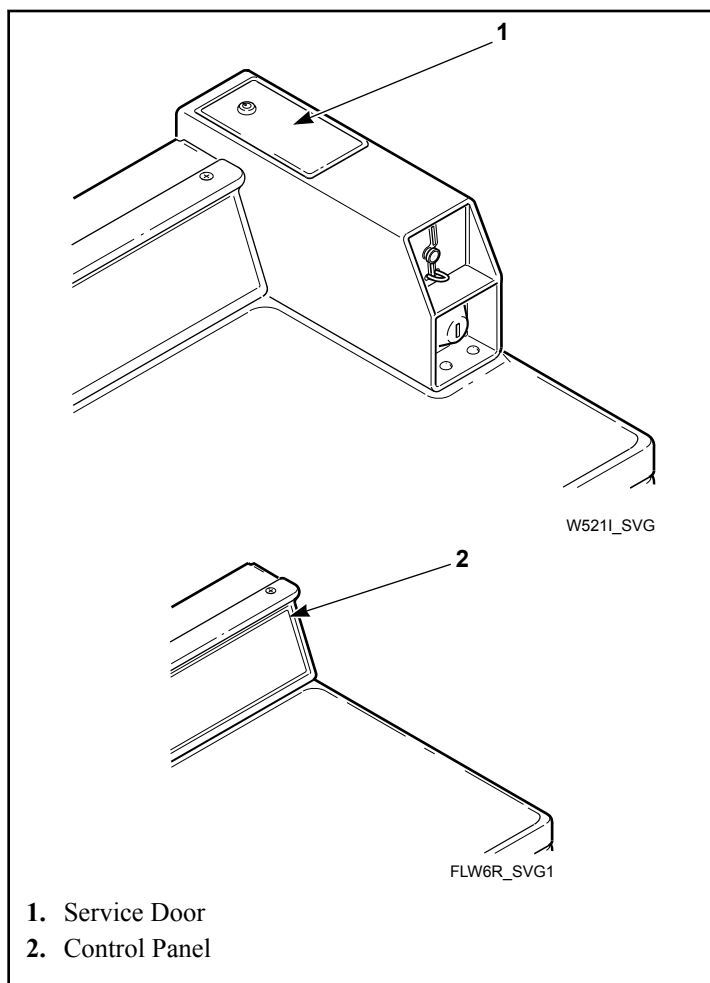


Figure 2

# Entering the Manual Mode

## How to Enter the Manual Mode

For programming, testing, and retrieving information from the control, it is often necessary to enter the Manual Mode by following the four simple steps below. For an overview of entering the Manual Mode, refer to the flowchart on the following page.

1. If accessing Diagnostic Tests that take control of machine operation, be sure the washer is in the Start or Ready Mode before continuing to step 2. If the washer is in an active cycle, rapid advance through the cycle. Refer to *Rapid Advance Feature*.
2. Open the service door, if necessary, and unplug bullet connector.
3. While pressing and holding the REGULAR keypad with one hand, press the NORMAL keypad with the other hand.
4. The display will show **rAP id**.
5. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the options until the desired option appears in the display.
6. Press the START (enter) keypad.  
**NOTE: After entering Manual Mode, if no keypads are pressed for 4.25 minutes, the control will return to the previous mode of operation.**
7. To exit, press the WARM (<) keypad. The control will revert back to Ready Mode.

Manual Programming can only be turned on or off with an external device or a network. Refer to the appropriate instruction manual. Manual Rapid Advance and Diagnostics can be turned on and off using an external device by manual programming (refer to NFC Access (On/Off) NFC En or Manual Rapid Advance rAPdEn), or with the network.

By default, all groups are turned on.

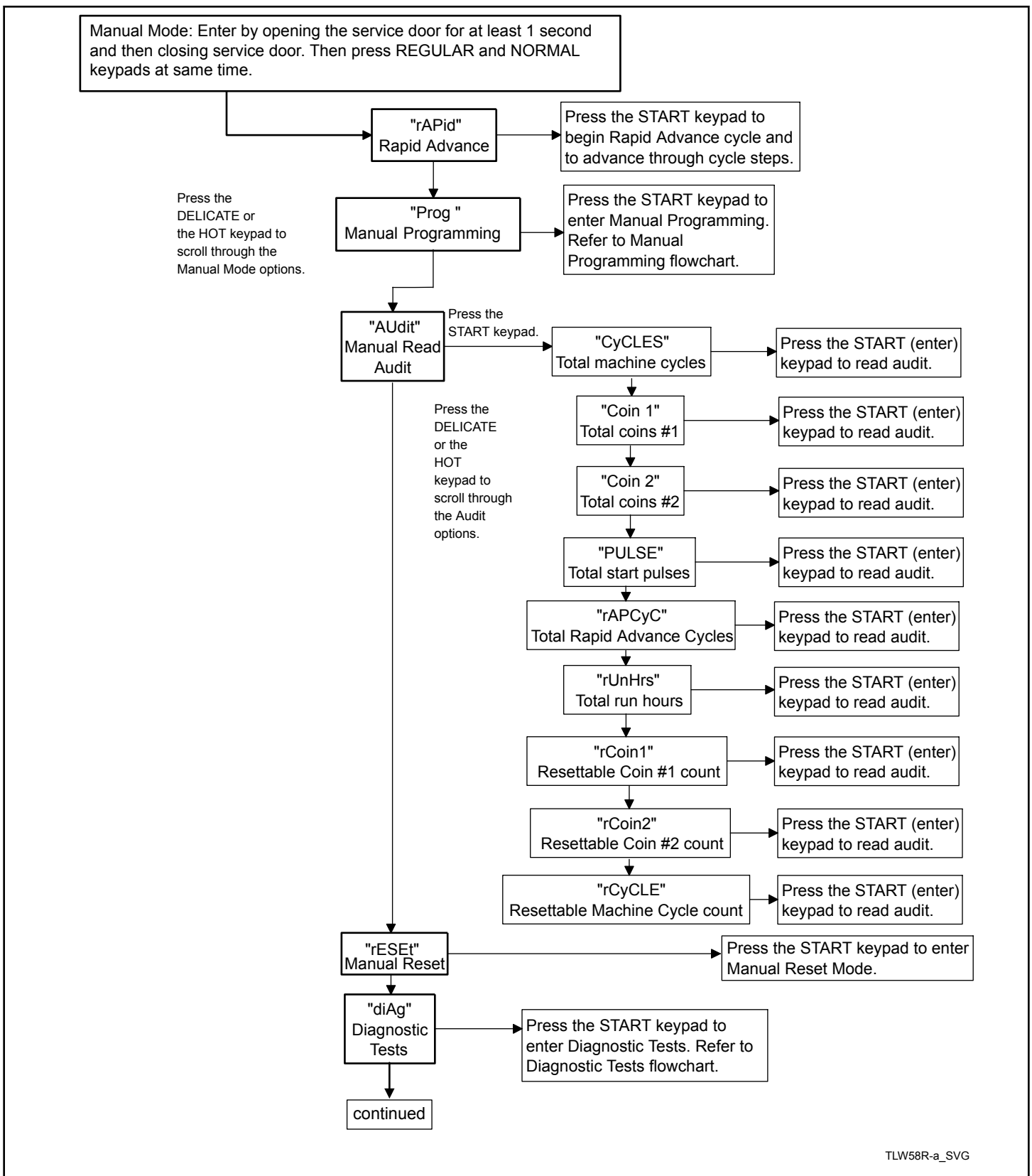
The manual features available in each group are as follows (the menu shown on the display in this mode is in parentheses).

- Manual Programming (**Pr o g**)
- Manual Read Audit (**RUd i t**)
- Manual Reset (**rESEt**)
- Rapid Advance (**rAP id**)
- Manual Diagnostic Tests (**d iA g**)
- WiFi (**W i F i**)

If a group is turned off, the display will change from the selected feature to **oFF** when the START (enter) pad is pressed. An audio signal will then sound for one (1) second and the display will return to the selected feature. The features in the group cannot be entered.

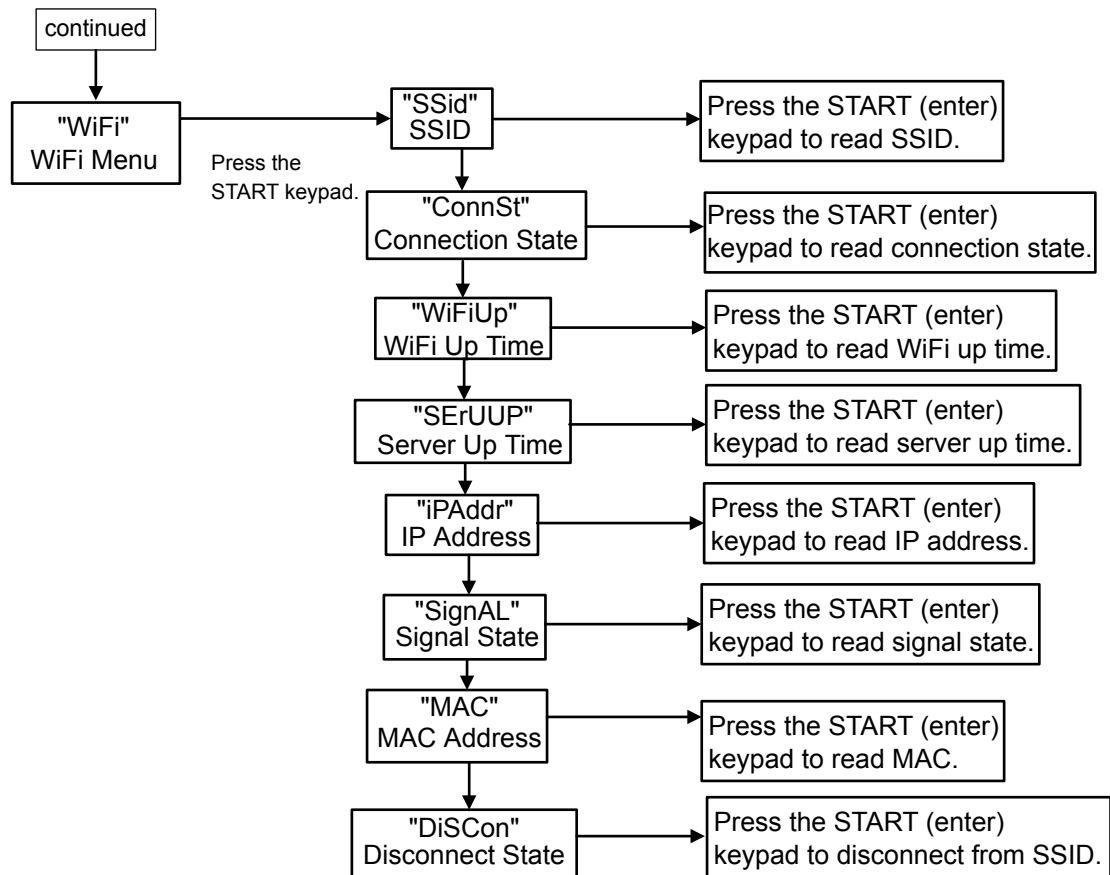
## Manual Mode Navigation

Manual Mode is broken into six groups: Manual Programming, Manual Read Audit, Manual Reset, Manual Rapid Advance, Manual Diagnostics, and WiFi.



TLW58R-a\_SVG

Figure 3



TLW58R-b\_SVG

# Programming Control

## What Can Be Programmed

This feature allows the owner to program cycle information, 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 the network.

Refer to this section when programming the control. This section offers a detailed description of all options available to program.

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, a quick reference list of the options available through the programming mode is located on this page.

**NOTE: The letters and numbers in the Option Display column of the Programmable Options List are what will be shown in the display when that option is selected.**

## Programmable Options Available

Option Number	Option Display	Description	Factory Default	Value Range
1	<i>Alt 1</i>	Vend Price #1	200	0 - 65,535
2	<i>Alt 2</i>	Vend Price #2	200	0 - 65,535
3	<i>Alt 3</i>	Vend Price #3	200	0 - 65,535
4	<i>Alt 4</i>	Vend Price #4	200	0 - 65,535
5	<i>Alt 5</i>	Vend Price #5	200	0 - 65,535
6	<i>Alt 6</i>	Vend Price #6	200	0 - 65,535
7	<i>Alt 7</i>	Vend Price #7	200	0 - 65,535
8	<i>Alt 8</i>	Vend Price #8	200	0 - 65,535
9	<i>Alt 9</i>	Vend Price #9	200	0 - 65,535
10	<i>Alt SL</i>	Unused	-	-
11	<i>ACNP 1</i>	Cycle Modifier Key 1 Deluxe Vend Price Adder	25	0 - 65,535
12	<i>ACNP 2</i>	Cycle Modifier Key 2 Ultra Vend Price Adder	50	0 - 65,535
13	<i>Alt dP</i>	Vend Price Decimal Point	2	oFF, 2, 3
14	<i>dEn 1</i>	Coin #1 Value	25	1 - 65,535
15	<i>dEn 2</i>	Coin #2 Value	100	1 - 65,535
16	<i>SErPAY</i>	Serial Payment Configuration	1	Disabled (0), Serial (1), Card (2), Start Pulse (3)

*Table continues...*

Option Number	Option Display	Description	Factory Default	Value Range
17	<i>PULSE</i>	Start Pulse Value	25	1 - 65,535
18	<i>PLSnod</i>	Start Pulse Mode	128	0, 128, 192
19	<i>ALYPE</i>	Programmable Output Type	0	0 - 14
20	<i>DFELCYC</i>	Default Cycle	3	1 - 9
21	<i>CRrd</i>	Card Reader Display Control	oFF	on/oFF
22	<i>AUdio</i>	Audio Signal	29	0 - 31
23	<i>nodE</i>	Network Node Number	250	1 - 250
24	<i>Error--</i>	Errors Menu	—	—
a	<i>CErr--</i>	Coin Error Parameters Menu	—	—
1	<i>CErr 1</i>	Coin Error	on	on/oFF
2	<i>CErr 2</i>	Coin Error Penalty	oFF	on/oFF
3	<i>CErr 3</i>	Vend Header Present Error	on	on/oFF
b	<i>E FL-</i>	Fill Error Menu	—	—
1	<i>E FL 1</i>	Fill Error	on	on/oFF
2	<i>E FL 2</i>	Fill Error Time	30	2 - 90
c	<i>E nF-</i>	No Water Flow Error Menu	—	—
1	<i>E nF 1</i>	No Water Flow Error	on	on/oFF
2	<i>E nF 2</i>	No Water Flow Error Time	5	1 - 59
e	<i>E dr-</i>	Drain Error Menu	—	—
1	<i>E dr 1</i>	Drain Error	on	on/oFF
f	<i>E Ld-</i>	Water Leak Detection Error Menu	—	—
1	<i>E Ld 1</i>	Water Leak Detection Day of Week	oFF	oFF, 3 - 255
2	<i>E Ld 2</i>	Water Leak Detection Number of Cycles	10	oFF, 0 - 127

Table continues...

Option Number	Option Display	Description	Factory Default	Value Range
3	<i>E Ld 3</i>	Water Leak Detection Display Sequence	on	on/oFF
g	<i>E 5d-</i>	Slow Drain Detection Error Menu	—	—
1	<i>E 5d 1</i>	Slow Drain Detection	oFF	on/oFF
2	<i>E 5d 2</i>	Slow Drain Detection Adjust	0	0 - 255
h	<i>ourFLd</i>	Overflow Mode Display	on	on/oFF
i	<i>CLrErr</i>	Allow error Cleaning	oFF	on/oFF
25	<i>rEtC-</i>	Real Time Clock Menu	—	—
a	<i>rEtC 1</i>	Set Real Time Clock Minutes	—	0 - 59
b	<i>rEtC 2</i>	Set Real Time Clock Hours	—	0 - 23
c	<i>rEtC 3</i>	Set Real Time Clock Day of Week	—	1 - 7
d	<i>rEtC 4</i>	Set Real Time Clock Date of Month	—	1 - 31
e	<i>rEtC 5</i>	Set Real Time Clock Month	—	1 - 12
f	<i>rEtC 6</i>	Set Real Time Clock Year	—	0 - 99
26	<i>dL5-</i>	Daylight Savings Option Menu	—	—
a	<i>dL5 1</i>	Daylight Saving	on	on/oFF
b	<i>dL5 2</i>	Start Month	3	1 - 12
c	<i>dL5 3</i>	Start Day of Week	7	1 - 7
d	<i>dL5 4</i>	Start Week of Month	2	1 - 4
e	<i>dL5 5</i>	Start Hour	2	0 - 23
f	<i>dL5 6</i>	End Month	11	1 - 12
g	<i>dL5 7</i>	End Day of Week	7	1 - 7
h	<i>dL5 8</i>	End Week of Month	1	1 - 4

Table continues...

Option Number	Option Display	Description	Factory Default	Value Range
i	<i>dL 5 9</i>	End Hour	2	0 - 23
27	<i>SP 1-</i>	Special Vend 1 Parameters Menu	—	—
a	<i>SP 1 1</i>	Special Vend 1 Days Enable	oFF	Refer to <i>Table 9</i>
b	<i>SP 1 2</i>	Special Vend 1 Start Minute	0	0 - 59
c	<i>SP 1 3</i>	Special Vend 1 Start Hour	0	0 - 23
d	<i>SP 1 4</i>	Special Vend 1 Start Date	oFF	oFF, 1 - 31
e	<i>SP 1 5</i>	Special Vend 1 Start Month	oFF	oFF, 1 - 12
f	<i>SP 1 6</i>	Special Vend 1 Start Year	0	0 - 99
g	<i>SP 1 7</i>	Special Vend 1 Length in Hours	0	0 - 24
h	<i>SP 1 8</i>	Special Vend 1 End Date	oFF	oFF, 1 - 31
i	<i>SP 1 9</i>	Special Vend 1 End Month	oFF	oFF, 1 - 12
j	<i>SP 1 10</i>	Special Vend 1 End Year	0	0 - 99
k	<i>SP 1 11</i>	Special Vend 1 Price #1	0	0 - 65,535
l	<i>SP 1 12</i>	Special Vend 1 Price #2	0	0 - 65,535
m	<i>SP 1 13</i>	Special Vend 1 Price #3	0	0 - 65,535
n	<i>SP 1 14</i>	Special Vend 1 Price #4	0	0 - 65,535
o	<i>SP 1 15</i>	Special Vend 1 Price #5	0	0 - 65,535
p	<i>SP 1 16</i>	Special Vend 1 Price #6	0	0 - 65,535

*Table continues...*



Option Number	Option Display	Description	Factory Default	Value Range
q	<i>SP 1 17</i>	Special Vend 1 Price #7	0	0 - 65,535
r	<i>SP 1 18</i>	Special Vend 1 Price #8	0	0 - 65,535
s	<i>SP 1 19</i>	Special Vend 1 Price #9	0	0 - 65,535
t	<i>SP 1 20</i>	Special Vend 1 Added Wash Status Agitate Steps Added Minutes	0	0 - 10
u	<i>SP 1 21</i>	Special Vend 1 Subtracted Wash Status Agitate Steps Subtracted Minutes	0	0 - 10
v	<i>SP 1 22</i>	Special Vend 1 Cycle Modifier Default Value	0	0 - 2
w	<i>SP 1 23</i>	Special Vend 1 Cycle Modifier Key #1 Deluxe Vend Price	0	0 - 65,535
x	<i>SP 1 24</i>	Special Vend 1 Cycle Modifier Key #2 Ultra Vend Price	0	0 - 65,535
y	<i>SP 1 25</i>	Special Vend 1 Cycle Modifier Key #1 Deluxe Options	0	0 - 1
z	<i>SP 1 26</i>	Special Vend 1 Cycle Modifier Key #2 Ultra Options	0	0 - 1
28	<i>SP2</i>	Special Vend 2 Days Enable	oFF	on/oFF
29	<i>SP3</i>	Special Vend 3 Days Enable	oFF	on/oFF
30	<i>SP4</i>	Special Vend 4 Days Enable	oFF	on/oFF
31	<i>CNP-</i>	Cycle Modifier Programming Menu	—	—
a	<i>CNP 1</i>	Default Cycle Modifier	0	0 - 2
b	<i>CNP 2</i>	Cycle Modifier Key #1 Deluxe Options	0	0 - 1

Table continues...

Option Number	Option Display	Description	Factory Default	Value Range
c	<i>CNP 3</i>	Cycle Modifier Key # 2 Ultra Options	0	0 - 1
d	<i>CNP 4</i>	Cycle Modifier Deluxe Additional Wash Time	2	0 - 10
e	<i>CNP 5</i>	Cycle Modifier Deluxe Additional Extra Rinse Time	0	0 - 10
f	<i>CNP 6</i>	Cycle Modifier Ultra Additional Wash Time	2	0 - 10
g	<i>CNP 7</i>	Cycle Modifier Ultra Additional Extra Rinse Time	0	0 - 10
32	<i>CYCP-</i>	Cycle Parameters	—	—
a	<i>CYCP 1</i>	Normal Wash Agitate Time	10	0 - 10
b	<i>CYCP 2</i>	Normal Rinse Agitate Time	4	0 - 10
c	<i>CYCP 3</i>	Normal Extra Rinse Agitate Time	0	0 - 10
d	<i>CYCP 4</i>	Normal Final Spin Time	7	0 - 10
e	<i>CYCP 5</i>	Synthetic Wash Agitate Time	10	0 - 10
f	<i>CYCP 6</i>	Synthetic Rinse Agitate Time	4	0 - 10
g	<i>CYCP 7</i>	Synthetic Extra Rinse Agitate Time	0	0 - 10
h	<i>CYCP 8</i>	Synthetic Final Spin Time	6	0 - 10
i	<i>CYCP 9</i>	Delicate Wash Agitate Time	10	0 - 10
j	<i>CYCP 10</i>	Delicate Rinse Agitate Time	4	0 - 10
k	<i>CYCP 11</i>	Delicate Extra Rinse Agitate Time	0	0 - 10
l	<i>CYCP 12</i>	Delicate Final Spin Time	5	0 - 10

*Table continues...*

Option Number	Option Display	Description	Factory Default	Value Range
m	<i>LYCP 13</i>	Warm Rinse Option	oFF	on/oFF
n	<i>LYCP 14</i>	Timed Hot Fill on = Less hot water oFF = More hot water	on	on/oFF
o	<i>LYCP 15</i>	Spray Rinse	on	on/oFF
33	<i>LPAS 1</i>	Low Power/Auto Shut-down 1 Days Enable	oFF	on/oFF
34	<i>LPAS 2</i>	Low Power/Auto Shut-down 2 Days Enable	oFF	on/oFF
35	<i>LPAS 3</i>	Low Power/Auto Shut-down 3 Days Enable	oFF	on/oFF
36	<i>LPAS 4</i>	Low Power/Auto Shut-down 4 Days Enable	oFF	on/oFF
37	<i>PF rSt</i>	Power Fail Reset	-	-
a	<i>PF En</i>	Power Fail Reset Enable Option	oFF	on/oFF
b	<i>rSt ti</i>	Power Fail Reset Time in Minutes	5	0-120 minutes
38	<i>NFC En</i>	NFC Access (On/Off)	on	on/oFF
39	<i>rRPdEn</i>	Manual Rapid Advance Access	on	on/oFF
40	<i>d iAGEn</i>	Manual Diagnostics Access	on	on/oFF
41	<i>Ft En</i>	Factory Test Access	on	on/oFF
42	<i>LUC -</i>	Lucky Cycle Menu	—	—
a	<i>LUC 1</i>	Lucky Cycle	oFF	oFF, 3 - 255
b	<i>LUC 2</i>	Lucky Cycle Number	50	1 - 255
c	<i>LUC 3</i>	Lucky Cycle Display Option	oFF	on/oFF
43	<i>EP ind</i>	Water Temperature Indicator	—	on/oFF
44	<i>PCdL d</i>	Programmable Close Lid Display	on	on/oFF

Table continues...

Option Number	Option Display	Description	Factory Default	Value Range
45	<i>PPSt d</i>	Programmable Push Start Display	on	on/oFF
46	<i>PodL d</i>	Programmable Open Lid Display	on	on/oFF
47	<i>RtS da</i>	Vend Price Display Override	oFF	on/oFF
48	<i>oPL -</i>	OPL Parameters	—	—
a	<i>oPL 1</i>	OPL Mode Enable	oFF	on/oFF
b	<i>oPL 2</i>	OPL Delayed Start	oFF	on/oFF
c	<i>oPL 3</i>	OPL Display Power Save	on	on/oFF
49	<i>droP</i>	Drop Off Mode	oFF	on/oFF
50	<i>oUt</i>	Out of Order	oFF	on/oFF

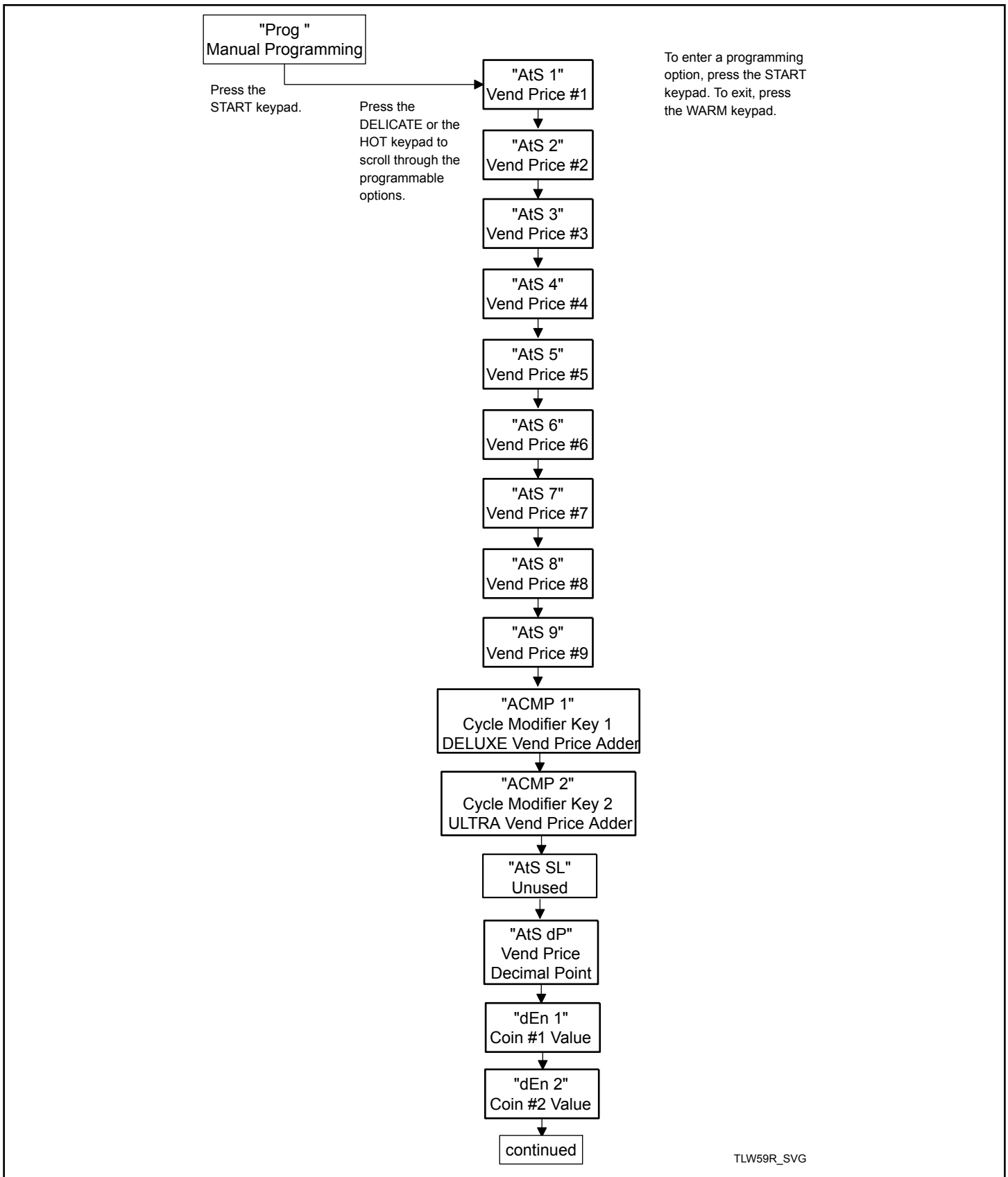


Figure 4

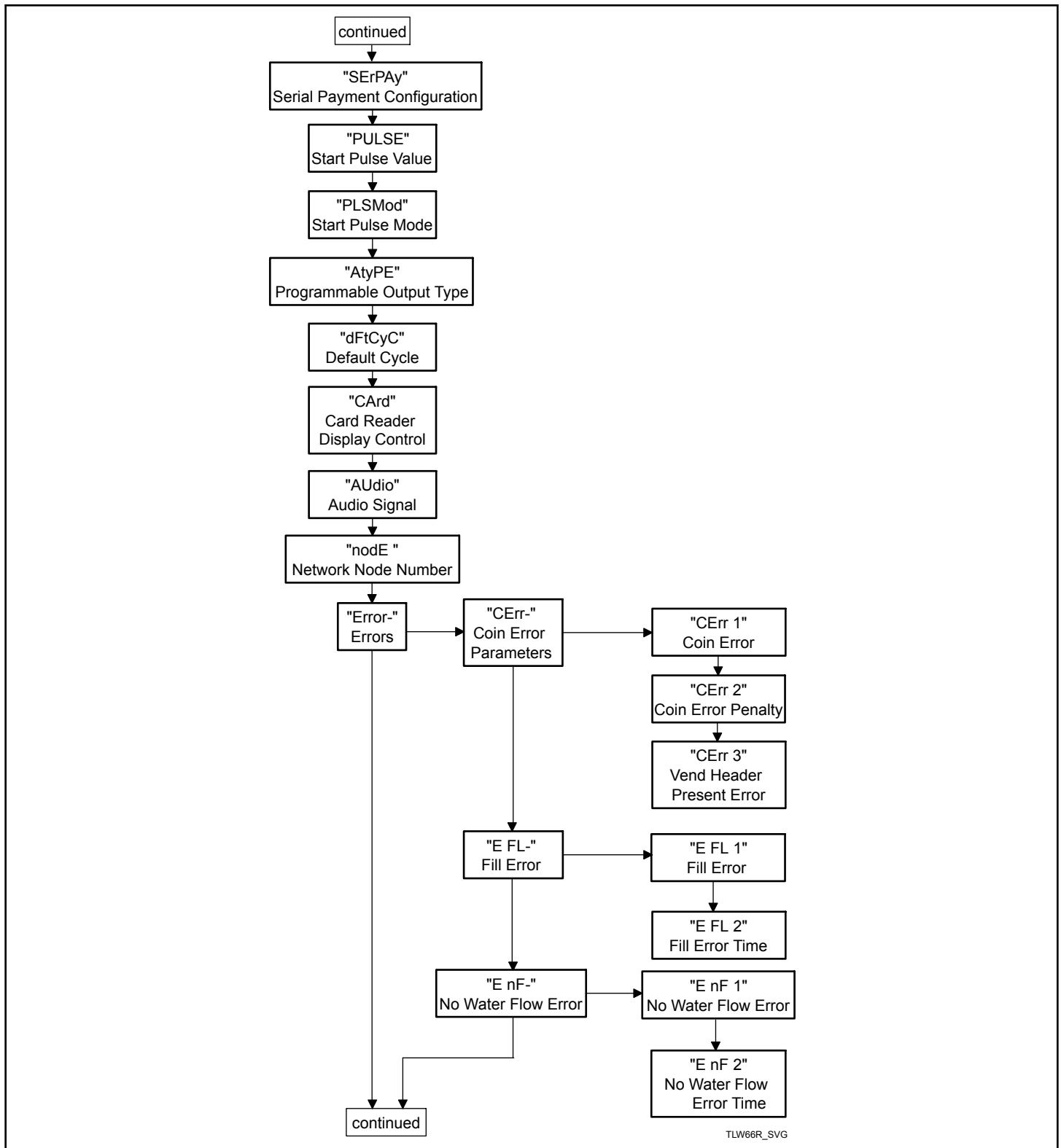


Figure 5

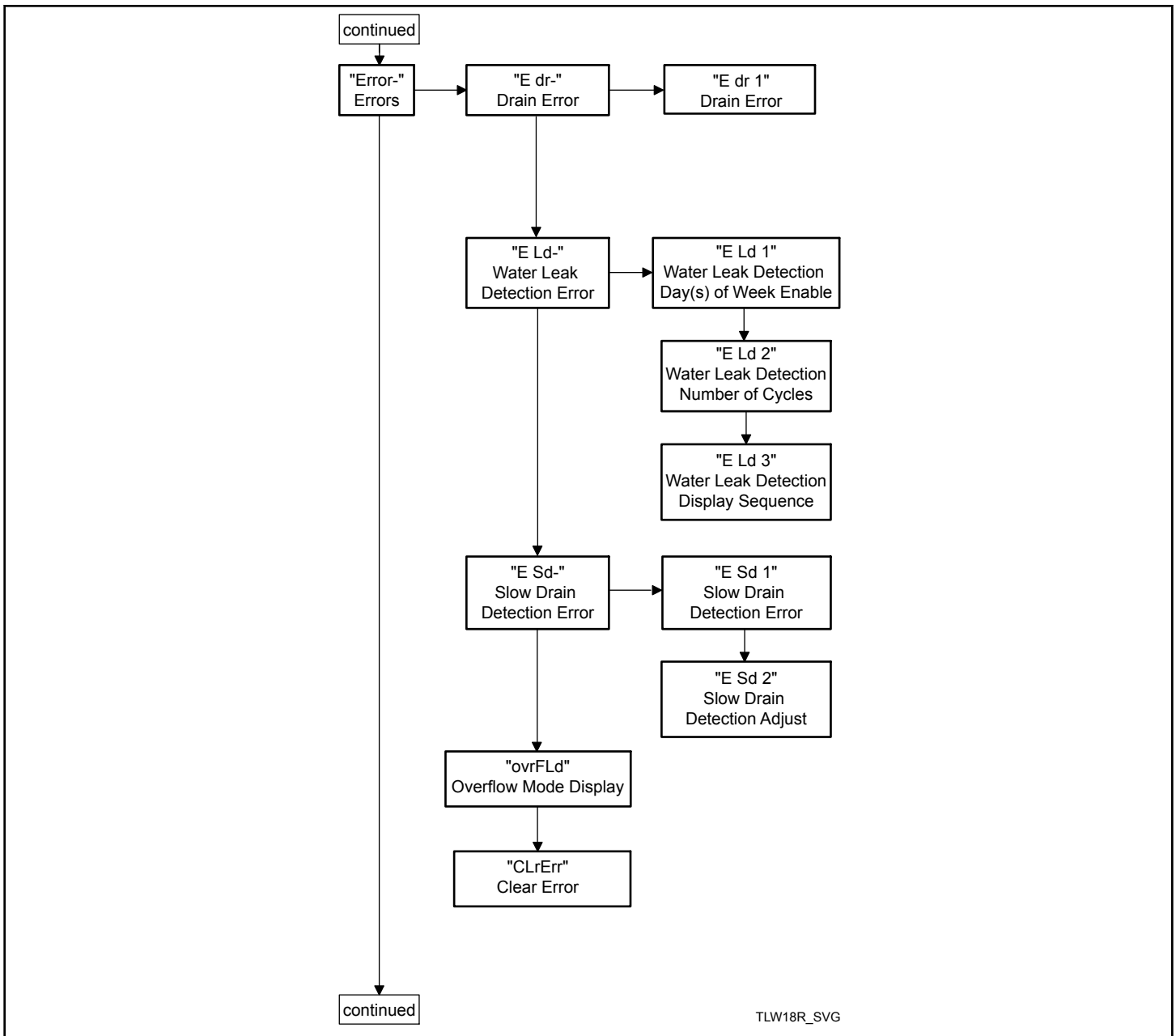


Figure 6

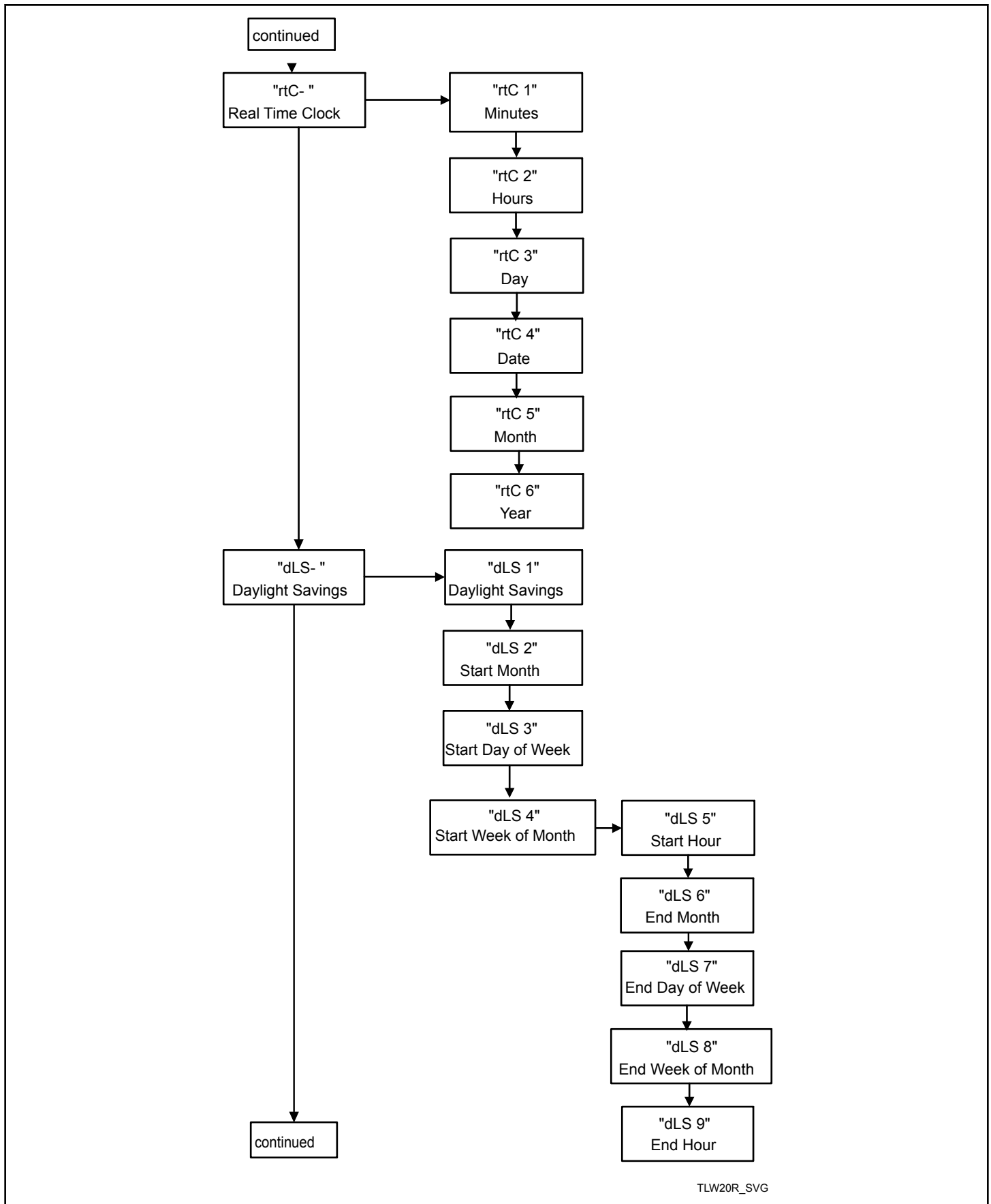


Figure 7



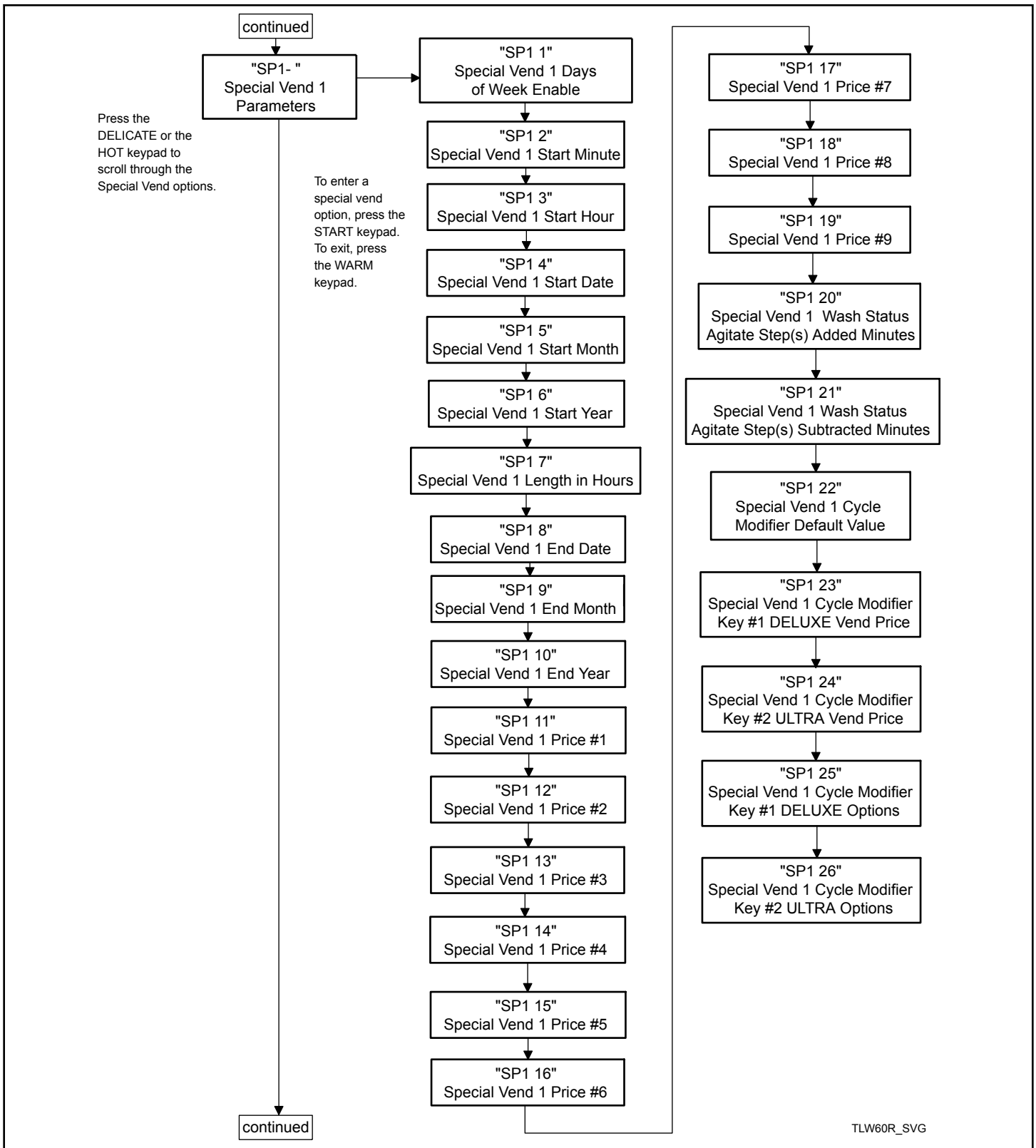


Figure 8

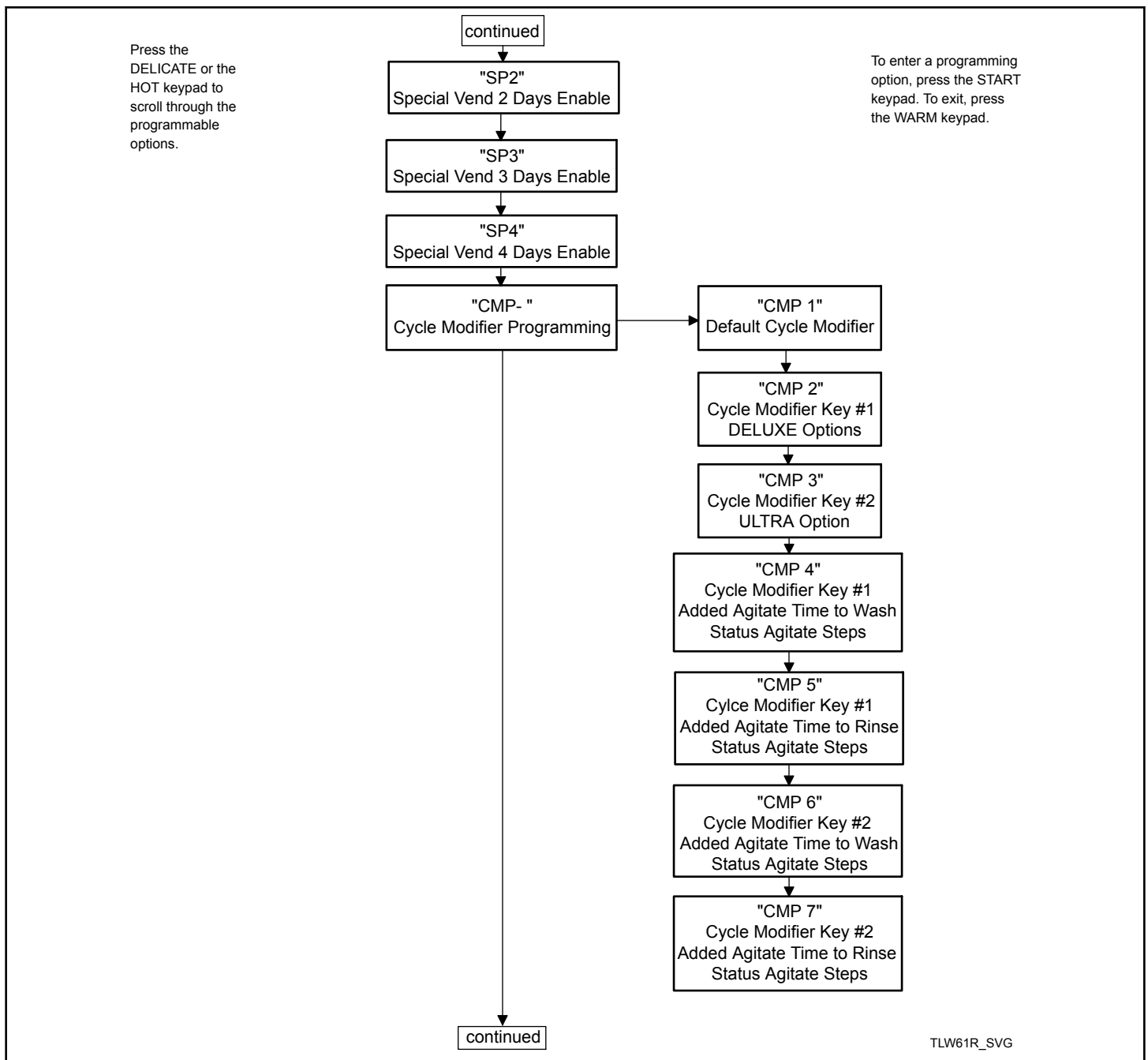
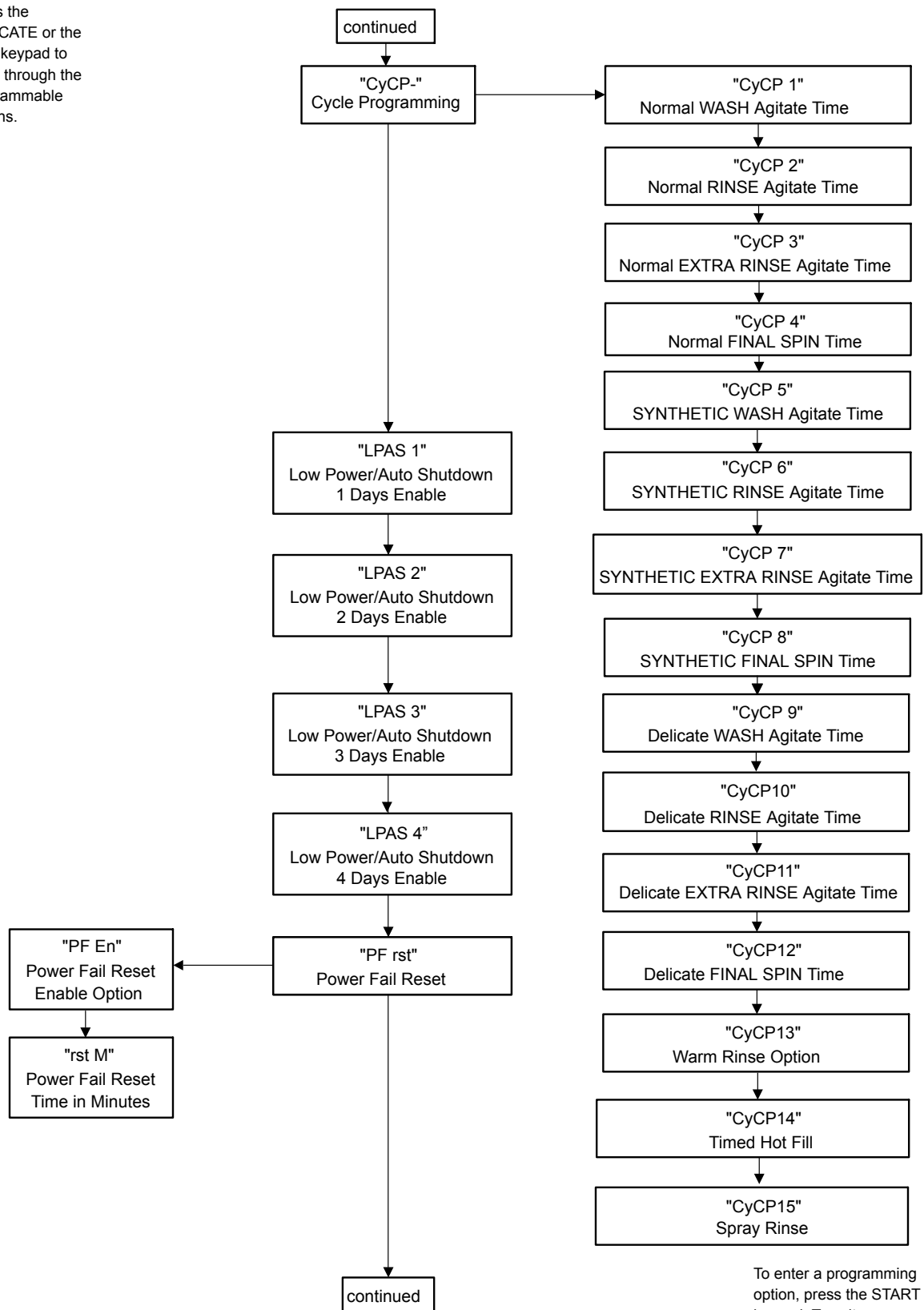


Figure 9

Press the  
DELICATE or the  
HOT keypad to  
scroll through the  
programmable  
options.



TLW72R\_SVG

Figure 10

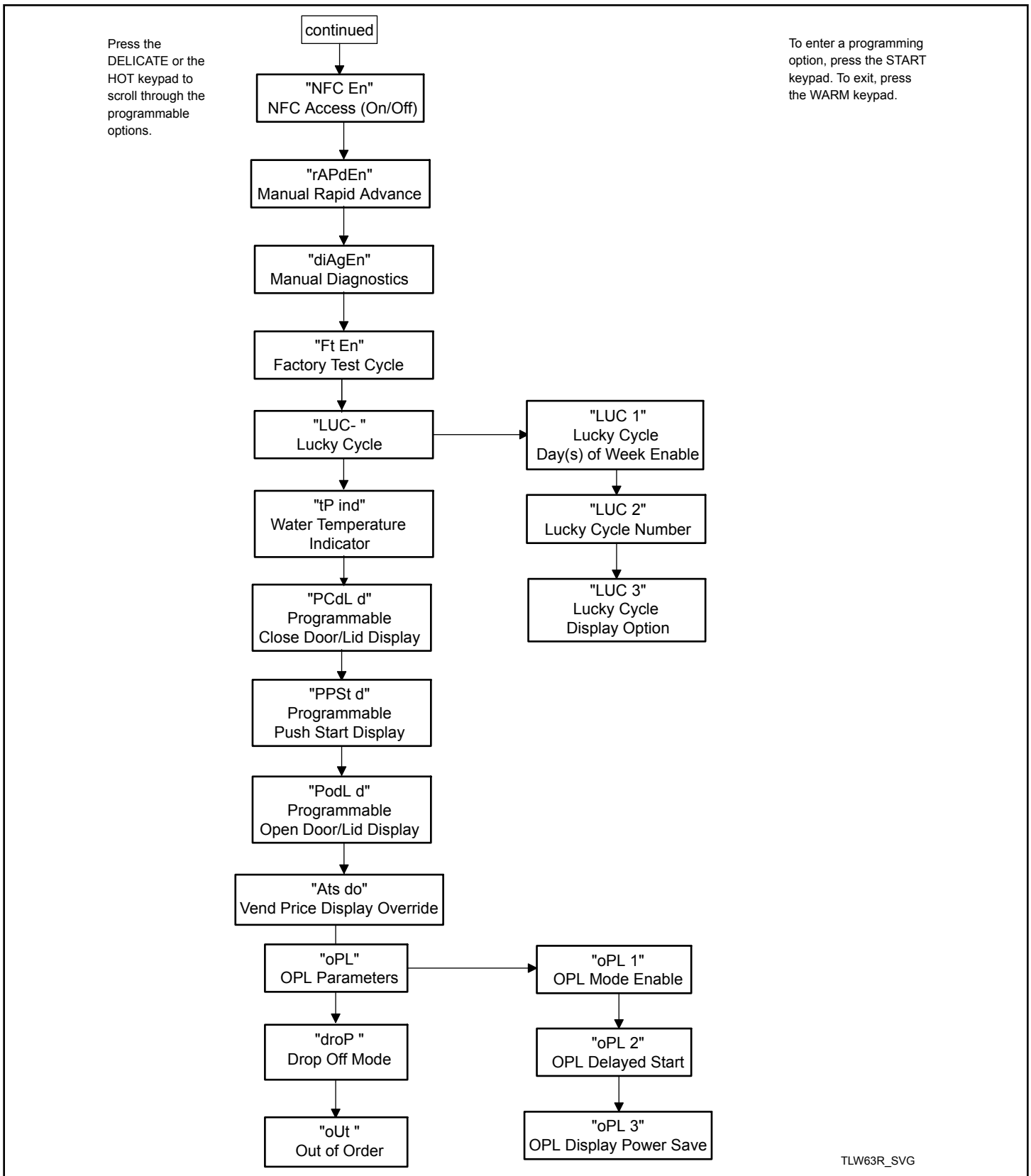


Figure 11

## Vend Price 1 At 5 /

This option allows the owner to set the vend price for all cycles, but otherwise specifically for NORMAL HOT. This price should

be set before all other prices. This vend price will be shown in the display when NORMAL HOT is selected.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prøg** appears in the display. Press the START (enter) keypad, and **Æ5 1** will appear in the display.
3. Press the START (enter) keypad. All cycle LEDs will be lit to show all cycle prices are being programmed.

**NOTE: To go back to the current programmable option without changing the value, press the WARM (<) keypad.**

4. Press the DELICATE (Λ) or the HOT (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.
5. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Vend Price 2 Æ5 2

This option allows the owner to set the vend price for NORMAL WARM. This vend price will be shown in the display when NORMAL WARM is selected.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prøg** appears in the display. Press the START (enter) keypad, and **Æ5 1** will appear in the display.
3. The keypad LEDs will be lit to show which cycle price is being programmed.
4. When **Æ5 2** appears in the display, press the START (enter) keypad.

**NOTE: To go back to the current programmable option without changing the value, press the WARM (<) keypad.**

5. Press the DELICATE (Λ) or the HOT (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 when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Vend Price 3 Æ5 3

This option allows the owner to set the vend price for a NORMAL COLD. This vend price will be shown in the display when NORMAL COLD is selected.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.

2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prøg** appears in the display. Press the START (enter) keypad, and **Æ5 1** will appear in the display.
3. The keypad LEDs will be lit to show which cycle price is being programmed.
4. When **Æ5 3** appears in the display, press the START (enter) keypad.

**NOTE: To go back to the current programmable option without changing the value, press the WARM (<) keypad.**

5. Press the DELICATE (Λ) or the HOT (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 when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Vend Price 4 Æ5 4

This option allows the owner to set the vend price for a SYNTHETIC HOT. This vend price will be shown in the display when SYNTHETIC HOT is selected.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prøg** appears in the display. Press the START (enter) keypad, and **Æ5 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **Æ5 4** appears in the display.
4. The keypad LEDs will be lit to show which cycle price is being programmed.
5. When **Æ5 4** appears in the display, press the START (enter) keypad.

**NOTE: To go back to the current programmable option without changing the value, press the WARM (<) keypad.**

6. Press the DELICATE (Λ) or the HOT (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.
7. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Vend Price 5 Æ5 5

This option allows the owner to set the vend price for SYNTHETIC WARM. This vend price will be shown in the display when SYNTHETIC WARM is selected.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.

2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prø9** appears in the display. Press the START (enter) keypad, and **Æ5 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **Æ5 5** appears in the display.
4. The keypad LEDs will be lit to show which cycle price is being programmed.
5. When **Æ5 5** appears in the display, press the START (enter) keypad.  
**NOTE: To go back to the current programmable option without changing the value, press the WARM (<) keypad.**
6. Press the DELICATE (Λ) or the HOT (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.
7. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Vend Price 6 Æ5 5

This option allows the owner to set the vend price for SYNTHETIC COLD. This vend price will be shown in the display when SYNTHETIC COLD is selected.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prø9** appears in the display. Press the START (enter) keypad, and **Æ5 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **Æ5 5** appears in the display.
4. The keypad LEDs will be lit to show which cycle price is being programmed.
5. When **Æ5 5** appears in the display, press the START (enter) keypad.  
**NOTE: To go back to the current programmable option without changing the value, press the WARM (<) keypad.**
6. Press the DELICATE (Λ) or the HOT (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.
7. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Vend Price 7 Æ5 7

This option allows the owner to set the vend price for DELICATE HOT. This vend price will be shown in the display when DELICATE HOT is selected.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prø9** appears in the display. Press the START (enter) keypad, and **Æ5 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **Æ5 7** appears in the display.
4. The DELICATE and COLD LEDs will be lit to show which cycle/temperature price is being programmed.
5. When **Æ5 7** appears in the display, press the START (enter) keypad.  
**NOTE: To go back to the current programmable option without changing the value, press the WARM (<) keypad.**
6. Press the DELICATE (Λ) or the HOT (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.
7. Press the START (enter) keypad with the last active digit. The next option, **Æ5 8**, will appear in the display.

## Vend Price 8 Æ5 8

This option allows the owner to set the vend price for DELICATE WARM. This vend price will be shown in the display when DELICATE WARM is selected.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prø9** appears in the display. Press the START (enter) keypad, and **Æ5 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **Æ5 8** appears in the display.
4. The DELICATE and WARM LEDs will be lit to show which cycle/temperature price is being programmed.
5. When **Æ5 8** appears in the display, press the START (enter) keypad.  
**NOTE: To go back to the current programmable option without changing the value, press the WARM (<) keypad.**
6. Press the DELICATE (Λ) or the HOT (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.
7. Press the START (enter) keypad with the last active digit. The next option, **Æ5 9**, will appear in the display.

## Vend Price 9 *RLS 9*

This option allows the owner to set the vend price for DELICATE COLD. This vend price will be shown in the display when DELICATE COLD is selected.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until *Prog* appears in the display. Press the START (enter) keypad, and *RLS 1* will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until *RLS 9* appears in the display.
4. The DELICATE and HOT LEDs will be lit to show which cycle/temperature price is being programmed.
5. When *RLS 9* appears in the display, press the START (enter) keypad.

**NOTE: To go back to the current programmable option without changing the value, press the WARM (<) keypad.**

6. Press the DELICATE (Λ) or the HOT (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.
7. Press the START (enter) keypad with the last active digit. The next option, *dEn 1*, will appear in the display.

## Cycle Modifier Key 1 DELUXE Vend Price Adder *RLNP 1*

This option allows the owner to add to the vend price for the DELUXE modifier key. This price is added onto the cycle price.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until *Prog* appears in the display. Press the START (enter) keypad, and *RLS 1* will appear in the display.
3. Press the DELICATE (Λ) or the DELICATE HOT(V) keypad to scroll through the programmable options until *RLNP 1* appears in the display.
4. The DELUXE modifier LED will be lit to show which price is being programmed.
5. When *RLNP 1* appears in the display, press the START (enter) keypad.

**NOTE: To go back to the current programmable option without changing the value, press the WARM (<) keypad.**

6. Press the DELICATE (Λ) or the HOT (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.

7. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Cycle Modifier Key 2 ULTRA Vend Price Adder *RLNP 2*

This option allows the owner to add to the vend price for the ULTRA modifier key. This price is added onto the cycle price.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until *Prog* appears in the display. Press the START (enter) keypad, and *RLS 1* will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until *RLNP 2* appears in the display.
4. The ULTRA modifier LED will be lit to show which price is being programmed.
5. When *RLNP 2* appears in the display, press the START (enter) keypad.

**NOTE: To go back to the current programmable option without changing the value, press the WARM (<) keypad.**

6. Press the DELICATE (Λ) or the HOT (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.
7. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Vend Price Decimal Point *RLS dP*

This option allows the owner to enable a decimal point to show up in the vend price at one of two locations. For example, a vend price of *200* can be display with a decimal point as *200* or *0.200*.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until *Prog* appears in the display. Press the START (enter) keypad, and *RLS 1* will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until *RLS dP* appears in the display.
4. When *RLS dP* appears in the display, press the START (enter) keypad.

**NOTE: To go back to the current programmable option without changing the value, press the WARM (<) keypad.**

5. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the value of the parameter.

- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Coin 1 Value *dEn 1*

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 Vend Price 1 is set for “.75”, and the Coin Value is set for “00025”, the vend price displayed will decrease by 0.25 for each coin entered and 3 coins will need to be entered to satisfy the vend price.

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
- Press the DELICATE (Λ) or the HOT (V) keypad until *Prø9* appears in the display. Press the START (enter) keypad, and *Æ5 1* will appear in the display.
- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until *dEn 1* appears in the display.
- When *dEn 1* appears in the display, press the START (enter) keypad.

**NOTE: To go back to the current programmable option without changing the value, press the WARM (<) keypad.**

- Press the DELICATE (Λ) or the HOT (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.
- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Coin 2 Value *dEn 2*

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 (1.00). Therefore, the coin value entered for one dollar coin would be 00100.

If the Vend Price #1 (option 1) 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 and 2 coins will need to be entered to satisfy the vend price.

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
- Press the DELICATE (Λ) or the HOT (V) keypad until *Prø9* appears in the display. Press the START (enter) keypad, and *Æ5 1* will appear in the display.

- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until *dEn 2* appears in the display.
- When *dEn 2* appears in the display, press the START (enter) keypad.

**NOTE: To go back to the current programmable option without changing the value, press the WARM (<) keypad.**

- Press the DELICATE (Λ) or the HOT (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.
- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Serial Payment Configuration *SErPAY*

This option allows the owner to program how the Port on at connector H13 will operate on the control. There will be four options available: *SErIAL*, *CARD*, *5 PULSE* or *OFF*. The default from the factory will be *CARD*. When one options is selected, the other options described below are inhibited in the control. .

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
- Press the DELICATE (Λ) or the HOT (V) keypad until *Prø9* appears in the display. Press the START (enter) keypad and *Æ5 H* will appear in the display
- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until *SErPAY* appears in the display.
- When *SErPAY* appears in the display, press the START (enter) keypad. There are four programmable options. Refer to *Table 1* .

Display	H13 Port Options
<i>SErIAL</i>	H13 is configured to accept firmware updates via serial link. Serial Card operation and Start Pulse operation are inhibited.

Table 1 *continues...*



Display	H13 Port Options
<b>Card</b>	H13 will be configured to work with “Serial Card”. This may be either a 3 <sup>rd</sup> -Party vending device or Serial FOB reader available on some Alliance models. If <b>Card</b> is the desired option, <b>CardEn</b> option must also be enabled or Serial Card operation will not function. Serial Firmware Update and Start Pulse operation are inhibited.
<b>5 PULSE</b>	H13 will not perform serial communications at all. Rather, H13 will accept Start Pulses from a pulse-style 3 <sup>rd</sup> -party vending device. All Serial Communication available through “Serial” and “Card” will be inhibited in the control.
<b>OFF</b>	Port at H13 can be turned completely off. If turned off, all options listed above will be inhibited by the control.

Table 1

- Press the DELICATE (Λ) or the HOT (V) keypad to select the desired port option.

**NOTE: The Serial Payment Configuration can be disabled, set for serial payment, set for card payment or set for start pulse. The default is Serial.**

**NOTE: To go back to the current programmable option without changing the value press the WARM (<) keypad.**

- Press the DELICATE (Λ) or the HOT (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.
- Press the START (enter) keypad with the last active digit. The new value is saved and the next option will appear in the display.

## Card Enable **CardEn**

This option works in conjunction with the **Card** option under **SErPAY**. If **Card** is selected to use Serial Card, **CardEn** should be turned on. It should be turned off for all other cases.

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
- Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad and **RES H** will appear in the display.
- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **CardEn** appears in the display.
- When **CardEn** appears in the display, press the START (enter) keypad. The current status will appear in the display.

**NOTE: The default value is OFF.**

- Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
- Press the START (enter) keypad when the desired status appears in the display. The new value is saved and the next option will appear in the display.

## Start Pulse Value **PL5dEn**

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. Card and start pulse will require external boards to be connected for use to H13.

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
- Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **RES I** will appear in the display.
- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **PULSE** appears in the display. Press the START (enter) keypad, and **PL5dEn** will appear in the display.
- When **PL5dEn** appears in the display, press the START (enter) keypad.

**NOTE: To go back to the current programmable option without changing the value, press the WARM (<) keypad.**

- Press the DELICATE (Λ) or the HOT (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.
- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Start Pulse Mode **PL5Mod**

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 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 until the vend is satisfied.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **PL5Mod** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **PL5Mod** appears in the display.
4. When **PL5Mod** 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.

<b>PL5Mod</b>		
Start Pulse Mode Value	Start Pulse ON/OFF	Single Pulse/ Multiple Pulses
0	OFF	OFF
128 *	ON	Single Pulse
192	ON	Multiple Pulses
* Factory default setting.		

Table 2

6. Press the DELICATE (Λ) or the HOT (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 WARM (<) keypad.**

7. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Programmable Output Type **RETYPE**

This option allows the owner to program when the control provides an output that can be used for variety of reasons.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **RETYPE** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **RETYPE** appears in the display.

4. When **RETYPE** appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current Output Type Value.
5. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the current number to the desired number selected from *Table 3*.

<b>Programmable Output Type Value</b>	<b>Mode(s) in Which Available Signal is Active</b>
0* - Available	Ready Mode only
1 - Available with Start	Ready Mode, Start Mode
2 - Available with End of Cycle	Ready Mode, End of Cycle Mode
3 - Available with Start and End of Cycle	Ready Mode, End of Cycle Mode, Start Mode
4 - Vend is Not Satisfied	Ready Mode, Partial Vend Mode
5 - Vend is Not Satisfied with End of Cycle	Ready Mode, Partial Vend Mode, End of Cycle Mode
6 - Available with Vend	Ready Mode, Partial Vend Mode, Start Mode
7 - Available with Vend and End of Cycle	Ready Mode, End of Cycle Mode, Partial Vend Mode, Start Mode
8 - Machine is In Use	Door Locking, Door/Lid Unlocking, Overflow Mode, Pause Mode, Run Mode
9 - Cycle is Complete	End of Cycle
10 - Lucky Cycle	For 10 seconds when Start Mode is entered
11 - Break in Alarm	For 15 seconds when Break in Alarm is triggered at same time as audio output tone
12 - End of Cycle is Entered	For 3 seconds when End of Cycle Mode is entered
13 - Motor Running	Whenever Motor is running
14 - Machine Error Present	Machine Error Mode

Table 3 continues...

Programmable Output Type Value	Mode(s) in Which Available Signal is Active
*Factory default setting.	

Table 3

- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Default Cycle **dFELCYC**

This option allows the owner to set the default cycle that the machine will enter when in the Ready Mode.

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
- Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **RLS 1** will appear in the display.
- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **dFELCYC** appears in the display.
- When **dFELCYC** appears in the display, press the START (enter) keypad. A number will appear in the display. Refer to table below. This number corresponds to the current default cycle value. The corresponding LEDs will also be lit.

Cycle	Number on Display
NORMAL / HOT	1
NORMAL / WARM	2
NORMAL / COLD	3
SYNTHETIC / HOT	4
SYNTHETIC / WARM	5
SYNTHETIC / COLD	6
DELICATE / HOT	7
DELICATE / WARM	8
DELICATE / COLD	9

Table 4

- Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the current number to the desired number.
- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Card Reader Display Control **CRd**

This option allows the owner to program whether the display is controlled by the machine's electronic control or an external payment system such as a card reader.

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

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
- Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **RLS 1** will appear in the display.
- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **CRd** appears in the display.
- 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/External Payment System controls display

**off** = Machine Electronic Control controls display (factory default setting)

- Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Audio Signal **aud io**

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

There are five occasions when a signal may sound during the washer operation. These five occasions are listed below:

- End of Cycle Signal** By default, the signal is turned off. If turned on, the signal will sound for three 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 second on and one second off when the control is prompting for card removal.
- Signal for Start** By default, this signal is turned on and will sound one second on and one second off for 10 seconds after vend price has been satisfied.

## How to Program the Audio Signal

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.

2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **Alt 5 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **Audio** appears in the display.
4. When **Audio** 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* on the following page.
6. Press the DELICATE (Λ) or the HOT (V) 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 will appear in the display.

### How to Read Audio Signal Table

To determine the correct number required to program the Audio Signal, use the following chart. The Signal Value column contains the number displayed on the control. 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.

The default value programmed at the factory is 29.

Signal Value	Start Mode	Serial or Network Vending Command Signal	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
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

Table 5 continues...

Signal Value	Start Mode	Serial or Network Vending Command Signal	Coin/Card Input	End of Cycle	Key Pressed
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

## Network Node Number *node*

This option allows the owner to program a unique number used for wired or wireless communication. Every machine on the same network must have a different node number to work correctly.

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
- Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **Alt 5** will appear in the display.
- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **node** appears in the display.
- When **node** appears in the display, press the START (enter) keypad. The current Network Node Number status will appear in the display.

- Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Error Code Programming *Error*

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

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
- Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **Alt 5** will appear in the display.

3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **Error -** appears in the display.
4. When **Error -** appears in the display, press the START (enter) keypad. There are multiple programmable error code parameters. Refer to *Table 6*.
5. Press the DELICATE (Λ) or the HOT (V) keypad to select the desired option.
6. Press the DELICATE (Λ) or the HOT (V) keypad to select error code.
7. Press the START (enter) keypad when the correct code appears in the display. The current status will appear in the display.

**NOTE: Press the DELICATE (Λ) or the HOT (V) keypad and then the START (enter) keypad again to choose a specific coin error parameter. Refer to *Table 6*.**

8. Press the DELICATE (Λ) or the HOT (V) keypad to change the status.
9. Press the START (enter) keypad when the correct status appears in the display. The next Error Code Programming option will appear in the display.

<b>Error Code Programming <i>Error -</i></b>		
<b>CErr -</b>	Coin Error Parameters Menu	
	<b>CEr 1</b>	Coin Error - Determines if display will show error.
	<b>CEr 2</b>	Coin Error Penalty - If enabled, coin error will erase previous coins entered and reset the vend price.
	<b>CEr 3</b>	Vend Header Present Error - If enabled and coin drop header is unplugged, control ignores coin inputs.
<b>E FL -</b>	Fill Error Menu	
	<b>E FL 1</b>	Fill Error (On/Off) - If Enabled, will set error after fill error alarm time if fill level isn't reached, if disabled will allow filling forever if fill level never reached.
	<b>E FL 2</b>	Fill Error Time - Time allowed in minutes to reach target fill level before setting a fill error.
<b>E nF -</b>	No Water Flow Error Menu	
	<b>E nF 1</b>	No Water Flow Error (On/Off) - If Enabled, will set error after no water flow error time if level isn't reached.
	<b>E nF 2</b>	No Water Flow Error Time - Time allowed in minutes to reach a no flow 0.5 level.

Table 6 *continues...*

Error Code Programming <i>Error-</i>		
<i>E dr-</i>	Drain Error Menu	
	<i>E dr 1</i>	Drain Error (On/Off) - If Enabled, will set error if empty water level isn't reached by the end of the cycle. If disabled will allow no alarm.
<i>E Ld-</i>	<i>E Ld-</i>	Water Leak Detection Error Menu - This error checks for whether the machine is leaking water by adding 1 minute to the cycle to check for water leaks.
	<i>E Ld 1</i>	Water Leak Detection On/Off - Allows owner to turn water leak detection on or off.
	<i>E Ld 2</i>	Water Leak Detection Day(s) of Week Enable - Allows owner to pick which days to check for water leaks.  Refer to <i>Table 9</i> for the value definitions.
	<i>E Ld 3</i>	Water Leak Detection Number of Cycles Between - Sets how many cycles must run before water leaks are checked again.
	<i>E Ld 4</i>	Water Leak Detection Display Sequence (On/Off) - Will show a moving dash "-" across the 7-segment display while the water leak detection is being performed.
<i>E 5d-</i>	Slow Drain Detection Error Menu	
	<i>E 5d 1</i>	Slow Drain Detection (On/Off) - Enables/Disables the error
	<i>E 5d 2</i>	Slow Drain Detection Adjust - Allows the owner to add time in seconds to the machine's default draining time used to detect for slow draining conditions. Helps allow for locations with poor draining conditions.
<i>ourFLd</i>	<i>ourFLd</i>	Overflow Mode Display - Can be used to disable "oFLo" on the display while in an Overflow Condition during a running cycle if set to Off. In all other modes, it will always show "oFLo" if an overflow condition exists.

Table 6 *continues...*

Error Code Programming <i>Error</i> -		
<i>CLrErr</i>	<i>CLrErr</i>	Allow Error Clearing (On/Off) - Allows the ability for the owner to clear most errors by pressing NORMAL SYNTHETIC keypads. Some errors will still require power to be cycled to clear the error and some errors will continually set themselves until the condition for the error being set is fixed. Call for service if an error will not clear.

Table 6



## Set Real-Time Clock *r t c* -

This option allows the owner to set the controls internal clock to the correct time and date.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **r t c 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until *r t c* - appears in the display.
4. Press the START keypad and *r t c 1* will appear in the display.
5. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options. Refer to *Table 7*.

<i>r t c 1</i>	Programs Minutes
<i>r t c 2</i>	Programs Hours
<i>r t c 3</i>	Programs Day of Week
<i>r t c 4</i>	Programs Date of Month
<i>r t c 5</i>	Programs Month
<i>r t c 6</i>	Programs Year

Table 7

6. When the desired option appears in the display, press the START (enter) keypad. The current value will appear in the display.
7. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the minutes, hours, day of week, date of month, month or 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 (1), Monday is day two (2) and so on. For year, the year 2000 is " 0 ", the year 2001 is " 1 " and so on.**

8. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Set Daylight Savings Time *d L 5* -

This option allows the owner to set the controls internal clock to the daylight savings time and date.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **r t c 1** will appear in the display.

3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **d L 5** - appears in the display. Press the START keypad and **d L 5 1** will appear in the display.
4. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options. Refer to *Table 8*.

<i>d L 5 1</i>	Daylight Savings (On/Off)
<i>d L 5 2</i>	Programs Start Month
<i>d L 5 3</i>	Programs Start Day of Week
<i>d L 5 4</i>	Programs Start Week of Month
<i>d L 5 5</i>	Programs Start Hour
<i>d L 5 6</i>	Programs End Month
<i>d L 5 7</i>	Programs End Day of Week
<i>d L 5 8</i>	Programs End Week of Month
<i>d L 5 9</i>	Programs End Hour

Table 8

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 DELICATE (Λ) or the HOT (V) keypad to increase or decrease the minutes, hours, day of week, date of month, month or 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 (1), Monday is day two (2) and so on. For year, the year 2000 is " 0 ", the year 2001 is " 1 " and so on. For week of month, first week is "1", second week is "2", third week is "3", and last week is "4".**
7. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Special Vend 1 Days Enable *SP 1 1*

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

Special Vend 1 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 1 option on or off if desired.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **RLS 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **SP 1-** appears in the display. Press the START (enter) keypad and **SP 1 1** will appear in the display.
4. When **SP 1 1** appears in the display, press the START (enter) keypad. A number will appear in the display that corresponds to the current Special Vend 1 Days Enable Programming Value.
5. Locate the desired number in the first column of *Table 9*.
6. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the current number until correct.

7. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Read the Days Enable Value Table

To determine the correct number required to program the Special Vend Days Enable, Water Leak Detection Days of Week Enable or the Lucky Cycle Day(s) of Week / Enable, use the following table.

The 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.

\* The default value programmed at the factory is 0.

<b>SP 1 1, E Ld 1 and LUC 1</b>								
<b>VALUE</b>	<b>SAT</b>	<b>FRI</b>	<b>THUR</b>	<b>WED</b>	<b>TUE</b>	<b>MON</b>	<b>SUN</b>	<b>ON/OFF</b>
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
31	OFF	OFF	OFF	ON	ON	ON	ON	ON
33	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON

Table 9 continues...

<i>SPI, ELD and LUC</i>								
VALUE	SAT	FRI	THUR	WED	TUE	MON	SUN	ON/OFF
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

Table 9 continues...

<i>SPI, LED and LUC</i>								
VALUE	SAT	FRI	THUR	WED	TUE	MON	SUN	ON/OFF
87	OFF	ON	OFF	ON	OFF	ON	ON	ON
89	OFF	ON	OFF	ON	ON	OFF	OFF	ON
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

Table 9 continues...

<i>SPI, LED and LUC</i>								
VALUE	SAT	FRI	THUR	WED	TUE	MON	SUN	ON/OFF
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
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

Table 9 continues...

<i>SPI, LED and LUC</i>								
VALUE	SAT	FRI	THUR	WED	TUE	MON	SUN	ON/OFF
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
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

Table 9 *continues...*

<i>SP I 1, E Ld 1 and LUC 1</i>								
VALUE	SAT	FRI	THUR	WED	TUE	MON	SUN	ON/OFF
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 9

### How to Program Special Vend 1 Start Minute *SP I 2*

This option allows the owner to set the minute that Special Vend 1 will begin.

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until *SP I 2* appears in the display.
2. When *SP I 2* appears in the display, press the START (enter) keypad. The current start minute will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the value to the desired minute.
4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Program Special Vend 1 Start Hour *SP I 3*

This option allows the owner to set the hour that Special Vend 1 will begin.

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until *SP I 3* appears in the display.
2. When *SP I 3* 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.**

3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the start value to the desired hour.
4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Program Special Vend 1 Start Date *SP I 4*

This option allows the owner to set the date of the month that Special Vend 1 will begin.

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until *SP I 4* appears in the display.
2. When *SP I 4* appears in the display, press the START (enter) keypad. The current start date will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the start date to the desired date.

**NOTE: If “off” is selected and Special Vend 1 is on, Special Vend 1 will occur at the time and days of week selected, regardless of the date.**

4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Program Special Vend 1 Start Month *SP I 5*

This option allows the owner to set the month that Special Vend 1 will begin.

**NOTE: If Special Vend 1 Start Month, Start Date, End Month, or End Date are programmed to zero (default is zero), the Special Vend 1 will be active every week on the days programmed in Table 9.**

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until *SP I 5* appears in the display.
2. When *SP I 5* appears in the display, press the START (enter) keypad. The current start month will appear in the display.

3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the start month to the desired month.

**NOTE: If “off” is selected and Special Vend 1 is on, Special Vend 1 will occur at the time and days of week selected, regardless of the month.**

4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Program Special Vend 1 Start Year *SP I 5*

This option allows the owner to set the year that Special Vend 1 will begin.

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until *SP I 5* appears in the display.
2. When *SP I 5* appears in the display, press the START (enter) keypad. The current start year will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the start value to the desired year.

**NOTE: If “off” is selected and Special Vend 1 is on, Special Vend 1 will occur at the time or days of week selected, regardless of the year. “1” is year 2001, “2” is year 2002, and so on.**

4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Program Special Vend 1 Length in Hours *SP I 7*

This option allows the owner to set the length in hours for Special Vend 1.

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until *SP I 7* appears in the display.
2. When *SP I 7* appears in the display, press the START (enter) keypad. The current length in hours will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the current value to the desired number of hours.
4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Program Special Vend 1 End Date *SP I 8*

This option allows the owner to set the date of the month that Special Vend 1 will end.

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until *SP I 8* appears in the display.
2. When *SP I 8* appears in the display, press the START (enter) keypad. The current end date will appear in the display.

3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the value to the desired date.

**NOTE: If “off” is selected and Special Vend 1 is on, Special Vend 1 will occur at the time or days of week selected, regardless of the date.**

4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Program Special Vend 1 End Month *SP I 9*

This option allows the owner to set the month that Special Vend 1 will end.

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until *SP I 9* appears in the display.
2. When *SP I 9* appears in the display, press the START (enter) keypad. The current end month will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the value to the desired month.

**NOTE: If “off” is selected and Special Vend 1 is on, Special Vend 1 will occur at the time and day of week selected, regardless of the month.**

4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Program Special Vend 1 End Year *SP I 10*

This option allows the owner to set the year that Special Vend 1 will end.

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until *SP I 10* appears in the display.
2. When *SP I 10* appears in the display, press the START (enter) keypad. The current end year will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the value to the desired year.

**NOTE: If “off” is selected and Special Vend 1 is on, Special Vend 1 will occur at the time or days of week selected, regardless of the year. “1” is year 2001, “2” is year 2002 and so on.**

4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Program Special Vend 1 Vend Price 1 *SP I 11*

This option allows the owner to set the vend price for all cycles, but otherwise specifically for NORMAL HOT. This price should be set before all other prices. The corresponding LEDs will be lit while programming.



1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until **SP 1 11** appears in the display.

2. When **SP 1 11** appears in the display, press the START (enter) keypad. The current value will appear in the display.

**NOTE: To go back to the current programmable Special Vend 1 option without changing the value, press the WARM (<) keypad.**

3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the value of the active digit and the START keypad to enter the value of the digit and advance to the next digit.
4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Program Special Vend 1 Vend Price 2 SP 1 12

This option allows the owner to set the vend price for a NORMAL WARM wash in Special Vend 1. The corresponding LEDs will be lit while programming.

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until **SP 1 12** appears in the display.
2. When **SP 1 12** appears in the display, press the START (enter) keypad. The current value will appear in the display.

**NOTE: To go back to the current programmable Special Vend 1 option without changing the value, press the WARM (<) keypad.**

3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the value of the active digit and the START keypad to enter the value of the digit and advance to the next digit.
4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Program Special Vend 1 Vend Price 3 SP 1 13

This option allows the owner to set the vend price for a NORMAL COLD wash in Special Vend 1. The corresponding LEDs will be lit while programming.

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until **SP 1 13** appears in the display.
2. When **SP 1 13** appears in the display, press the START (enter) keypad. The current value will appear in the display.

**NOTE: To go back to the current programmable Special Vend 1 option without changing the value, press the WARM (<) keypad.**

3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the value of the active digit and the START key-

pad to enter the value of the digit and advance to the next digit.

4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Program Special Vend 1 Vend Price 4 SP 1 14

This option allows the owner to set the vend price for a SYNTHETIC HOT wash in Special Vend 1. The corresponding LEDs will be lit while programming.

1. Press key 6 (Λ) or HOT (V) keypad to scroll through the programmable Special Vend 1 options until **SP 1 14** appears in the display.
2. When **SP 1 14** appears in the display, press the START (enter) keypad. The current value will appear in the display.

**NOTE: To go back to the current programmable Special Vend 1 option without changing the value, press the WARM (<) keypad.**

3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the value of the active digit and the START keypad to enter the value of the digit and advance to the next digit.
4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Program Special Vend 1 Vend Price 5 SP 1 15

This option allows the owner to set the vend price for a SYNTHETIC WARM wash in Special Vend 1. The corresponding LEDs will be lit while programming.

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until **SP 1 15** appears in the display.
2. When **SP 1 15** appears in the display, press the START (enter) keypad. The current value will appear in the display.

**NOTE: To go back to the current programmable Special Vend 1 option without changing the value, press the WARM (<) keypad.**

3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the value of the active digit and the START keypad to enter the value of the digit and advance to the next digit.
4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Program Special Vend 1 Vend Price 6 SP 1 16

This option allows the owner to set the vend price for a SYNTHETIC COLD wash in Special Vend 1. The corresponding LEDs will be lit while programming.

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until **SP I 15** appears in the display.

2. When **SP I 15** appears in the display, press the START (enter) keypad. The current value will appear in the display.

**NOTE: To go back to the current programmable Special Vend 1 option without changing the value, press the WARM (<) keypad.**

3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the value of the active digit and the START keypad to enter the value of the digit and advance to the next digit.
4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Program Special Vend 1 Vend Price 7 **SP I 17**

This option allows the owner to set the vend price for a DELICATE HOT wash in Special Vend 1. The corresponding LEDs will be lit while programming.

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until **SP I 17** appears in the display.

2. When **SP I 17** appears in the display, press the START (enter) keypad. The current value will appear in the display.

**NOTE: To go back to the current programmable Special Vend 1 option without changing the value, press the WARM (<) keypad.**

3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the value of the active digit and the START keypad to enter the value of the digit and advance to the next digit.
4. Press the START (enter) keypad with the last active digit. The next Special Vend 1 option, **SP I 18**, will appear in the display.

### How to Program Special Vend 1 Vend Price 8 **SP I 18**

This option allows the owner to set the vend price for a DELICATE WARM wash in Special Vend 1. The corresponding LEDs will be lit while programming.

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until **SP I 18** appears in the display.

2. When **SP I 18** appears in the display, press the START (enter) keypad. The current value will appear in the display.

**NOTE: To go back to the current programmable Special Vend 1 option without changing the value, press the WARM (<) keypad.**

3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the value of the active digit and the START keypad to enter the value of the digit and advance to the next digit.
4. Press the START (enter) keypad with the last active digit. The next Special Vend 1 option, **SP I 19**, will appear in the display.

### How to Program Special Vend 1 Vend Price 9 **SP I 19**

This option allows the owner to set the vend price for a DELICATE COLD wash in Special Vend 1. The corresponding LEDs will be lit while programming.

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until **SP I 19** appears in the display.

2. When **SP I 19** appears in the display, press the START (enter) keypad. The current value will appear in the display.

**NOTE: To go back to the current programmable Special Vend 1 option without changing the value, press the WARM (<) keypad.**

3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the value of the active digit and the START keypad to enter the value of the digit and advance to the next digit.
4. Press the START (enter) keypad with the last active digit. The next Special Vend 1 option, **SP I 20**, will appear in the display.

### How to Program Special Vend 1 Wash Status Agitate Steps Added Minutes **SP I 20**

This option allows the owner to add time to any agitate steps that have their status set to Wash in Special Vend 1.

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until **SP I 20** appears in the display.

2. When **SP I 20** appears in the display, press the START (enter) keypad. The current value will appear in the display.

**NOTE: To go back to the current programmable Special Vend 1 option without changing the value, press the WARM (<) keypad.**

3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the number of minutes displayed to the desired number of added minutes.
4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## How to Program Special Vend 1 Wash Status Agitate Steps Subtracted Minutes *SP I 2 I*

This option allows the owner to subtract time from any agitate steps that have their status set to Wash in Special Vend 1.

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until *SP I 2 I* appears in the display.

2. When *SP I 2 I* appears in the display, press the START (enter) keypad. The current value will appear in the display.

**NOTE: To go back to the current programmable Special Vend 1 option without changing the value, press the WARM (<) keypad.**

3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the value of the active digit and the START keypad to enter the value of the digit and advance to the next digit.
4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## How to Program Special Vend 1 Cycle Modifier Default Value *SP I 22*

This option allows the owner to set the default cycle modifier that should be selected any time that Ready Mode is entered.

0 = Modifier REGULAR, 1 = Modifier DELUXE, 2 = Modifier ULTRA.

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until *SP I 22* appears in the display.
2. When *SP I 22* appears in the display, press the START (enter) keypad. The current value will appear in the display.

**NOTE: To go back to the current programmable Special Vend 1 option without changing the value, press the WARM (<) keypad.**

3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the value of the active digit and the START keypad to enter the value of the digit and advance to the next digit.
4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## How to Program Special Vend 1 Cycle Modifier DELUXE Key #1 Vend Price *SP I 23*

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until *SP I 23* appears in the display.
2. When *SP I 23* appears in the display, press the START (enter) keypad. The current value will appear in the display.

**NOTE: To go back to the current programmable Special Vend 1 option without changing the value, press the WARM (<) keypad.**

3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the value of the active digit and the START keypad to enter the value of the digit and advance to the next digit.
4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## How to Program Special Vend 1 Cycle Modifier ULTRA Key #2 Vend Price *SP I 24*

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until *SP I 24* appears in the display.
2. When *SP I 24* appears in the display, press the START (enter) keypad. The current value will appear in the display.

**NOTE: To go back to the current programmable Special Vend 1 option without changing the value, press the WARM (<) keypad.**

3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the value of the active digit and the START keypad to enter the value of the digit and advance to the next digit.
4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## How to Program Special Vend 1 Cycle Modifier DELUXE Key #1 Options *SP I 25*

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until *SP I 25* appears in the display.
2. When *SP I 25* appears in the display, press the START (enter) keypad. The current value will appear in the display.

**NOTE: To go back to the current programmable Special Vend 1 option without changing the value, press the WARM (<) keypad.**

3. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the value to enable the desired options to be active when the DELUXE keypad is active. Refer to *Table 1*.
4. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## How to Program Special Vend 1 Cycle Modifier ULTRA Key #2 Options *SP I 26*

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Special Vend 1 options until *SP I 26* appears in the display.

- When **SP 1 25** appears in the display, press the START (enter) keypad. The current value will appear in the display.  
**NOTE: To go back to the current programmable Special Vend 1 option without changing the value, press the WARM (<) keypad.**
- Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease to enable the desired options to be active when the ULTRA keypad is active. Refer to *Table 1*.
- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Special Vend 2 Days Enable **SP2**

This option allows the owner to enable or disable a second special vend. Special Vend 2 can be programmed using an external device or network. The owner may also turn the Special Vend 2 option on or off.

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
- Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **RE5 1** will appear in the display.
- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **SP2** appears in the display.
- When **SP2** appears in the display, press the START (enter) keypad. The current Special Vend 2 Days Enable status will appear in the display.

**on** = Option Enabled

**off** = Option Disabled (factory default setting)

- Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Special Vend 3 Days Enable **SP3**

This option allows the owner to enable or disable third special vend. Special Vend 3 can be programmed using an external device or network. The owner may also turn the Special Vend 3 option on or off.

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
- Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **RE5 1** will appear in the display.
- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **SP3** appears in the display.

- When **SP3** appears in the display, press the START (enter) keypad. The current Special Vend 3 Days Enable status will appear in the display.

**on** = Option Enabled

**off** = Option Disabled (factory default setting)

- Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Special Vend 4 Days Enable **SP4**

This option allows the owner to enable or disable a fourth special vend. Special Vend 4 can be programmed using an external device or network. The owner may also turn the Special Vend 4 option on or off if desired.

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
- Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **RE5 1** will appear in the display.
- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **SP4** appears in the display.
- When **SP4** appears in the display, press the START (enter) keypad. The current Special Vend 4 Days Enable status will appear in the display.

**on** = Option Enabled

**off** = Option Disabled (factory default setting)

- Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Cycle Modifier Programming **CP-**

This option allows the owner to program the machine to offer extra wash time, extra rinse time, a warm rinse, or any combination of the above to the customers for an added vend price. This option is used when DELUXE or ULTRA is selected using the Modifier keypad.

### How to Program Default Cycle Modifier **CP 1**

This option allows the owner to set the Default Cycle Modifier.

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
- Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **RE5 1** will appear in the display.

- Press the DELICATE (Λ) or the DELICATE (V) keypad to scroll through the programmable options until **CNP-** appears in the display.
- When **CNP-** appears in the display, press the START (enter) keypad.
- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable Cycle Modifier options until **CNP 1** appears in the display.
- When **CNP 1** appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current default cycle modifier. Refer to table below.

<b>CNP 1</b>	
<b>Default Value</b>	<b>Cycle Modifier</b>
0*	REGULAR
1	DELUXE
2	ULTRA
*Factory default setting.	

Table 10

- Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the current number to the desired number selected from the table.
- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Program Cycle Modifier DELUXE Key #1 Options **CNP 2**

This option allows the owner to select the options that are enabled when the DELUXE modifier keypad is active.

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
- Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **RE5 1** will appear in the display.
- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **CNP-** appears in the display.
- When **CNP-** appears in the display, press the START (enter) keypad.
- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **CNP 2** appears in the display.
- When **CNP 2** appears in the display, press the START (enter) keypad.

**NOTE: To go back to the current programmable option without changing the value, press the WARM (←) keypad.**

- Press the DELICATE (Λ) or the HOT (V) keypad to change the configuration value. Refer to the table below for the value definitions.
- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

<b>Cycle Modifier Value</b>	<b>Warm Rinse</b>
0 *	OFF
1	ON
* Factory default setting	

Table 11

### How to Program Cycle Modifier ULTRA Key #2 Options **CNP 3**

This option allows the owner to select the options that are enabled when the ULTRA modifier keypad is active.

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
- Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **RE5 1** will appear in the display.
- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **CNP-** appears in the display.
- When **CNP-** appears in the display, press the START (enter) keypad.
- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **CNP 3** appears in the display.
- When **CNP 3** appears in the display, press the START (enter) keypad.

**NOTE: To go back to the current programmable option without changing the value, press the WARM (←) keypad.**

- Press the DELICATE (Λ) or the HOT (V) keypad to change the configuration value.
- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Program Cycle Modifier DELUXE Additional Wash Time **CNP 4**

This option allows the owner to add additional time to agitate steps that have wash selected as their status. The additional wash time option needs to be turned on for the Cycle Modifier DELUXE Additional Wash Time to take effect.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **RLS 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **CNP-** appears in the display.
4. When **CNP-** appears in the display, press the START (enter) keypad.
5. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **CNP 4** appears in the display.
6. When **CNP 4** appears in the display, press the START (enter) keypad. A number will appear in the display corresponding to the number of minutes to be added to agitate steps that have wash selected as their status.
7. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the current number minutes.
8. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Program Cycle Modifier DELUXE Additional Extra Rinse Time **CNP 5**

This option allows the owner to add additional agitate time to extra rinse steps. The additional rinse time option needs to be turned on for the Cycle Modifier DELUXE Additional Extra Rinse Time to take effect.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **RLS 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **CNP-** appears in the display.
4. When **CNP-** appears in the display, press the START (enter) keypad.
5. When **CNP 5** appears in the display, press the START (enter) keypad. A number will appear in the display corresponding to the number of minutes to be added to steps that have Rinse 1 selected as their status.
6. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the current number of minutes.

**NOTE: To go back to the current programmable option without changing the value, press the WARM (<) keypad.**

7. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Program Cycle Modifier ULTRA Additional Wash Time **CNP 6**

This option allows the owner to add additional time to agitate steps that have wash selected as their status. The additional wash time option needs to be turned on for the Cycle Modifier ULTRA Additional Wash Time to take effect.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **RLS 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **CNP-** appears in the display.
4. When **CNP-** appears in the display, press the START (enter) keypad.
5. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **CNP 6** appears in the display.
6. When **CNP 6** appears in the display, press the START (enter) keypad. A number will appear in the display corresponding to the number of minutes to be added to steps that have Wash selected as their status.
7. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the current number of minutes.
8. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Program Cycle Modifier ULTRA Additional Extra Rinse Time **CNP 7**

This option allows the owner to add additional agitate time to extra rinse steps. The additional rinse time option needs to be turned on for the Cycle Modifier ULTRA Additional Extra Rinse Time to take effect.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **RLS 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **CNP-** appears in the display.
4. When **CNP-** appears in the display, press the START (enter) keypad.
5. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **CNP 7** appears in the display.
6. When **CNP 7** appears in the display, press the START (enter) keypad. A number will appear in the display corresponding to

the number of minutes to be added to steps that have Rinse 1 selected as their status.

- Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the current number of minutes
- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Cycle Parameters **CYCP -**

This option allows the owner to set the amount of time for various steps in each type of cycle. For programmable options refer to table below.

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
- Press the DELICATE (Λ) or the HOT (V) keypad until **PROG** appears in the display. Press the START (enter) keypad, and **RLS 1** will appear in the display.
- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **CYCP -** appears in the display. Press the START (enter) keypad and **CYCP 1** will appear in the display.
- When **CYCP 1** appears in the display, press the START (enter) keypad. The current number of minutes set will appear in the display.
- Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the current number of minutes shown in the display to the desired number of minutes.
- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### Programmable Options

Option Display	Description
<b>CYCP 1</b>	NORMAL Wash Agitate Time
<b>CYCP 2</b>	NORMAL Rinse Agitate Time
<b>CYCP 3</b>	NORMAL Extra Rinse Agitate Time
<b>CYCP 4</b>	NORMAL Final Spin Time
<b>CYCP 5</b>	SYNTHETIC Wash Agitate Time
<b>CYCP 6</b>	SYNTHETIC Rinse Agitate Time
<b>CYCP 7</b>	SYNTHETIC Extra Rinse Agitate Time
<b>CYCP 8</b>	SYNTHETIC Final Spin Time

Table continues...

Option Display	Description
<b>CYCP 9</b>	DELICATE Wash Agitate Time
<b>CYCP 10</b>	DELICATE Rinse Agitate Time
<b>CYCP 11</b>	DELICATE Extra Rinse Agitate Time
<b>CYCP 12</b>	DELICATE Final Spin Time
<b>CYCP 13</b>	Warm Rinse Option
<b>CYCP 14</b>	Timed Hot Fill
<b>CYCP 15</b>	Spray Rinse

## Low Power-Auto Shutdown 1 Days Enable **LPRS 1**

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

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
- Press the DELICATE (Λ) or the HOT (V) keypad until **PROG** appears in the display. Press the START (enter) keypad, and **RLS 1** will appear in the display.
- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **LPRS 1** appears in the display.
- When **LPRS 1** appears in the display, press the START (enter) keypad. The current Low Power/Auto Shutdown 1 Days Enable status will appear in the display.

**on** = Option Enabled

**off** = Option Disabled (factory default setting)

- Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Low Power-Auto Shutdown 2 Days Enable **LPRS 2**

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

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.

2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prø9** appears in the display. Press the START (enter) keypad, and **RE5 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **LPAS 2** appears in the display.
4. When **LPAS 2** appears in the display, press the START (enter) keypad. The current Low Power/Auto Shutdown 2 Days Enable status will appear in the display.

**on** = Option Enabled

**oFF** = Option Disabled (factory default setting)

5. Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
6. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Low Power-Auto Shutdown 3 Days Enable **LPAS 3**

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

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prø9** appears in the display. Press the START (enter) keypad, and **RE5 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **LPAS 3** appears in the display.
4. When **LPAS 3** appears in the display, press the START (enter) keypad. The current Low Power/Auto Shutdown 3 Days Enable status will appear in the display.

**on** = Option Enabled

**oFF** = Option Disabled (factory default setting)

5. Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
6. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Low Power-Auto Shutdown 4 Days Enable **LPAS 4**

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

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prø9** appears in the display. Press the START (enter) keypad, and **RE5 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **LPAS 4** appears in the display.
4. When **LPAS 4** appears in the display, press the START (enter) keypad. The current Low Power/Auto Shutdown 4 Days Enable status will appear in the display.

**on** = Option Enabled

**oFF** = Option Disabled (factory default setting)

5. Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
6. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Power Fail Reset **PF r5t**

This option allows the owner to enable or disable Power Fail Reset and 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.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prø9** appears in the display. Press the START (enter) keypad, and **RE5 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **PF r5t** appears in the display.
4. When **PF r5t** appears in the display, press the START (enter) keypad. There are two programmable Power Fail Reset options. Refer to *Table 12*

Display	Power Fail Reset Options
<b>PF En</b>	Power Fail Reset Enable On/Off
<b>r5t n</b>	Power Fail Reset Time in Minutes (0-120) (refer to <i>Table 13</i> .

Table 12

5. Press the DELICATE (Λ) or the HOT (V) keypad to increase or decrease the current number to the desired number selected from *Table 13* .



- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### How to Read Power Fail Reset Table

Use Table 13 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.

Setting this option from 1 - 120 will save the cycle status without power that number of minutes before the cycle is lost. A value of 0 will cause the cycle and vend to be lost any time a power failure occurs.

PF rSt	
DISPLAY TO ENTER IN STEP 6	POWER FAIL RESET TIME
OFF *	Turned OFF. Cycle will be saved.
0 - 120 Number in minutes	0 - 120 minutes without power before cycle is lost
* Factory default setting.	

Table 13

### NFC Access (On/Off) nFC En

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 *How to Enter the Manual Mode*.
- Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad and **RLS H** will appear in the display.
- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **nFC En** appears in the display.
- When **nFC En** appears in the display, press the START (enter) keypad. The current NFC Access status will appear in the display. **on** = Option Enabled **OFF** = Option Disabled

**NOTE: The default value is on.**

- Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
- Press the START (enter) keypad when the desired status appears in the display. The new value is saved and the next option will appear in the display.

### Manual Rapid Advance rAPdEn

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

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
- Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **RLS I** will appear in the display.
- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **rAPdEn** appears in the display.
- When **rAPdEn** appears in the display, press the START (enter) keypad. The current Manual Rapid Advance status will appear in the display.

0 = **OFF** (access requires password)

1 = **on** (access allowed) (factory default setting)

2 = DISABLED (access not allowed)

- Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### Manual Diagnostics d iAGEn

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.

- Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
- Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **RLS I** will appear in the display.
- Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **d iAGEn** appears in the display.
- When **d iAGEn** appears in the display, press the START (enter) keypad. The current Manual Diagnostics status will appear in the display.

0 = **OFF** (access requires password)

1 = **on** (access allowed) (factory default setting)

2 = DISABLED (access not allowed)

- Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
- Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### Factory Test FSt En

This option allows the owner to enable or disable access to Factory Test.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prøg** appears in the display. Press the START (enter) keypad, and **Æ5 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **Fl En** appears in the display.
4. When **Fl En** appears in the display, press the START (enter) keypad. The current Factory Test status will appear in the display.

**on** = Option Enabled (factory default setting)

**oFF** = Option Disabled

5. Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
6. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Lucky Cycle **LUC -**

This option allows the owner to program the machine to provide a free or reduced vend cycle to users after a certain number of machine cycles have occurred.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prøg** appears in the display. Press the START (enter) keypad, and **Æ5 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **LUC -** appears in the display.
4. When **LUC -** appears in the display, press the START (enter) keypad. There are three programmable Lucky Cycle options. Refer to *Table 14*.

Display	Lucky Cycle Options
<b>LUC 1</b>	Lucky Cycle Day(s) of Week / Enable On/Off  Refer to <i>Table 9</i> for programming.
<b>LUC 2</b>	Lucky Cycle Number (0-255)

Table 14 *continues...*

Display	Lucky Cycle Options
<b>LUC 3</b>	Lucky Cycle Display Option On/Off  ON = Free vend. Lucky cycle active after 4.25 minutes in Ready Mode.  OFF = Vend must be entered. Remaining vend is free. For example, after entering a coin the price will count down by Coin 1 value until vend is satisfied.

Table 14

**NOTE: When the Lucky Cycle conditions have been met, the display will show **FREE** when the Display Option is set to On.**

5. Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
6. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Water Temperature Indicator **ÆP ind**

This option allows the owner to program the water temperature indicator. If the Wash Temp Display is enabled the actual water valve fill temperature will be indicated during the fill, supply, agitate, or soak step by lighting the LED corresponding to the actual temperature. If the option is enabled the control will light up the LED of the water temperature for the current segment that the control is in while running after the first fill.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prøg** appears in the display. Press the START (enter) keypad, and **Æ5 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **ÆP ind** appears in the display.
4. When **ÆP ind** appears in the display, press the START (enter) keypad. The current Water Temperature Indicator status will appear in the display.

**on** = Option Enabled

**oFF** = Option Disabled (factory default setting)

5. Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.

6. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Programmable Close Lid Display *PCdL*

This option allows the owner to enable or disable allowing the control to display the corresponding command to close the lid along with the cycle time.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until *Prog* appears in the display. Press the START (enter) keypad, and *RLS 1* will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until *PCdL* appears in the display.
4. When *PCdL* appears in the display, press the START (enter) keypad. The current status will appear in the display.

**on** = Option Enabled (factory default setting)

**off** = Option Disabled

5. Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
6. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Programmable Push Start Display *PPSt*

This option allows the owner to enable or disable allowing the control to display the corresponding command to press the START (enter) keypad once the vend has been satisfied.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until *Prog* appears in the display. Press the START (enter) keypad, and *RLS 1* will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until *PPSt* appears in the display.
4. When *PPSt* appears in the display, press the START (enter) keypad. The current Push Start status will appear in the display.

**on** = Option Enabled (factory default setting)

**off** = Option Disabled

5. Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
6. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Programmable Open Lid Display *PodL*

This option allows the owner to enable or disable allowing the control to display the corresponding command to open the lid along with the cycle time when the cycle had completed.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until *Prog* appears in the display. Press the START (enter) keypad, and *RLS 1* will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until *PodL* appears in the display.
4. When *PodL* appears in the display, press the START (enter) keypad. The current status will appear in the display.

**on** = Option Enabled (factory default setting)

**off** = Option Disabled

5. Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
6. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Vend Price Display Override *RLS do*

This option allows the owner to override the previously set vend price with a custom display that is set by the payment system. The default display is *CRd* if the payment system does not modify it.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until *Prog* appears in the display. Press the START (enter) keypad, and *RLS 1* will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until “AtS do” appears in the display.
4. When *RLS do* appears in the display, press the START (enter) keypad. The current Vend Price Display Override status will appear in the display.

**on** = Option Enabled

**off** = Option Disabled (factory default setting)

5. Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
6. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## OPL Parameters *oPL -*

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

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Pr Og** appears in the display. Press the START (enter) keypad, and **RL5 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) 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 to enter the OPL submenu.
5. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the OPL submenu options.
6. Press the START (enter) keypad when the desired option appears in the display

### OPL Mode Enable **oPL 1**

This option allows the owner to place the control in OPL Mode, in which no vend price needs to be satisfied in order to start the machine. If the control is in Start Mode, the cycle time will be displayed. Pressing the START keypad will start the machine cycle. Once a machine cycle has been started, each additional press of the START keypad will advance the cycle to the next cycle step only if Rapid Advance Programming Parameter is Enabled.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Pr Og** appears in the display. Press the START (enter) keypad, and **RL5 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) 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 to enter the OPL submenu.
5. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **oPL 1** appears in the display.
6. When **oPL 1** appears in the display, press the START (enter) keypad. The current OPL status will appear in the display.

**on** = Option Enabled

**oFF** = Option Disabled (factory default setting)

7. Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
8. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### OPL Delayed Start **oPL 2**

This option allows the owner to enable delayed start mode which can delay the cycle up to a maximum of 72 hours.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Pr Og** appears in the display. Press the START (enter) keypad, and **RL5 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) 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 to enter the OPL submenu.
5. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **oPL 2** appears in the display.
6. When **oPL 2** appears in the display, press the START (enter) keypad. The current OPL status will appear in the display.

**on** = Option Enabled

**oFF** = Option Disabled (factory default setting)

7. Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
8. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

### OPL Display Power Save **oPL 3**

This option allows the owner to enable the OPL Display Power Save Feature. If enabled, after 255 seconds of no user input, the control will turn off all LEDs and the display until user input occurs. The OPL Display Power Save Feature will only turn off the display if the control is in Start Mode.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Pr Og** appears in the display. Press the START (enter) keypad, and **RL5 1** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) 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 to enter the OPL submenu.
5. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **oPL 3** appears in the display.
6. When **oPL 3** appears in the display, press the START (enter) keypad. The current OPL status will appear in the display.

**on** = Option Enabled

**oFF** = Option Disabled (factory default setting)

7. Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.

8. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Drop Off Mode *dr oP*

This option allows the owner to limit machine use to an attendant without requiring vend. Refer to *Drop-Off Mode* for more details.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until *Pr oP* appears in the display. Press the START (enter) keypad, and *RE 5 1* will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until *dr oP* appears in the display.
4. When *dr oP* appears in the display, press the START (enter) keypad. The current Drop Off Mode status will appear in the display.

*o n* = Option Enabled

*o F F* = Option Disabled (factory default setting)

5. Press the DELICATE (Λ) or the HOT (V) keypad to change the current status.
6. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

## Out of Order *o U t*

This option allows the owner to disable machine use by displaying an out of order message.

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until *Pr oP* appears in the display. Press the START (enter) keypad, and *RE 5 1* will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until *o U t* appears in the display.
4. When *o U t* appears in the display, press the START (enter) keypad. The current Out of Order status will appear in the display.

*o n* = Option Enabled

*o F F* = Option Disabled (factory default setting)

5. Press the DELICATE (Λ) or the HOT (V) keypads to change the current status.
6. Press the START (enter) keypad when the correct value appears in the display. The new value is saved and the next option will appear in the display.

# Collecting Audit Information

This feature allows the owner to retrieve audit information stored in the washer by pressing a sequence of pads on the control.

## How to Enter Audit Feature

There are two 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 *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **AUDIT** appears in the display.
3. Press the START keypad and **CYCLES** will appear in the display.

### Entering the Audit Feature with the Coin Vault Open

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

## How to Read Audit Data

1. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options. Refer to *Table 15*.
2. When the desired option appears in the display press the START (enter) keypad. The current value will appear in the display.
3. Press the WARM keypad. The display will return to the audit option list.

Programmable Options

<b>CYCLES</b>	Total Number of Machine Cycles
<b>Coin 1</b>	Total Number of Coins #1
<b>Coin 2</b>	Total Number of Coins #2
<b>PULSE</b>	Total Number of Start Pulses
<b>RAPID</b>	Total Number of Rapid Advance Cycles
<b>RunHrs</b>	Total Number of Run Hours
<b>Coin 1</b>	Resettable Coin #1 Count

Table 15 *continues...*

<b>Coin 2</b>	Resettable Coin #2 Count
<b>CYCLE</b>	Resettable machine Cycle Count

Table 15

## How to Exit Audit Feature

1. Press the WARM (<) keypad until the control returns to Ready Mode.
2. To exit Audit Feature when using Coin Vault Open method, owner must close coin vault. The control will then return to Ready Mode.

# Manual Reset

This feature allows the owner to reset the washer control's programming data to the factory default settings by pressing a sequence of pads on the control.

## How to Enter Manual Reset

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad until **Prog** appears in the display. Press the START (enter) keypad, and **RES** will appear in the display.
3. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **RESET** appears in the display.
4. Press the START (enter) keypad. **no** will appear in the display.
5. Press the DELICATE (Λ) or the HOT (V) keypad to change the value to **YES**.
6. Press the START (enter) keypad when the correct value appears in the display.

# Testing Machine and Electronic Control Functions

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

- Front-End Control Software Version # Test
- Input/Output Board Software Version # Test
- Service Door Switch Input Test
- Coin Vault Switch Input Test
- Coin Drop #1 Input Test
- Coin Drop #2 Input Test
- Vend Connection Header Present Input Test
- Start Pulse Input Test
- Lid Switch Input Test\*
- Show Fill Time Test
- Show Drain Time Test
- External Output Test\*
- Water Purge Test\*
- Water Leak Detection Test\*
- Water Level Test
- Machine Configuration #1 Display Test
- Machine Configuration #2 Display Test
- Machine Configuration #3 Display Test
- Machine Configuration #4 Display Test
- Machine Configuration #5 Display Test
- Card Communications Test

\* Tests can only be entered when in Start or Ready Mode.

For an overview of the manual diagnostic test features, refer to the flowchart on the following page.

## How to Enter Testing Feature

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **d .R9** appears in the display.
3. Press the START (enter) keypad. Display will change to **d 1** indicating the control software version number test.
4. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the diagnostic test options.

## How to Start Tests

1. To start a diagnostic test, refer to the quick reference chart below.
2. 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 Testing Feature

Press the WARM (<) keypad until the display returns to the previous mode of operation.

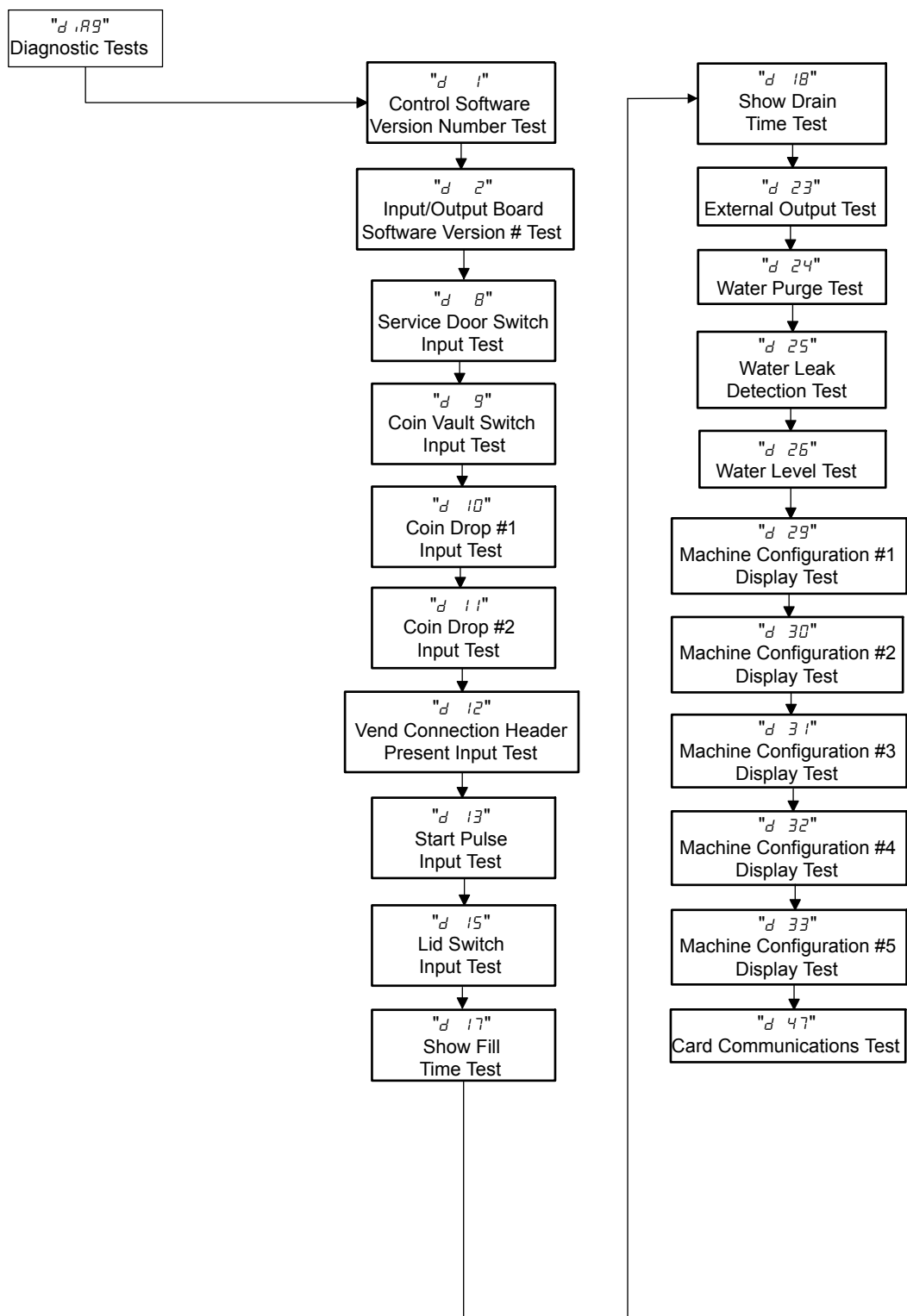


## Diagnostic (Testing) Mode – Quick Reference Chart

Test Number	Diagnostic Mode	Display
<i>d 1</i>	Control Software Version # Test	<i>5 ---</i>
<i>d 2</i>	Input/Output Board Software Version # Test	<i>ab --</i>
<i>d 7</i>	Water Level Trim Test	<i>tr .nnH</i>
<i>d 8</i>	Service Door Opening Test	<i>5 oP</i> or <i>5 CL</i>
<i>d 9</i>	Coin Vault Opening Test	<i>u oP</i> or <i>u CL</i>
<i>d 10</i>	Coin Drop #1 Input Test	<i>CL --</i>
<i>d 11</i>	Coin Drop #2 Input Test	<i>CL2 --</i>
<i>d 12</i>	Vend Header Present Status Test	<i>CH oP</i> (Open) or <i>CH CL</i> (Closed)
<i>d 13</i>	Start Pulse Test	<i>St --</i>
<i>d 15</i>	Lid Switch Input Test	<i>L id oP, L id CL</i>
<i>d 17</i>	Show Fill Time Test	<i>FL ---</i>
<i>d 18</i>	Show Drain Time Test	<i>dr ---</i>
<i>d 23</i>	External Output Test	<i>ES -</i> or <i>ES -on</i>
<i>d 24</i>	Water Purge Test	<i>CLoSE, L id, PURGE</i> or <i>FLUSH</i>
<i>d 25</i>	Water Leak Detection Test	<i>PASS, E Ld, E LF</i> or <i>Ld</i> <i>CLoSE, L id</i>
<i>d 26</i>	Water Level Test	<i>L ---</i> or <i>L ---.</i>
<i>d 29</i>	Machine Configuration #1 Display Test	<i>A ---</i>
<i>d 30</i>	Machine Configuration #2 Display Test	<i>b ---</i>
<i>d 31</i>	Machine Configuration #3 Display Test	<i>C ---</i>
<i>d 32</i>	Machine Configuration #4 Display Test	<i>d ---</i>
<i>d 33</i>	Machine Configuration #5 Display Test	<i>E ---</i>
<i>d 47</i>	Card Communications Test	<i>noCnF9, CnF9---</i> or <i>no in it</i>

Table 16

- Press the START (enter) keypad to display Diagnostic Test options.
- Press the DELICATE or the HOT keypad to scroll through the Diagnostic Test options.
- To enter a test, press the START (enter) keypad.
- To exit a test, press the WARM keypad.



TLW51R\_SVG

Figure 12

## Diagnostic Test Descriptions

### Control Software Version Number Test $\Delta$ 1

This option displays the control software version number. To start test, control must be in the Testing Mode. Refer to *How to Enter 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 software version number.

To exit the Software Version Number Test, press the WARM (<) keypad. The control will return to the Testing Mode.

### Input/Output Software Version # Test $\Delta$ 2

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

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

To exit the Drive Board #1 Version Test, press the WARM (<) keypad. The control will return to the Testing Mode.

### Service Door Opening Test $\Delta$ B

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

To enter, press the START (enter) keypad. The display will show **5 aP** when the service door switch is open and **5 cL** when the service door switch is closed.

The service door switch has to be closed for at least one second and opened for at least one second for the display to change. This test will add a count to the service door opening counter for the audit and save the date/time for each opening.

To exit the Service Door Opening Test, press the WARM (<) keypad. The control will return to the Testing Mode.

### Coin Vault Opening Test $\Delta$ 9

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

To enter, press the START (enter) keypad. The display will show **u aP** when the coin vault switch is open and **u cL** when the coin vault switch is closed.

The coin vault switch has to be closed for at least one second and opened for at least one 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 each opening.

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

### Coin Drop 1 Input Test $\Delta$ 10

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

To enter, press the START (enter) keypad. The display will show **C 1 HH**. 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 WARM (<) keypad. The control will return to the Testing Mode.

### Coin Drop 2 Input Test $\Delta$ 11

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

To enter, press the START (enter) keypad. The display will show **C 2 HH**. 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 WARM (<) keypad. The control will return to the Testing Mode.

### Vend Connection Header Present Test $\Delta$ 12

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

To enter, press the START (enter) keypad. The display will show **C H aP** when the wiring connection is open and **C H cL** when the connection is closed.

To exit Vend Connection Header Present Test, press the WARM (<) keypad. The control will return to the Testing Mode.

### Start Pulse Test $\Delta$ 13

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

To enter, press the START (enter) keypad. The display will show **5E HH**. 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 WARM (<) keypad. The control will return to the Testing Mode.

### Lid Switch Input Test $\Delta$ 15

This test will display whether the washer lid is open or closed.

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

To enter, press the START (enter) keypad. If the lid is closed, the display will show **L id CL**. If the lid is open, the display will show **L id oP**.

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

### Show Fill Time Test d 17

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

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

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

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

### Show Drain Time Test d 18

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 Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

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

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

### External Outputs Test d 23

This test will allow any one of the external outputs to be selected. To start test, control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **E5 H** where **H** is the output number. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the outputs.

Press the START (enter) keypad to energize the selected external output. **E5 H on** will be displayed. Press the START (enter) again or the WARM (<) keypad to turn off the selected external output.

To exit the External Outputs Test, press the WARM (<) keypad. The control will return to the Testing Mode.

### Water Purge Test d 24

This test allows the user to test water removal from the machine. To start test, control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **PU-9E** and the START (enter) keypad LED will flash. Begin the test by pressing START (enter). If the lid is open, **CL o5E, L id**

will be displayed to prompt the user to close the lid. When the START (enter) pad is pressed with the lid closed, **FLUSH** will be displayed.

The control will energize all water valves, enable high speed spin and enable the pump. Press any keypad to end the test. The test will end automatically after 3 minutes or if the lid is opened.

To exit the Water Purge Test, press the WARM (<) keypad. The control will return to the Testing Mode.

### Water Leak Detection Test d 25

This test allows the user to check for water leaking from the machine. To start test, control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **L id** and the START (enter) keypad LED will flash. Begin the test by pressing START (enter). If the lid is open, **CL o5E, L id** will be displayed to prompt the user to close the lid. When the START (enter) pad is pressed with the lid closed, the test will begin. The cold water valve will turn on until the DELUXE water level is reached.

After a 10 second pause to allow the water pressure to stabilize, the control will record the current water level from the electronic water level sensing input and continue to monitor the water level for two minutes. The display will show a sequence of horizontal LED segments to indicate it is monitoring the water level.

After two minutes, the control will compare the ending water level with the level at the start. If the water level has dropped or raised, the display will show **E L id** to signify a drain leak or **E LF** to signify a fill leak. If the water level has not dropped or raised, the display will show **PASS**.

Then the control will spin out the tub. When the water has been drained out of the machine, the control will display the result message. The error message is an indication to the machine owner that there should be service attention devoted to the fill valve or pump on the machine to diagnose where the water leak is originating.

To stop the test while it is running, press the WARM (<) keypad. The test will stop and the control will go back to the beginning of the test sequence.

To exit the Water Leak Detection Test, press the WARM (<) keypad. The control will return to the Testing Mode.

### Water Level Test d 26

This test displays the water level as determined by the water level sensor. To start test, control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. The display will show **L HHH** where **HHH** is the water level in 0.1 inch precision where a value of 05 equals 0.5 inches. If the rightmost decimal point is lit, the value is negative.

To exit the Water Level Test, press the WARM (<) keypad. The control will return to the Testing Mode.

**Configuration 1 Display Test *d 29***

This option shows the machine configuration values. To start test, control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.

To enter, press the START (enter) keypad. For configuration value #1, the display will show *R HHH. HHH*. *HHH* is a number corresponding to whether or not coin drops are connected, a card reader or network board are connected, or whether the life-test jumper is present. Refer to *Table 17*.

To exit a Configuration Display Test, press the WARM (<) keypad. The control will return to the Testing Mode.

Each column of the table below contains a unique combination of the words “YES” and “NO” that indicates if that column’s connection is present.

<b>Configura- tion Value</b>	<b>Life Test Jumper Present</b>	<b>Comm Board "B" Header Present</b>	<b>Comm Board "A" Header Present</b>	<b>Vend Con- nection Present</b>	<b>Coin Drop #2 Present</b>	<b>Coin Drop #1 Present</b>
0	NO	NO	NO	NO	NO	NO
1	NO	NO	NO	NO	NO	YES
2	NO	NO	NO	NO	YES	NO
3	NO	NO	NO	NO	YES	YES
4	NO	NO	NO	YES	NO	NO
5	NO	NO	NO	YES	NO	YES
6	NO	NO	NO	YES	YES	NO
7	NO	NO	NO	YES	YES	YES
8	NO	NO	YES	NO	NO	NO
9	NO	NO	YES	NO	NO	YES
10	NO	NO	YES	NO	YES	NO
11	NO	NO	YES	NO	YES	YES
12	NO	NO	YES	YES	NO	NO
13	NO	NO	YES	YES	NO	YES
14	NO	NO	YES	YES	YES	NO
15	NO	NO	YES	YES	YES	YES
16	NO	YES	NO	NO	NO	NO
17	NO	YES	NO	NO	NO	YES
18	NO	YES	NO	NO	YES	NO
19	NO	YES	NO	NO	YES	YES
20	NO	YES	NO	YES	NO	NO
21	NO	YES	NO	YES	NO	YES
22	NO	YES	NO	YES	YES	NO
23	NO	YES	NO	YES	YES	YES
24	NO	YES	YES	NO	NO	NO
25	NO	YES	YES	NO	NO	YES
26	NO	YES	YES	NO	YES	NO
27	NO	YES	YES	NO	YES	YES
28	NO	YES	YES	YES	NO	NO
29	NO	YES	YES	YES	NO	YES
30	NO	YES	YES	YES	YES	NO

Table 17 continues...

<b>Configura- tion Value</b>	<b>Life Test Jumper Present</b>	<b>Comm Board "B" Header Present</b>	<b>Comm Board "A" Header Present</b>	<b>Vend Con- nection Present</b>	<b>Coin Drop #2 Present</b>	<b>Coin Drop #1 Present</b>
31	NO	YES	YES	YES	YES	YES
32	YES	NO	NO	NO	NO	NO
33	YES	NO	NO	NO	NO	YES
34	YES	NO	NO	NO	YES	NO
35	YES	NO	NO	NO	YES	YES
36	YES	NO	NO	YES	NO	NO
37	YES	NO	NO	YES	NO	YES
38	YES	NO	NO	YES	YES	NO
39	YES	NO	NO	YES	YES	YES
40	YES	NO	YES	NO	NO	NO
41	YES	NO	YES	NO	NO	YES
42	YES	NO	YES	NO	YES	NO
43	YES	NO	YES	NO	YES	YES
44	YES	NO	YES	YES	NO	NO
45	YES	NO	YES	YES	NO	YES
46	YES	NO	YES	YES	YES	NO
47	YES	NO	YES	YES	YES	YES
48	YES	YES	NO	NO	NO	NO
49	YES	YES	NO	NO	NO	YES
50	YES	YES	NO	NO	YES	NO
51	YES	YES	NO	NO	YES	YES
52	YES	YES	NO	YES	NO	NO
53	YES	YES	NO	YES	NO	YES
54	YES	YES	NO	YES	YES	NO
55	YES	YES	NO	YES	YES	YES
56	YES	YES	YES	NO	NO	NO
57	YES	YES	YES	NO	NO	YES
58	YES	YES	YES	NO	YES	NO
59	YES	YES	YES	NO	YES	YES
60	YES	YES	YES	YES	NO	NO
61	YES	YES	YES	YES	NO	YES

Table 17 *continues...*

Configura- tion Value	Life Test Jumper Present	Comm Board "B" Header Present	Comm Board "A" Header Present	Vend Con- nection Present	Coin Drop #2 Present	Coin Drop #1 Present
62	YES	YES	YES	YES	YES	NO
63	YES	YES	YES	YES	YES	YES

Table 17

**Configuration 2 Display Test d 30**

This option is not used on this model.

**Configuration 3 Display Test d 31**

This option is not used on this model.

**Configuration 4 Display Test d 32**

This option shows the user which dipswitches are set on the control.

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

To Enter, press the START (enter) keypad. The display will show **d HHH** with **HHH** representing a configuration value as shown in *Table 18*.

Configuration Value	Dipswitch 3 Payment System Not Present (OFF) Payment System Present (ON)	Dipswitch 1 120 Volt Supply (OFF) 240 Volt Supply (ON)
0	OFF	OFF
1	OFF	ON
2	OFF	OFF
3	OFF	ON
4	ON	OFF
5	ON	ON
6	ON	OFF
7	ON	ON

Table 18

**Configuration 5 Display Test d 33**

This option is not used on this model.

**Card Reader Communication Test d 47**

This test displays if an attached card reader has established communications with the control. To start test, control must be in the Testing Mode. Refer to *How to Enter Testing Feature* at the beginning of this section.



To enter, press the START (enter) keypad. The display will show **noCnF9** if communication between the card reader and control has not been established. If communication has been established the display will show **CnHHHH** where **HHH** is a counter of valid communications. If the display shows **no in E**, then no payment system is expected and the machine is not set up for a card reader.

To exit the Card Reader Communication Test, press the WARM (<) keypad. The control will return to the Testing Mode.

## Factory Test

### To Enter Factory Test

1. Be certain control is in Ready Mode or Start Mode and access panel or coin vault is open.
2. While pressing and holding the ULTRA modifier keypad with one hand, press the HOT keypad with the other hand.
3. When the control enters Factory Test, it will display the first test step, Machine Type.

4. The control will advance through the sequence of test steps whenever START (enter) is pressed, with the exception of the Keypad Test and Pressure Sensor Test. Refer to the table below for all tests in the Factory Test.

### To Exit Factory Test

To exit a test step, disconnect the machine from electrical power.

Factory Test Cycle Quick Reference Chart		
Display	Test Mode	Comments
<i>EL</i>	Machine Type	Topload washer is the machine type.
<i>5---</i>	Software Version Number	<i>---</i> is the control version number.
<i>ab--</i>	Output Board Version Number	<i>--</i> is the output board software version number.
<i>A-</i>	Control Level	The control will display the control type where <i>-</i> is the control level.
<i>PR--</i>	Keypad Test	<i>--</i> is the number of the keypad being pressed. You need to press all keypads to advance to the next step.
<i>BBBB</i>	Display Test	All LEDs and display segments will light.
<i>C-C-</i>	Coin Drop Test	<i>-</i> is the number of coins entered. For dual coin drops, coin drop 1 is shown on the left of the display and coin drop 2 is shown on the right of the display.
<i>CRrd, LC5U</i> or <i>5U</i>	Card Reader Test	<i>CRrd</i> is displayed when a card reader is connected but not driving the display. <i>LC5U</i> is displayed when a programming/set-up card is needed. <i>5U</i> is displayed when a programming/set-up card was successful.
<i>5 oP</i> or <i>5 CL</i>	Service Door Switch Test	<i>5 oP</i> is displayed when service door switch is open. <i>5 CL</i> is displayed when service door switch is closed.
<i>U oP</i> or <i>U CL</i>	Coin Vault Test	<i>U oP</i> is displayed when coin vault switch is open. <i>U CL</i> is displayed when coin vault switch is closed.
<i>000 I</i>	High Speed Spin	SPIN LED is lit and the control energizes the high speed spin motor outputs.

Table 19 continues...

Factory Test Cycle Quick Reference Chart		
Display	Test Mode	Comments
0002	Hot Water Fill	Hot water fill valve is turned on.
0003	Cold Water Fill	Cold water fill valve is turned on.
0004	Pressure Sensor Fill	Hot and Cold water valves are turned on until the tub fill level is reached. Test cannot be advanced until the step is complete.
0005	High Agitate	RINSE LED is lit and the control energizes the high speed agitate motor outputs.
0006	Low Agitate	RINSE LED is lit and the control energizes the low speed agitate motor outputs.
0007	Low Speed Spin	SPIN LED is lit and the control energizes the low speed spin motor outputs.
0008	High Speed Spin	SPIN LED is lit and the control energizes the high speed spin motor outputs.
0009	Warm Water Fill	Hot and Cold water valves are turned on.
00 10	High Speed Spin	SPIN LED is lit and the control energizes the high speed spin motor outputs.
00 11	Auxilliary Output 1	The control energizes the Auxiliary Output 1.
00 12	Auxilliary Output 2	The control energizes the Auxiliary Output 2.
00 13	Auxilliary Output 3	The control energizes the Auxiliary Output 3.
00 14	Auxilliary Output 4	The control energizes the Auxiliary Output 4.
Pd	Power Down	This is the final step of Factory Test. The control will display <b>Pd</b> to signify that factory test has been completed and that the user can safely unplug the machine. Cycling power to the machine is the only way to resume normal operation and the control will stay in this state indefinitely until that time.

Table 19

# Error Codes

Following is a list of possible error codes for an electronic control. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

**NOTE: Fatal Errors will show *off* or *order* along with the error on the display.**

Error Codes		
Display	Description	Cause/Corrective Action
<b>EC HH</b>	Payment System Error	The Front-end control communicates with the Payment System in order to perform vending transactions. If an error should occur, which, terminates communication during a transaction, the LED Display will show <b>EC HH</b> for a control generated error, where the <b>HH</b> represents an error code.
<b>EC 02</b>	Time-out Error	Communication failure. Try card again.
<b>EC 03</b>	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.
<b>EC 05</b>	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
<b>EC 11</b>	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
<b>EC 18</b>	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
<b>EC 19</b>	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.
Right most decimal point Lit	Water Leak Detection Error or Slow Drain Detection Error	Water leak test has detected a water leak during a cycle or slow drain is detected in the drain step of a running cycle. The decimal point will remain lit after the error display has expired. Clear the decimal point by pressing the START keypad three times within five seconds or by cycling the power to the machine.
<b>ALARM</b>	Break-in Alarm Error	Check the service door and coin vault switches.
<b>off</b>	Break-in Alarm Shutdown Error	Check the service door and coin vault switches.
<b>E FL</b>	Fill Error	Fill level is not reached within 30 minutes (or other programmed length of time) in any fill step.
<b>Coin Error</b>	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.

*Table continues...*

Error Codes		
Display	Description	Cause/Corrective Action
<b>E id</b>	Board ID	Incorrect replacement control. Replace user control or output board with the correct part.
<b>E d5</b>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board.
<b>E nr</b>	Drive/Output Board Not Ready	Hardware failure. Try cycling power to machine before replacing output board.
<b>E b5</b>	Drive/Output Board Shorted	Hardware failure. Try cycling power to machine before replacing output board.
<b>E Co</b>	Drive/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<b>E dr</b>	Drain Error	If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and turn on the Machine Error Tone for 15 seconds.
<b>E 5d</b>	Slow Drain Error	If a slow drain is detected in the Drain step of a running cycle, the machine control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired, to draw the attention of the owner or attendant. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.
<b>E Ld</b>	Water Leak Drain Error	Error will display if there is a leak after the lid is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<b>E nFLo</b>	No Water Flow Error	If the control does not reach a water level of 0.5 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control will enter Machine Error mode. The control will turn off all outputs and turn on the Machine Error Tone for 15 seconds. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<b>E oF</b>	Overflow Error	The machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent. This error is triggered when an unsafe high water level is detected in the machine and water is unable to drain.

*Table continues...*

Error Codes		
Display	Description	Cause/Corrective Action
<b>E P5</b>	Pressure Sensor Error	If the control does not detect a valid water level sensor input for thirty (30) seconds, or if the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Mode, or Overflow Mode, the control will enter Machine Error Mode. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<b>E LF</b>	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
Display is dim		Look for loose pins and damaged wires on harness from user control to drive board.
<b>E LP</b>	Thermal Protect Error	This error occurs when the motor thermal protect opens. If a cycle is running, the audio will sound for five seconds and the cycle will stop for two minutes. If the motor thermal protect is closed and the lid was not opened during the duration of the error, the cycle will resume automatically. If the lid was opened, the display will show <b>PUSH, START, E LP</b> indicating that the START keypad must be pressed to resume the cycle.
<b>E dxx</b>	Drive/Output Board Error	A machine error tone will sound for 15 seconds. Fatal error condition detected by drive board where xx represents an error code. Power down machine to clear. Call a service technician if error persists.

# Rapid Advance Feature

This feature allows the user to quickly advance through an active cycle or advance into a cycle from the Ready Mode. This feature is useful when tests must be performed immediately on a machine currently in an active cycle. In this case, the user can quickly advance through the cycle to the Ready Mode. At this point, the user can perform the required tests and then return the machine to the active cycle.

## How to Enter Rapid Advance

1. Control must be in Manual Mode. Refer to *How to Enter the Manual Mode*.
2. Press the DELICATE (Λ) or the HOT (V) keypad to scroll through the programmable options until **RAPID** appears in the display.
3. Press the START (enter) keypad. The display will show **PUSH** then **START** followed by the cycle time and the START (enter) keypad LED will flash.
4. Press the START (enter) keypad to start cycle or, if already in an active cycle, pressing START (enter) keypad will advance to the next cycle step.

**NOTE: Lid must be closed to start cycle.**

5. Continue pressing the START (enter) keypad until the cycle is completed.

**NOTE: The Rapid Advance option must be turned on for Rapid Advance to work.**

## How to Exit Rapid Advance Feature

Advance through the cycle until reaching the Ready Mode.

# Clear Vend Feature

The Clear Vend feature allows the owner to clear a control which is in the middle of satisfying the initial vend price, and set it back to the ready mode.

**NOTE: The Clear Vend Feature does not work with Additional Vend Mode or Additional Cycle Top-Off.**

## How to Clear Vend

1. Open the service door. Refer to Opening the Service Door section.
2. While pressing and holding the DELUXE modifier keypad with one hand, press the NORMAL cycle keypad with the other hand. The control will reset to the Ready Mode and clear out the current vend that has been entered.



# 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 5 seconds, the cycle will resume without requiring the user to press the START (enter) keypad to restart.

If the power failure lasted longer than 5 seconds, 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, 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 5 seconds and the Power Fail Reset option is turned **OFF**, the START (enter) keypad will flash one second on and one second off until it is pressed. The cycle will restart from the point it left off when START (enter) is pressed.

If the power failure lasted longer than 5 seconds, lasted longer than the time programmed in the Power Fail Reset option, and the Power Fail Reset option is turned **ON**, the control will reset the cycle and lose all vending entered for the cycle.

# Communications Mode

## Near Field Communications

The Near Field Communications (NFC) 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.

## Card Reader Communications - Card Models Only

The Card Reader Communications feature allows the washer control to communicate with the card reader. The washer control can be programmed for a limited number of options and have its data read without using the keypad.

## Network Communications

The Network Communications feature allows the washer control to communicate with a network. The washer control can be programmed and have its data read without using the keypad.

# Default Cycle Time

Cycles can be made longer or shorter by reprogramming the fill/agitate times. Refer to Programmable Options to change these times. All other times are not programmable. The default cycle programmed in at the factory is:

REGULAR, NORMAL, COLD

Description	Step Number	Step Type	Step Time (Minutes:Seconds)
Wash	0	Fill	4:00
		Agitate	10:00
	1	Pause	0:10
	2	Spin #1	1:00
	3	Spin/Spray	0:30
	4	Spin #2	2:45
Rinse	5	Pause	0:10
	6	Spin	0:05
	7	Spin/Spray	0:30
	8	Spin	1:00
	9	Spin/Spray	0:30
	10	Spin	1:00
Final Spin	11	Pause	0:10
Final Spin	12	Final Spin	NORMAL = 7:00 SYNTHETIC = 6:00 DELICATE = 5:00
Total Time			NORMAL = 28:50 SYNTHETIC = 27:50 DELICATE = 26:50