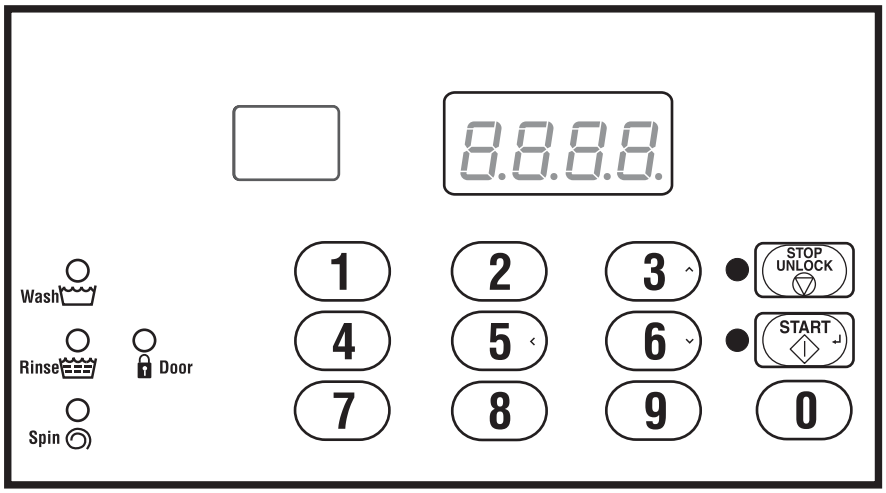
# Washer-Extractor

Refer to Page 4 for Model Numbers

Programming




PHM1263R

**Keep These Instructions for Future Reference.**
(If this machine changes ownership, this manual must accompany machine.)

Alliance Laundry Systems

**www.comlaundry.com**

Part No. F8208801R5
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## 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.**

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**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 washer-extractors. These factors MUST BE supplied by the person(s) installing, maintaining, or operating the washer-extractor.**

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

# Table of Contents

# Model Identification

Information in this manual is applicable to these washer-extractor models:

| | |
|---|---|
| UWL035K12 | UWN080K1M |
| UWL035K1L | UWN080K1V |
| UWL035K1M | UWN100K1M |
| UWL060K12 | UWN100K1V |
| UWL060K1L | UWN125K1M |
| UWL060K1M | UWN125K1V |
| UWL080K1M | UWU035K12 |
| UWL100K1M | UWU035K1L |
| UWL125K1M | UWU035K1M |
| UWN035K12 | UWU060K12 |
| UWN035K1L | UWU060K1L |
| UWN035K1M | UWU060K1M |
| UWN060K12 | UWU080K1M |
| UWN060K1L | UWU100K1M |
| UWN060K1M | UWU125K1M |
| UWN060K1V | |

# Preliminary Information

## About the Control

This control is an advanced, programmable computer that lets the owner control most machine features by pressing a sequence of keypads. Refer to *Figure 1*.

The control allows the owner to program custom cycles, retrieve audit information, run diagnostic tests, and other programmable features. Refer to ***Programming Control*** for a list of features. Washer-extractors shipped from the factory have a default cycle of Cycle #5 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 until the electrical power is restored.**

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

## Glossary of Terms

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

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

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

## Power Failure Recovery

If a cycle is in progress and the power fails for less than five seconds, the cycle status is saved in memory. When the power recovers, the washer-extractor will resume into the previously active cycle.

If the length of the power failure is greater than five seconds, the control will end the cycle and the display will revert back to Start Mode.

## Communications

The control may be programmed manually or by infra-red communication with an external device.

### *Infra-red Communications*

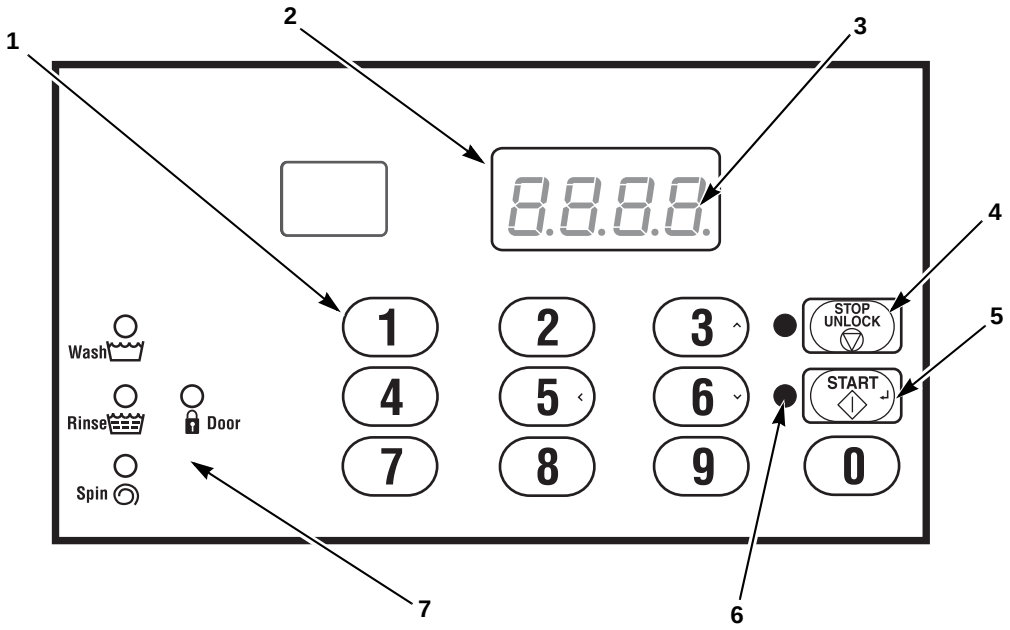
An external device, such as a PDA, allows the owner to program and retrieve information from the control without touching the keypad. An external device greatly expands the programming options available to the owner. However, it is not required to program and operate the washer-extractor. The operation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

# Control Identification

## Select Cycle Pads (Refer to *Figure 1*)

SELECT CYCLE pads are used to select the specific washer cycle. These pads are numbered 0-9 and allow the user to select a cycle other than the default cycle (#5). The SELECT CYCLE keypads are not active after a cycle has been started. Pressing the flashing START pad will confirm the selection and the cycle will begin.

The SELECT CYCLE pads are used in various combinations for programming cycles, retrieving audit information, running diagnostic tests, and other operations. These instructions cover the manual programming and data retrieval options.

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| | |
|---|---|
| **1** | SELECT CYCLE pads |
| **2** | Display |
| **3** | Four 7-Segment Digits |
| **4** | STOP UNLOCK pad |
| **5** | START pad |
| **6** | LED Light |
| **7** | LED Status Lights |

Figure 1

# Display Identification

## Light Emitting Diodes (LEDs) (Refer to *Figure 1*)

LIGHT EMITTING DIODES (LEDs) are used to indicate the chosen cycle, cycle status, when the bleach compartment is dispensing, and door lock information. See below for information on each LED.

### 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.

### DOOR LED

*DOOR* LED is lit whenever the door is locked.

### Four 7-Segment Digits

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

# Washer-Extractor Operation

## Start Up

When power is applied to the washer-extractor, the control will display its software version as “S XX” (“XX” is the version number) for one second. If the control was not powered down during a running cycle, it will enter Start Mode.

## Door Locking Mode

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

## Stop Mode

The control enters this mode if the user stops the cycle by pressing the STOP keypad. If control does not detect water or cylinder rotation it will enter End Of Cycle mode.

## Start Mode

The control enters this mode when machine is ready for operation. The display will show “CYxx” where “xx” is the cycle number.

After pressing the START keypad, with the door closed and locked, the cycle will begin. The cycle cannot be changed once the cycle has started.

## End of Cycle Mode

When a cycle is complete, the control will display “00” and will prompt for door unlock by flashing STOP/ UNLOCK LED until the washer door is unlocked and opened. When this event occurs, the display will revert back to Start 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. The user will not be able to change cycles or water temperature.

## Run Mode

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

## Signals

There are two options when a signal can be used during the washer operation. These two 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.

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

# Special Features

## Programming Control

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

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

## Collecting Audit Information

The control will store audit information in its memory that can be retrieved by pressing various combinations of Select Cycle keypads. The control will record total machine cycles.

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

**NOTE: Additional audit information is retrievable with an external device, using infra-red communications. 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 access panel and then pressing various sequences of Select Cycle keypads, the owner may retrieve or perform the following tests:

- Front End Control Software Version Number
- Output Board Control Software Version Number
- Output Board Water Level Sensor Trim Value
- Access Panel Opening Test
- Door Switch Input Test
- Door Lock Input Test
- Show Fill Time Test
- Show Drain Time Test
- Temperature Sensor Display Test
- Start Pulse Test
- VFD Balance Input Test
- 24 VAC Switch Input Test
- VFD Drive Fault Input Test
- Frame Balance Switch Input Test
- VFD Balance Weight Test
- Water Purge Test
- Water Leak Detection test

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

## Rapid Advance Feature

This feature allows the user to quickly advance through active cycles. This feature is useful when tests must be performed immediately on a washer-extractor currently in an active cycle. In this case, the user can quickly advance through the cycles to shakeout. At this point, the user can perform the required tests and then return the washer-extractor to the point it was interrupted.

For detailed information on using the Rapid Advance feature, refer to ***Rapid Advance Feature***.

## Communications Mode

This feature allows the control to communicate with an external device using infra-red communications. This allows the control to be programmed and have its data read without using the keypad.

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

# Entering the Manual Mode

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

## How to Enter the Manual Mode

1. If the washer is in an active cycle, rapid advance through the cycle. Refer to the ***Rapid Advance Feature***.
2. Press and hold the #4 keypad and the #1 keypad at the same time.
3. The display will show "rAPd".
4. Press the #3 (∧) keypad or the #6 (∨) keypad to scroll through the options until the desired option appears in the display.
5. Press the START (enter) keypad.

Manual Mode is broken into three groups: Manual Programming, Manual Rapid Advance and Manual Diagnostics. Manual Programming can only be turned on or off with an external device. Refer to the appropriate instruction manual. Manual Rapid Advance and Manual Diagnostics can be turned on and off using an external device or by manual programming (refer to 13 and 15 of ***Programming Control***).

By default, all groups are turned "ON".

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

### Manual Programming

Manual Programming (Prog)

Manual Read Audit (AUdt)

Manual Reset (rSEt)

### Manual Rapid Advance

Rapid Advance (rAPd)

### Manual Diagnostics

Manual Diagnostic Tests (dIAg)

If a group is turned off, the display will change from the selected feature to "OFF" when the START pad is pressed and an audio signal will sound for one second. The display will then return to the selected feature. The features in the group cannot be entered.

# Programming Control

## What Can Be Programmed?

This feature allows the owner to program cycle information 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. Refer to this section when programming the control.

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

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

For more advanced users, a quick reference list (refer to *Table 1*) of the options available through the programming mode is available. Programming flowcharts (refer to *Figures Figure 2-Figure 6*) are located on the following pages.

**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 | Default Value | Value Range |
|---|---|---|---|---|
| **1** | **"**dCYC**"** | **Default Cycle** | "Cy05"* | "Cy01"-"Cy30"* |
| **2** | **"**AUd**"** | **Audio Signal** | "29"* | "0"-"31"* |
| **3** | **"**Err-**"** | **Errors** | — | — |
| a. | "E FL" | Fill Errors | "on" | "on"/"oFF" |
| b. | "E dr" | Drain Error | "on" | "on"/"oFF" |
| c. | "E Ub" | Unbalance Error Display | "on" | "on"/"oFF" |
| d. | "E oP" | Open Thermister Error Display | "on" | "on"/"oFF" |
| e. | "E SH" | Shorted Thermistor Error Display | "on" | "on"/"oFF" |
| f. | "E Ht" | Heat Error Display (Heater only) | "on" | "on"/"oFF" |
| g. | "LEr-" | Water Leak Detection Error | — | — |
| 1. | "LEr1" | 1. Water Leak Detection During a Machine Cycle (On/Off) | "oFF" | "on"/"oFF" |
| 2. | "LEr2" | 2. Water Leak Detection Day of Week Enable | "127"* | "0"-"127"* |
| 3. | "LEr3"*** | 3. Number of Cycles Between Water Leak Detection During a Machine Cycle | "0" | "0"-"127" |
| h. | "E Sd" | Slow Drain Detection | "oFF" | "on"/"oFF" |
| **4** | **"**Cy--**"** | **Cycle Programming** | Refer to Operation Manual for default cycle information | |
| a. | **"**Aglt**"** | **Cycle Agitate** | — | — |
| 1. | **"**tyPE**"** | **Agitate Type** | ** | "1"-"4"* |
| 2. | **"**ASPd**"** | **Agitate Speed (VFD only)** | ** | "Lo"/"rEg"* |
| b. | **"**Segx**" (1-8)** | **Cycle Segment Programming** | — | — |
| 1. | "SgEn" | Segment Enable/Disable | ** | "on"/"oFF" |

Table 1 (continued)

Table 1 (continued)

| Option Number | Option Display | Description | Default Value | Value Range |
|---|---|---|---|---|
| c. | **“FILL”** | **Fill Step** | — | — |
| 1. | “FLEn” | Fill Step Enable/Disable | ** | “on”/“oFF” |
| 2. | “FLEU” | Fill Level | ** | “Hl”/“nEd”/“Lo” or 1-30 |
| 3. | “tEnP” | Fill Temperature | ** | “CoLd”/“Uarn”/“Hot”or 35°F-194°F/2°C-90°C |
| d. | **“SUPL”** | **Supply Step** | — | — |
| 1. | “SUEn” | Supply Step Enable/Disable | ** | “on”/“oFF” |
| 2. | “dISP” | Dispenser Options | ** | Display will show “Sx” |
| 3. | “S1” | Supply #1 | ** | “on”/“oFF” |
| 4. | “S2” | Supply #2 | ** | “on”/“oFF” |
| 5. | “S3” | Supply #3 | ** | “on”/“oFF” |
| 6. | “S4” | Supply #4 | ** | “on”/“oFF” |
| 7. | “SdUr” | Supply Duration | ** | Press START keypad to access options |
| 8. | “SEC” | Seconds | ** | 0-59 |
| 9. | “nIn” | Minutes | ** | 0-9 |
| e. | **“AgSt”** | **Agitate Step** | — | — |
| 1. | “AgEn” | Agitate Step Enable/Disable | ** | “on”/“oFF” |
| 2. | “AdUr” | Agitate Duration (in minutes) | ** | 1-30 for agitate types 1 or 2; 1-180 for agitate types 3 or 4 |
| 3. | “HEAt” | Heat in Agitate (if heater is present) | “oFF” (Rinse) “2” (Wash) | “oFF”/“1”/“2”** |
| f. | **“drAn”** | **Drain Step** | — | “on”/“oFF” |
| g. | **“SPIn”** | **Spin Stop** | — | — |
| 1. | “SPEn” | Extract Step Enable/Disable | ** | “on”/“oFF” |
| 2. | “SSEC” | Extract Seconds | ** | 0-59 |
| 3. | “SnIn” | Extract Minutes | ** | Intermediate Extract: Min. Step Time = 30 seconds, Max. Step Time = 3:59 minutes |
| | | | | Final Extract: Min. Step Time = 30 seconds, Max. Step Time = 9:59 minutes |
| 4. | “SSPd” | Extract Speed (VFD only) | ** | “1”-“3”* |
| h. | **“Cnin”*** | Cycle Time in Minutes (If PCtd is enabled) | 0 | 0-255 minutes |
| **5** | **“bALr”** | **Number of Balance Retries (VFD only)** | 3 | 1-7 |
| **6** | **“IrA”** | **IR Access (On/Off)** | “on” | “on”/“oFF” |
| **7** | **“t FC”** | **Fahrenheit/Celsius** | “FAHr” (Fahrenheit) | “FAHr” (Fahrenheit)/“CEL” (Celsius) |
| **8** | **“FH”** | **Hot Water Temperature** | 140°F (60°C) | 35°F-194°F/2°C-90°C |
| **9** | **“FHC”** | **Warm Water Temperature** | 100°F (38°C) | 35°F-194°F/2°C-90°C |
| **10** | **“FC”** | **Cold Water Temperature** | 35°F (2°C) | 35°F-194°F/2°C-90°C |

Table 1 (continued)

Table 1 (continued)

| Option Number | Option Display | Description | Default Value | Value Range |
|---|---|---|---|---|
| **11** | **“**Codn**”** | **Cooldown Enable/Temperature** | “oFF” | “oFF” or 50°F-160°F/10°C-71°C |
| **12** | **“**PtEn**”** | **Production Test Cycle (On/Off)** | “on” | “on”/“oFF” |
| **13** | **“**rAEn**”** | **Manual Rapid Advance (On/Off)** | “on” | “on”/“oFF” |
| **14** | **“**nCtd**”** | **No Cycle Time Display** | “oFF” | “on”/“oFF” |
| **15** | **“**PCtd**”*** | **Programmable Cycle Time Display** | 0 | 0 = Disabled / 1 = Enabled |
| **16** | **“**SdAd**”** | **Slow Drain Detection Adjust** | 0 | 0-255 seconds |
| **17** | **“**rtC-**”** | **Real Time Clock** | — | — |
| a. | “rtC1” | Set Real Time Clock Minutes | — | 00-59 |
| b. | “rtC2” | Set Real Time Clock Hours | — | 00-23 |
| c. | “rtC3” | Set Real Time Clock Day | — | “001” (Sunday)-“007” (Saturday) |
| d. | “rtC4” | Set Real Time Clock Date | — | 1-31 |
| e. | “rtC5” | Set Real Time Clock Month | — | 1-12 |
| f. | “rtC6” | Set Real Time Clock Year | — | 00 (2000)-99 |
| g. | “rtC7” | Daylight Savings Option | “on” | “on”/“oFF” |
| **18** | **“**dAEn**”** | **Manual Diagnostics (On/Off)** | “on” | “on”/“oFF” |
| **19** | **“**FLo**”** | **Low Water Level** | 3 | 1-10 |
| **20** | **“**FnEd**”** | **Medium Water Level** | 15 | 11-20 |
| **21** | **“**FHl**”** | **High Water Level** | 27 | 21-30 |
| **22** | **“**tCF**”** | **Temperature Controlled Fill** | “oFF” | “on”/“oFF” |
| **23** | **“**ALd**”** | **Auto-Water Leak Detection** | — | — |
| a. | “ALd1” | Auto-Water Leak Detection (On/Off and cycles) | “oFF” | “oFF”/0-127 (Cycles) |
| b. | “ALd2” | Auto-Water Leak Detection Hour | 0 | 0-23 |
| c. | “ALd3” | Auto-Water Leak Detection Day of Week | ”127”* | “0”-“127”* |

*Refer to programming section for value definition.
**Refer to the Operation Manual for default cycle setting information.
***Option not available on Software Version 1.

Table 1

## Manual Mode Flowchart

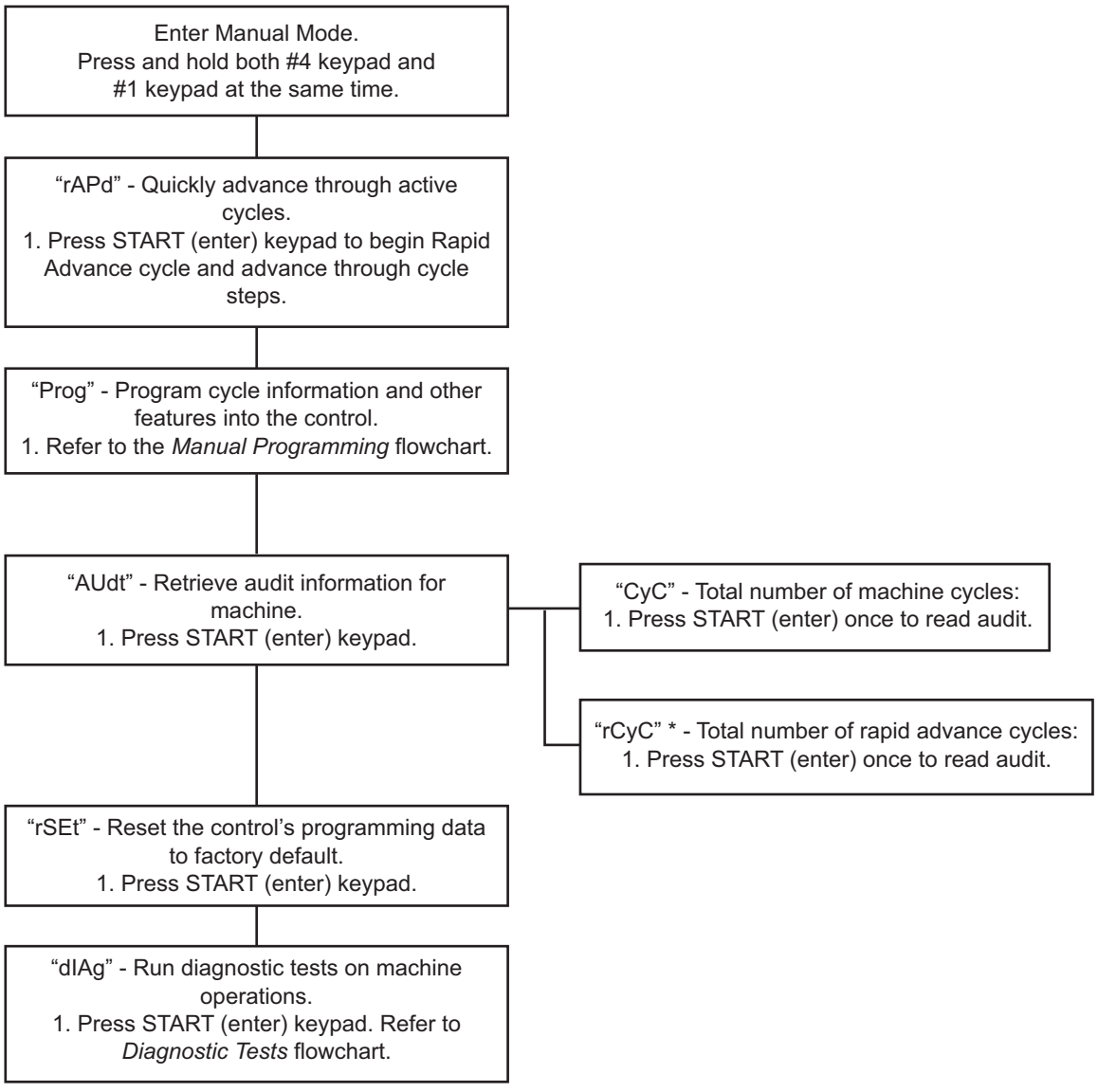



Figure 2

# Manual Programming Flowchart (1 of 3)

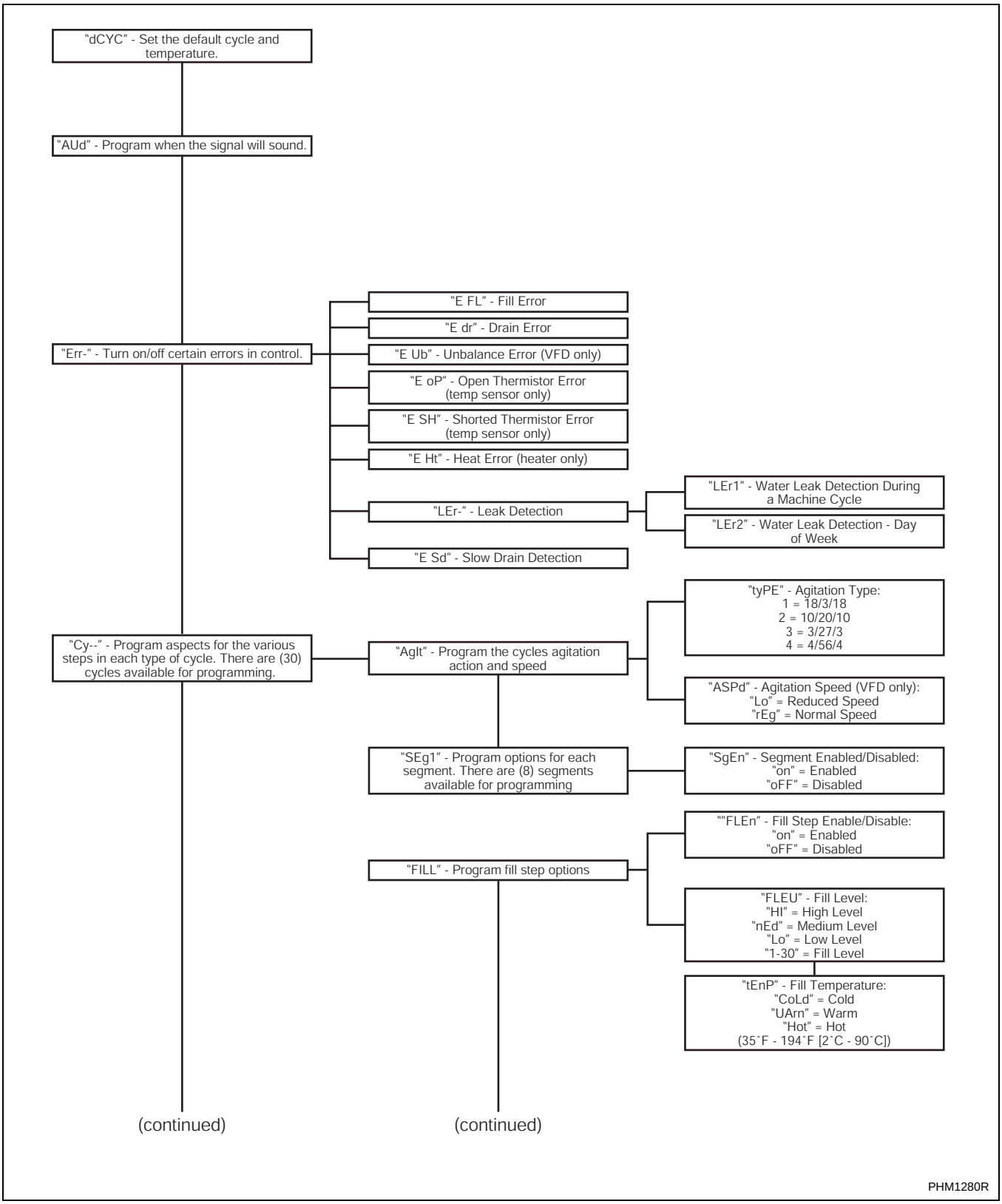
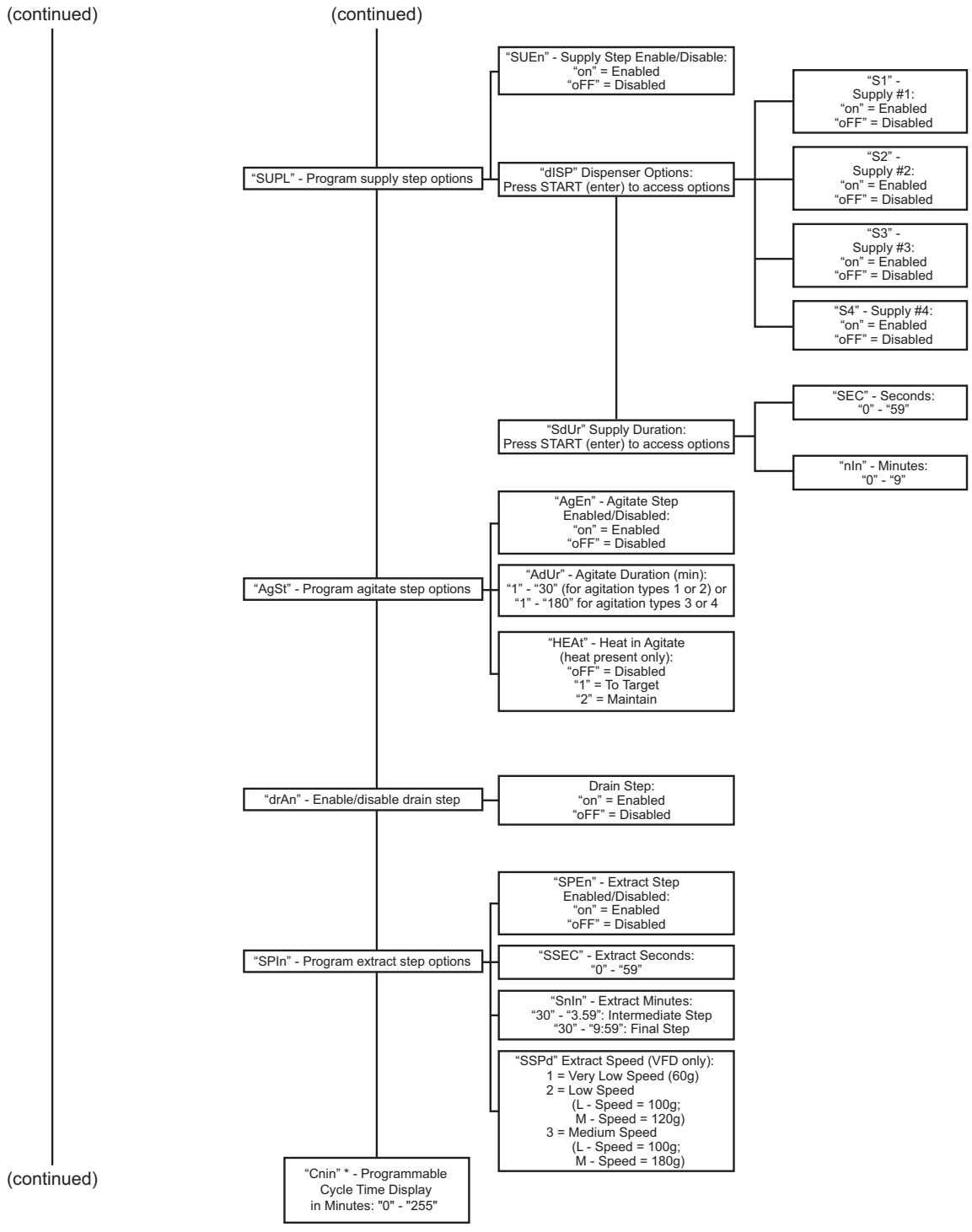



Figure 3

# Manual Programming Flowchart (2 of 3)




* Option available on software version 2 only.

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Figure 4

# Manual Programming Flowchart (3 of 3)

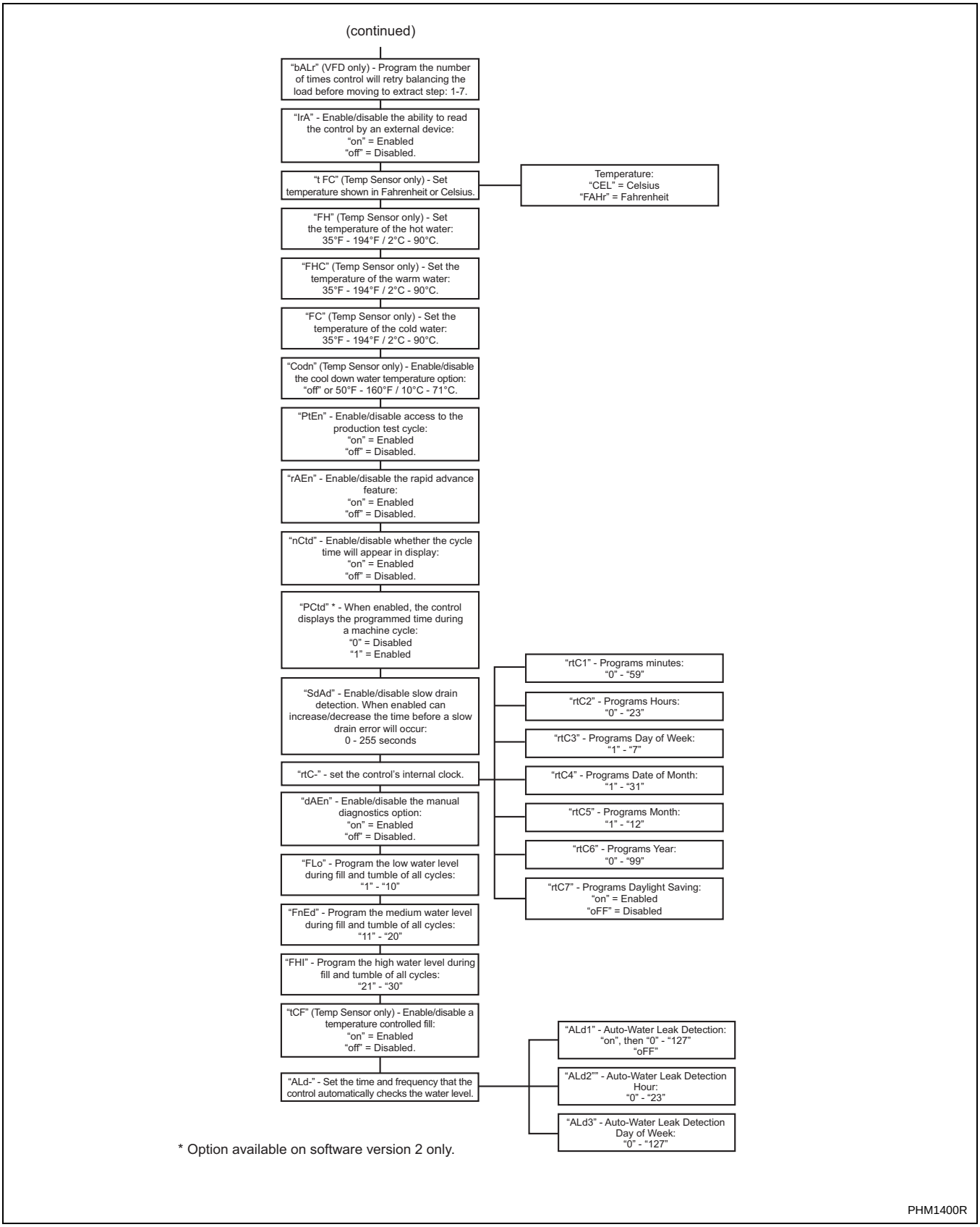


Figure 5

# Diagnostic Tests Flowchart

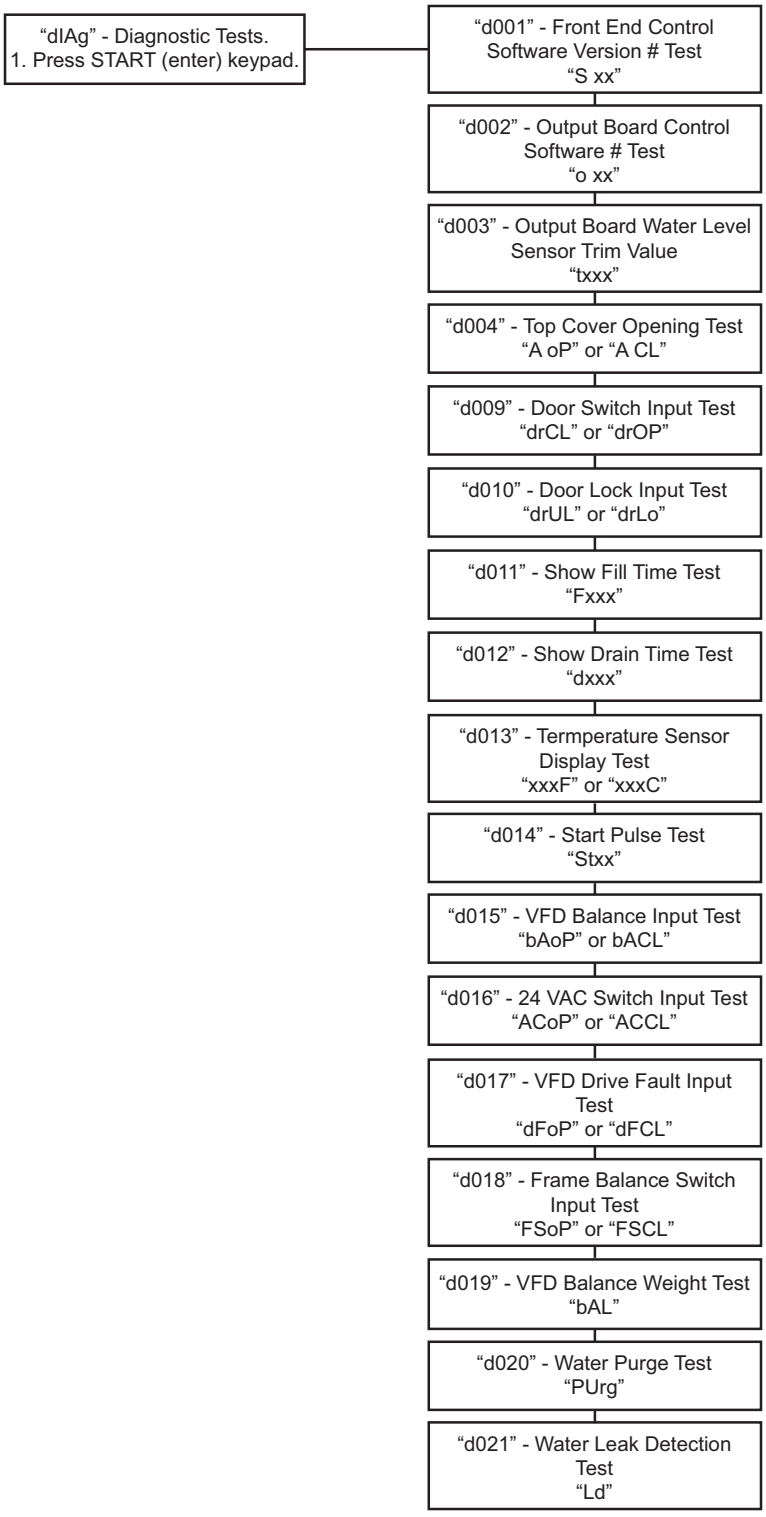


Figure 6

# 1. Default Cycle “dCYC”

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

## How to Program Default Cycle

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. When “dCYC” appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current default cycle value.

**NOTE: The default cycle can be set from 1 to 30.**

4. Press the #3 (∧) or the #6 (∨) keypad to increase or decrease the current number to the desired number.
5. Press the START (enter) keypad when the correct number appears in the display. The next option, “AUd”, will appear in the display.

**NOTE: To program “AUd” (Audio Signal), refer to *option 2* To program other options, refer to the appropriate section.**

## How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## 2. Audio Signal “AUd”

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

There are two occasions when a signal may sound during operation. These two occasions are listed below:

1. **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.
2. **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.

### How to Program the Audio Signal

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “AUd” appears in the display.
4. When “AUd” appears in the display press the START (enter) keypad. A number will appear in the display. This number corresponds to the current Audio Signal Programming Value.
5. Locate the desired number in the first column of *Table 2* on the following page.
6. Press the #3 (∧) or the #6 (∨) 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, “Err-”, will appear in the display.

**NOTE: To program “Err-” (Errors), refer to *.option 3* To program other options, refer to the appropriate section.**

### How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## How to Read *Table 2*

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

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

The default value programmed at the factory is 1.

| Signal Value | Start Mode (Not Used) | Remove Card (Not Used) | Coin/ Card Input (Not Used) | 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** |
| 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 2

## 3. Error Code Programming “Err-”

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

### How to Program Error Code Programming

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “Err-” appears in the display.
4. When “Err-” appears in the display, press the START (enter) keypad. Refer to *Table 3* for a list of programmable error code parameters.
5. Press the #3 (∧) or the #6 (∨) keypad to select error code.
6. Press the START (enter) keypad when the correct code appears in the display. The current status will appear in the display.
   “on” = Error Code Enabled
   “oFF” = Error Code Disabled
7. Press the #3 (∧) or the #6 (∨) keypad to change the status.
8. Press the START (enter) keypad when the correct status appears in the display. The next Error Code Programming option will appear in the display.

**NOTE: To program “Cy--” (Cycle Programming), press the #5 (<) keypad, then the #3 (∧) keypad and refer to *option 4*. To program other options, refer to the appropriate section.**

### How to Exit Programming Feature

9. Press the #5 (<) keypad until the control returns to Start Mode.

| | | |
|---|---|---|
| “E FL” | **Fill Error** | |
| “E dr” | **Drain Error** | |
| “E Ub” | **Unbalance Error Display (VFD only)** | |
| “E oP” | **Open Thermistor Error Display** | |
| “E SH” | **Shorted Thermistor Error Display** | |
| “E Ht” | **Heat Error Display (Heater only)** | |
| “LEr-” | **Leak Detection Error**<br>If water leak detection during a machine cycle is enabled, then, on the enabled day(s) of the week, the control will check for water leaks during running machine cycles. If a leak is detected, the control will display the “E Ld” error for one minute after the cycle is completed. It will also light the right-most decimal point on the display. To turn off the right-most decimal point on the display, press the START keypad 3 times (within 5 seconds) anytime after the first fill. The water leak detector diagnostic test can be used to verify the leak. | |
| | “LEr1” | **Water Leak Detection During a Machine Cycle - Determines if water level drops below target level.** |
| | “LEr2” | **Water Leak Detection During Machine Cycle Day of Week Enable (Refer to *Figure 3* for Day(s) of the Week Enabled Values)** |
| | “LEr3” | **Number of Cycles Between Water Leak Detection During a Machine Cycle (Option not available on Software Version 1.)** |
| “ESd” | **Slow Drain Detection Determines if machine is draining slower than normal.**<br>If Slow Drain Detection is enabled, the control will check for slow drain operation during running machine cycles. If a slow drain is detected, the control will display the “ESd” error for one minute after the cycle is completed. It will also light the right-most decimal point on the display. For machines equipped with Software Version 2, to turn off the right-most decimal point on the display, press the START keypad 3 times (within 5 seconds) anytime after the first fill. | |

Table 3

| Day(s) of the Week Enabled Values | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Day Of Week Value** | **SAT** | **FRI** | **THUR** | **WED** | **TUE** | **MON** | **SUN** |
| 0 | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| 1 | OFF | OFF | OFF | OFF | OFF | OFF | **ON** |
| 2 | OFF | OFF | OFF | OFF | OFF | **ON** | OFF |
| 3 | OFF | OFF | OFF | OFF | OFF | **ON** | **ON** |
| 4 | OFF | OFF | OFF | OFF | **ON** | OFF | OFF |
| 5 | OFF | OFF | OFF | OFF | **ON** | OFF | **ON** |
| 6 | OFF | OFF | OFF | OFF | **ON** | **ON** | OFF |
| 7 | OFF | OFF | OFF | OFF | **ON** | **ON** | **ON** |
| 8 | OFF | OFF | OFF | **ON** | OFF | OFF | OFF |
| 9 | OFF | OFF | OFF | **ON** | OFF | OFF | **ON** |
| 10 | OFF | OFF | OFF | **ON** | OFF | **ON** | OFF |
| 11 | OFF | OFF | OFF | **ON** | OFF | **ON** | **ON** |
| 12 | OFF | OFF | OFF | **ON** | **ON** | OFF | OFF |
| 13 | OFF | OFF | OFF | **ON** | **ON** | OFF | **ON** |
| 14 | OFF | OFF | OFF | **ON** | **ON** | **ON** | OFF |
| 15 | OFF | OFF | OFF | **ON** | **ON** | **ON** | **ON** |
| 16 | OFF | OFF | **ON** | OFF | OFF | OFF | OFF |
| 17 | OFF | OFF | **ON** | OFF | OFF | OFF | **ON** |
| 18 | OFF | OFF | **ON** | OFF | OFF | **ON** | OFF |
| 19 | OFF | OFF | **ON** | OFF | OFF | **ON** | **ON** |
| 20 | OFF | OFF | **ON** | OFF | **ON** | OFF | OFF |
| 21 | OFF | OFF | **ON** | OFF | **ON** | OFF | **ON** |
| 22 | OFF | OFF | **ON** | OFF | **ON** | **ON** | OFF |
| 23 | OFF | OFF | **ON** | OFF | **ON** | **ON** | **ON** |
| 24 | OFF | OFF | **ON** | **ON** | OFF | OFF | OFF |
| 25 | OFF | OFF | **ON** | **ON** | OFF | OFF | **ON** |
| 26 | OFF | OFF | **ON** | **ON** | OFF | **ON** | OFF |
| 27 | OFF | OFF | **ON** | **ON** | OFF | **ON** | **ON** |
| 28 | OFF | OFF | **ON** | **ON** | **ON** | OFF | OFF |
| 29 | OFF | OFF | **ON** | **ON** | **ON** | OFF | **ON** |
| 30 | OFF | OFF | **ON** | **ON** | **ON** | **ON** | OFF |
| 31 | OFF | OFF | **ON** | **ON** | **ON** | **ON** | **ON** |
| 32 | OFF | **ON** | OFF | OFF | OFF | OFF | OFF |
| 33 | OFF | **ON** | OFF | OFF | OFF | OFF | **ON** |
| 34 | OFF | **ON** | OFF | OFF | OFF | **ON** | OFF |
| 35 | OFF | **ON** | OFF | OFF | OFF | **ON** | **ON** |
| 36 | OFF | **ON** | OFF | OFF | **ON** | OFF | OFF |
| 37 | OFF | **ON** | OFF | OFF | **ON** | OFF | **ON** |
| 38 | OFF | **ON** | OFF | OFF | **ON** | **ON** | OFF |
| 39 | OFF | **ON** | OFF | OFF | **ON** | **ON** | **ON** |

Table 4 (continued)

Table 4 (continued)

| Day(s) of the Week Enabled Values | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Day Of Week Value** | **SAT** | **FRI** | **THUR** | **WED** | **TUE** | **MON** | **SUN** |
| 40 | OFF | **ON** | OFF | **ON** | OFF | OFF | OFF |
| 41 | OFF | **ON** | OFF | **ON** | OFF | OFF | **ON** |
| 42 | OFF | **ON** | OFF | **ON** | OFF | **ON** | OFF |
| 43 | OFF | **ON** | OFF | **ON** | OFF | **ON** | **ON** |
| 44 | OFF | **ON** | OFF | **ON** | **ON** | OFF | OFF |
| 45 | OFF | **ON** | OFF | **ON** | **ON** | OFF | **ON** |
| 46 | OFF | **ON** | OFF | **ON** | **ON** | **ON** | OFF |
| 47 | OFF | **ON** | OFF | **ON** | **ON** | **ON** | **ON** |
| 48 | OFF | **ON** | **ON** | OFF | OFF | OFF | OFF |
| 49 | OFF | **ON** | **ON** | OFF | OFF | OFF | **ON** |
| 50 | OFF | **ON** | **ON** | OFF | OFF | **ON** | OFF |
| 51 | OFF | **ON** | **ON** | OFF | OFF | **ON** | **ON** |
| 52 | OFF | **ON** | **ON** | OFF | **ON** | OFF | OFF |
| 53 | OFF | **ON** | **ON** | OFF | **ON** | OFF | **ON** |
| 54 | OFF | **ON** | **ON** | OFF | **ON** | **ON** | OFF |
| 55 | OFF | **ON** | **ON** | OFF | **ON** | **ON** | **ON** |
| 56 | OFF | **ON** | **ON** | **ON** | OFF | OFF | OFF |
| 57 | OFF | **ON** | **ON** | **ON** | OFF | OFF | **ON** |
| 58 | OFF | **ON** | **ON** | **ON** | OFF | **ON** | OFF |
| 59 | OFF | **ON** | **ON** | **ON** | OFF | **ON** | **ON** |
| 60 | OFF | **ON** | **ON** | **ON** | **ON** | OFF | OFF |
| 61 | OFF | **ON** | **ON** | **ON** | **ON** | OFF | **ON** |
| 62 | OFF | **ON** | **ON** | **ON** | **ON** | **ON** | OFF |
| 63 | OFF | **ON** | **ON** | **ON** | **ON** | **ON** | **ON** |
| 64 | **ON** | OFF | OFF | OFF | OFF | OFF | OFF |
| 65 | **ON** | OFF | OFF | OFF | OFF | OFF | **ON** |
| 66 | **ON** | OFF | OFF | OFF | OFF | **ON** | OFF |
| 67 | **ON** | OFF | OFF | OFF | OFF | **ON** | **ON** |
| 68 | **ON** | OFF | OFF | OFF | **ON** | OFF | OFF |
| 69 | **ON** | OFF | OFF | OFF | **ON** | OFF | **ON** |
| 70 | **ON** | OFF | OFF | OFF | **ON** | **ON** | OFF |
| 71 | **ON** | OFF | OFF | OFF | **ON** | **ON** | **ON** |
| 72 | **ON** | OFF | OFF | **ON** | OFF | OFF | OFF |
| 73 | **ON** | OFF | OFF | **ON** | OFF | OFF | **ON** |
| 74 | **ON** | OFF | OFF | **ON** | OFF | **ON** | OFF |
| 75 | **ON** | OFF | OFF | **ON** | OFF | **ON** | **ON** |
| 76 | **ON** | OFF | OFF | **ON** | **ON** | OFF | OFF |
| 77 | **ON** | OFF | OFF | **ON** | **ON** | OFF | **ON** |
| 78 | **ON** | OFF | OFF | **ON** | **ON** | **ON** | OFF |
| 79 | **ON** | OFF | OFF | **ON** | **ON** | **ON** | **ON** |
| 80 | **ON** | OFF | **ON** | OFF | OFF | OFF | OFF |
| 81 | **ON** | OFF | **ON** | OFF | OFF | OFF | **ON** |
| 82 | **ON** | OFF | **ON** | OFF | OFF | **ON** | OFF |
| 83 | **ON** | OFF | **ON** | OFF | OFF | **ON** | **ON** |

Table 4 (continued)

Table 4 (continued)

| Day(s) of the Week Enabled Values | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Day Of Week Value** | **SAT** | **FRI** | **THUR** | **WED** | **TUE** | **MON** | **SUN** |
| 84 | **ON** | OFF | **ON** | OFF | **ON** | OFF | OFF |
| 85 | **ON** | OFF | **ON** | OFF | **ON** | OFF | **ON** |
| 86 | **ON** | OFF | **ON** | OFF | **ON** | **ON** | OFF |
| 87 | **ON** | OFF | **ON** | OFF | **ON** | **ON** | **ON** |
| 88 | **ON** | OFF | **ON** | **ON** | OFF | OFF | OFF |
| 89 | **ON** | OFF | **ON** | **ON** | OFF | OFF | **ON** |
| 90 | **ON** | OFF | **ON** | **ON** | OFF | **ON** | OFF |
| 91 | **ON** | OFF | **ON** | **ON** | OFF | **ON** | **ON** |
| 92 | **ON** | OFF | **ON** | **ON** | **ON** | OFF | OFF |
| 93 | **ON** | OFF | **ON** | **ON** | **ON** | OFF | **ON** |
| 94 | **ON** | OFF | **ON** | **ON** | **ON** | **ON** | OFF |
| 95 | **ON** | OFF | **ON** | **ON** | **ON** | **ON** | **ON** |
| 96 | **ON** | **ON** | OFF | OFF | OFF | OFF | OFF |
| 97 | **ON** | **ON** | OFF | OFF | OFF | OFF | **ON** |
| 98 | **ON** | **ON** | OFF | OFF | OFF | **ON** | OFF |
| 99 | **ON** | **ON** | OFF | OFF | OFF | **ON** | **ON** |
| 100 | **ON** | **ON** | OFF | OFF | **ON** | OFF | OFF |
| 101 | **ON** | **ON** | OFF | OFF | **ON** | OFF | **ON** |
| 102 | **ON** | **ON** | OFF | OFF | **ON** | **ON** | OFF |
| 103 | **ON** | **ON** | OFF | OFF | **ON** | **ON** | **ON** |
| 104 | **ON** | **ON** | OFF | **ON** | OFF | OFF | OFF |
| 105 | **ON** | **ON** | OFF | **ON** | OFF | OFF | **ON** |
| 106 | **ON** | **ON** | OFF | **ON** | OFF | **ON** | OFF |
| 107 | **ON** | **ON** | OFF | **ON** | OFF | **ON** | **ON** |
| 108 | **ON** | **ON** | OFF | **ON** | **ON** | OFF | OFF |
| 109 | **ON** | **ON** | OFF | **ON** | **ON** | OFF | **ON** |
| 110 | **ON** | **ON** | OFF | **ON** | **ON** | **ON** | OFF |
| 111 | **ON** | **ON** | OFF | **ON** | **ON** | **ON** | **ON** |
| 112 | **ON** | **ON** | **ON** | OFF | OFF | OFF | OFF |
| 113 | **ON** | **ON** | **ON** | OFF | OFF | OFF | **ON** |
| 114 | **ON** | **ON** | **ON** | OFF | OFF | **ON** | OFF |
| 115 | **ON** | **ON** | **ON** | OFF | OFF | **ON** | **ON** |
| 116 | **ON** | **ON** | **ON** | OFF | **ON** | OFF | OFF |
| 117 | **ON** | **ON** | **ON** | OFF | **ON** | OFF | **ON** |
| 118 | **ON** | **ON** | **ON** | OFF | **ON** | **ON** | OFF |
| 119 | **ON** | **ON** | **ON** | OFF | **ON** | **ON** | **ON** |
| 120 | **ON** | **ON** | **ON** | **ON** | OFF | OFF | OFF |
| 121 | **ON** | **ON** | **ON** | **ON** | OFF | OFF | **ON** |
| 122 | **ON** | **ON** | **ON** | **ON** | OFF | **ON** | OFF |
| 123 | **ON** | **ON** | **ON** | **ON** | OFF | **ON** | **ON** |
| 124 | **ON** | **ON** | **ON** | **ON** | **ON** | OFF | OFF |
| 125 | **ON** | **ON** | **ON** | **ON** | **ON** | OFF | **ON** |
| 126 | **ON** | **ON** | **ON** | **ON** | **ON** | **ON** | OFF |
| 127 | **ON** | **ON** | **ON** | **ON** | **ON** | **ON** | **ON** |

Table 4

# 4. Cycle Programming “Cy--”

This option allows the owner to program different aspects for various steps in each type of cycle. There are 30 cycles available for programming.

## How to Enter Cycle Programming

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “Cy--” appears in the display. Press the START (enter) keypad and “Cy01” will appear in the display.
4. Press the #3 (∧) or the #6 (∨) keypad to scroll through the 30 cycles to program. Press the START (enter) keypad when the desired cycle appears in the display.
5. The first Cycle Programming option, “Agit”, will appear in the display.

**NOTE: To program “Agit” (Cycle Agitate), continue to next option. To program other options, press the #3 (∧) or the #6 (∨) keypad and refer to the appropriate section.**

## How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## How to Program Cycle Agitate “AgIt”

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

1. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable Cycle Programming options until “Agit” appears in the display.
2. When “Agit” appears in the display, press the START (enter) keypad. The first Cycle Agitate option will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options. Refer to *Table 5*.
4. Press the START (enter) keypad when the desired programmable option appears in the display. The current status will appear in the display. Refer to *Table 5*.

| Final Spin Step | Description | Status |
|---|---|---|
| “tyPE” | Agitate Type | 1-4<br>1 = 18/3/18 Agitation Action<br>2 = 10/20/10 Agitation Action<br>3 = 3/27/3 Agitation Action<br>4 = 4/56/4 Agitation Action |
| “ASPd” | Agitate Speed (VFD only) | “Lo” = Reduced Speed<br>“rEg” = Normal Speed |

Table 5

5. Press the #3 (∧) or the #6 (∨) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next Cycle Agitate option will appear in the display.

**NOTE: To program “SEg1” (Cycle Segment 1) press the #5 (<) keypad and continue to next Cycle Programming option. To program other options, press the #5 (<) keypad and refer to the appropriate section.**

## How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## How to Program Cycle Segment "SEg1"

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

1. Press the #3 (∧) or the #6 (∨) keypad to scroll through the eight programmable Cycle Segments until the desired segment appears in the display.
2. When the desired segment appears in the display, press the START (enter) keypad. "SgEn" (Segment Enable/Disable) will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the Cycle Segment programmable options.

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

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

### *Programming Segment Enable/Disable*

1. When "SgEn" appears in the display, press the START (enter) keypad. The current Segment Enable/Disable status will appear in the display.
   "on" = Segment is enabled
   "oFF" = Segment is disabled
2. Press the #3 (∧) or the #6 (∨) keypad to change the current status.

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

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

**NOTE: To program "FILL" (Fill Step), continue to next Cycle Segment option. To program other options, press the #3 (∧) or the #6 (∨) keypad and refer to the appropriate section.**

## How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

### *Programming Fill Step*

1. When "FILL" appears in the display, press the START (enter) keypad. The first Fill step programming option will appear in the display.
2. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable Fill step options. Refer to *Table 6*.

**NOTE: Fill Step "FLEn" must be enabled to scroll through all Fill Step options.**

3. Press the START (enter) keypad when the desired option appears in the display. The current status will appear in the display. Refer to *Table 6*.

| Fill Step | Description | Status |
|---|---|---|
| "FLEn" | Fill Step Enable/Disable | "on"/"oFF" |
| "FLEU" | Fill Level | "HI" = high level<br>"nEd" = medium level<br>"Lo" = low level<br>"1-30" |
| "tEnP" | Fill Temperature | "CoLd" = Cold<br>"UArn" = Warm<br>"Hot" = Hot<br>(35°F-194°F [2°C-90°C]) |

Table 6

4. Press the #3 (∧) or the #6 (∨) keypad to change the current status.
5. Press the START (enter) keypad when the desired status appears in the display. The next Fill step option will appear in the display.

**NOTE: To program "SUPL" (Supply Step), continue to next Cycle Segment option. To program other options, press the #3 (∧) or the #6 (∨) keypad the and refer to the appropriate section.**

## How to Exit Programming Feature

Press the #5(<) keypad until the control returns to Start Mode.

### *Programming Supply Step*

1. When "SUPL" appears in the display, press the START (enter) keypad. The first Supply step programming option will appear in the display.
2. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable Supply step options. Refer to *Table 7*.

**NOTE: Supply Step "SUEn" must be enabled to scroll through all Supply Step options.**

3. Press the START (enter) keypad when the desired option appears in the display. The current status value will appear in the display. Refer to *Table 7*.

| Supply Step | Description | Status/Value |
|---|---|---|
| "SUEn" | Supply Step Enable/Disable | "on"/"oFF" |
| "dISP" | Dispenser Options | Press START (enter) to access options |
| "S1" | Supply #1 | "on"/"oFF" |
| "S2" | Supply #2 | "on"/"oFF" |
| "S3" | Supply #3 | "on"/"oFF" |
| "S4" | Supply #4 | "on"/"oFF" |
| "SdUr" | Supply Duration | Press START (enter) to access options |
| "SEC" | Seconds | 0-59 |
| "nIn" | Minutes | 0-9 |

Table 7

4. Press the #3 (∧) or the #6 (∨) keypad to change the current status/value.
5. Press the START (enter) keypad when the desired status/value appears in the display. The next Supply step option will appear in the display.

**NOTE: To program "AgSt" (Agitate Step), continue to next Cycle Segment option. If in the Dispenser Options or Supply Duration programming option, press the #5 (<) keypad first. To program other options, press the #3 (∧) or the #6 (∨) keypad and refer to the appropriate section.**

## How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Ready Mode.

### *Programming Agitate Step*

1. When "AgSt" appears in the display, press the START (enter) keypad. The first Agitate step programming option will appear in the display.
2. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable Agitate step options. Refer to *Table 8*.

**NOTE: Agitate Step "AgEn" must be enabled to scroll through all Agitate step options.**

3. Press the START (enter) keypad when the desired option appears in the display. The current status/value will appear in the display. Refer to *Table 8*.

| Agitate Step | Description | Status/Value |
|---|---|---|
| "AgEn" | Agitate Step Enable/Disable | "on"/"oFF" |
| "AdUr" | Agitate Duration (in minutes) | 1-30 Minutes for agitate types 1 or 2<br>1-180 Minutes for agitate types 3 or 4<br>(Refer to Cycle Agitate) |
| "HEAt" | Heat in Agitate (If heater is present) | "oFF", 1 or 2<br>1 = To Target<br>2 = Maintain |

Table 8

4. Press the #3 (∧) or the #6 (∨) keypad to change the current status/value.
5. Press the START (enter) keypad when the desired status/value appears in the display. The next Agitate step option will appear in the display.

**NOTE: To program "drAn" (Drain Step), continue to next Cycle Segment option. To program other options, press the #3 (∧) or the #6 (∨) keypad and refer to the appropriate section.**

## How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

### *Programming Drain Step*

1. When "drAn" appears in the display, press the START (enter) keypad. The current status will be displayed.
2. Press the #3 (∧) or the #6 (∨) keypad to change the current status.
   "on" = Drain step is enabled
   "oFF" = Drain step is disabled

**NOTE: Drain must be enabled to activate Extract step.**

3. Press the START (enter) keypad when the desired status appears in the display. The next Cycle Segment option, "SPIn", will appear in the display.

**NOTE: To program "SPIn" (Extract Step), continue to next Cycle Segment option. To program other options press the #3 (∧) or the #6 (∨) keypad and refer to the appropriate section.**

## How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Ready Mode.

### *Programming Extract Step*

1. When "SPIn" appears in the display, press the START (enter) keypad. The first Extract step programming option will appear in the display.
2. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable Extract step options. Refer to *Table 9*.

**NOTE: Extract Step "SPEn" must be enabled to scroll through all Extract step options.**

3. Press the START (enter) keypad when the desired option appears in the display. The current status/value will appear in the display. Refer to *Table 9*.

| Extract Step | Description | Status/Value |
|---|---|---|
| "SPEn" | Extract Step Enable/ Disable | "on"/"oFF" |
| "SSEC" | Extract Seconds | 0-59 |
| "SnIn" | Extract Minutes | ***Intermediate Extract:***<br>Minimum<br>Step Time = 30 seconds<br>Maximum<br>Step Time = 3:59 minutes<br><br>***Final Extract:***<br>Minimum<br>Step Time = 30 seconds<br>Maximum<br>Step Time = 9:59 minutes |
| "SSPd" | Extract Speed (VFD only) | 1 = very low speed (60g)<br>2 = low speed<br>(L-speed = 100g;<br>M-speed = 120g)<br>3 = medium speed<br>(L-speed = 100g;<br>M-speed = 180g) |

Table 9

4. Press the #3 (∧) or the #6 (∨) keypad to change the current status/value.
5. Press the START (enter) keypad when the desired status/value appears in the display.

**NOTE: To program "Cnin" (Cycle Time Display), continue to next Cycle Segment option. To program other options press the #3 (∧) or the #6 (∨) keypad and refer to the appropriate section.**

## How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

*Programming Cycle Time Display*

**NOTE: This option is not available on Software Version 1.**

**NOTE: This programmable option (Cnin) will only appear if the Programmable Cycle Time Display option (PCtd) has been enabled.**

1. When "Cnin" appears in the display, press the START (enter) keypad. The current status will be displayed.
2. Press the #3 (∧) or the #6 (∨) keypad to change the current value. The cycle time display can be set from 0 to 255 minutes.
3. Press the START (enter) keypad when the desired value appears in the display.

**NOTE: To program another cycle, repeat Cycle Programming steps. To program other options press the the #3 (∧) or the #6 (∨) keypad and refer to the appropriate section.**

### How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## 5. Number of Balance Retries "bALr" (Variable Frequency Drives Only)

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

### How to Program Number of Balance Retries

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until "Prog" appears in the display. Press the START (enter) keypad, and "dCYC" will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until "bALr" appears in the display.
4. When "bALr" appears in the display, press the START (enter) keypad. The current value will appear in the display.
5. Press the #3 (∧) or the #6 (∨) keypad to increase or decrease the current value.

**NOTE: The number of balance retries can be set from 1-7.**

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

**NOTE: To program "IrA" (IR Access [on/off]), refer to *option 6*. To program other options, refer to the appropriate section.**

### How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## 6. IR Access (On/Off) “IrA”

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

### How to Program the IR Access (On/Off)

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “IrA” appears in the display.
4. When “IrA” appears in the display, press the START (enter) keypad. The current IR Access status will appear in the display.
   “on” = Option Enabled
   “oFF” = Option Disabled
5. Press the #3 (∧) or the #6 (∨) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, “t FC” will appear in the display.

**NOTE: To program “t FC” (Fahrenheit/Celsius), refer to *option 7*. To program other options, refer to the appropriate section.**

### How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## 7. Fahrenheit/Celsius “t FC”

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

### How to Program Fahrenheit/Celsius

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “t FC” appears in the display.
4. When “t FC” appears in the display, press the START (enter) keypad. A number will appear in the display. This number (found below) corresponds to the current Fahrenheit/Celsius setting.
   CEL = Celsius
   FAHr = Fahrenheit
5. Press the #3 (∧) or the #6 (∨) keypad to increase or decrease the current number to the desired number.
6. Press the START (enter) keypad when the correct number of degrees appears in the display. The new value is saved and the next option, “FH”, will appear in the display.

**NOTE: To program “FH” (Hot Water Temperature), refer to *option 8*. To program other options, refer to the appropriate section.**

### How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## 8. Hot Water Temperature “FH”

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

### How to Program Hot Water Temperature

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “FH” appears in the display.
4. When “FH” appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current Hot Water Temperature value.
5. Press the #3 (∧) or the #6 (∨) keypad to increase or decrease the current Hot Water Temperature value to the desired Hot Water Temperature value.

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

**NOTE: Refer to *option 7* to select Celsius or Fahrenheit display.**

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

**NOTE: To program “FHC” (Warm Water Temperature), refer to *option 9*. To program other options, refer to the appropriate section.**

### How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## 9. Warm Water Temperature “FHC”

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

### How to Program Warm Water Temperature

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “FHC” appears in the display.
4. When “FHC” appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current Warm Water Temperature value.
5. Press the #3 (∧) or the #6 (∨) keypad to increase or decrease the current Warm Water Temperature value to the desired Warm Water Temperature value.

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

**NOTE: Refer to *option 7* to select Celsius or Fahrenheit display.**

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

**NOTE: To program “FC” (Cold Water Temperature), refer to *option 10*. To program other options, refer to the appropriate section.**

### How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## 10. Cold Water Temperature “FC”

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

### How to Program Cold Water Temperature

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “FC” appears in the display.
4. When “FC” appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current Cold Water Temperature value.
5. Press the #3 (∧) or the #6 (∨) keypad to increase or decrease the current Cold Water Temperature value to the desired Cold Water Temperature value.

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

**NOTE: Refer to *option 7* to select Celsius or Fahrenheit display.**

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

**NOTE: To program “Codn” (Cooldown Enable/ Temperature), refer to *option 11*. To program other options, refer to the appropriate section.**

### How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## 11. Cooldown Enable/Temperature “Codn”

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

### How to Program Cooldown Enable/ Temperature

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “Codn” appears in the display.
4. When “Codn” appears in the display, press the START (enter) keypad. A number or “off” will appear in the display. The number corresponds to the current Cooldown Water Temperature value, and “oFF” appears when cooldown is disabled.
5. Press the #3 (∧) or the #6 (∨) keypad to change the current status.

**NOTE: Cooldown Water Temperature is selectable between 50° and 160° Fahrenheit (10° and 71° Celsius). Default is off.**

6. Press the START (enter) keypad when the desired value appears in the display.

**NOTE: Refer to *option 7* to select Celsius or Fahrenheit display.**

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

**NOTE: To program “PtEn” (Production Test Cycle [on/off]), refer to *option 12*. To program other options, refer to the appropriate section.**

### How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## 12. Production Test Cycle (On/Off) “PtEn”

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

### How to Program the Production Test Cycle (On/Off)

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “PtEn” appears in the display.
4. When “PtEn” appears in the display, press the START (enter) keypad. The current Production Test Cycle status will appear in the display.
   “on” = Option Enabled
   “oFF” = Option Disabled
5. Press the #3 (∧) or the #6 (∨) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, “rAEn”, will appear in the display.

**NOTE: To program “rAEn” (Manual Rapid Advance [on/off]), refer to *option 13*. To program other options, refer to the appropriate section.**

### How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## 13. Manual Rapid Advance (On/Off) “rAEn”

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

### How to Program the Manual Rapid Advance (On/Off)

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “rAEn” appears in the display.
4. When “rAEn” appears in the display, press the START (enter) keypad. The current Manual Rapid Advance status will appear in the display.
   “on” = Option Enabled
   “oFF” = Option Disabled
5. Press the #3 (∧) or the #6 (∨) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, “rtc-”, will appear in the display.

**NOTE: To program “nCtd” (No Cycle Time Display), refer to *option 14*. To program other options, refer to the appropriate section.**

### How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## 14. No Cycle Time Display “nCtd”

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

### How to Program in the Cycle Time Display

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCyC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “nCtd” appears in the display.
4. When “nCtd” appears in the display, press the START (enter) keypad. The current No Cycle Time Display status will appear in the display.
   “on” = Option Enabled
   “oFF” = Option Disabled
5. Press the #3 (∧) or the #6 (∨) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, “PCtd” will appear in the display.

**NOTE: To program “PCtd” (Programmable Cycle Time Display), refer to *option 15*. To program other options, refer to the appropriate section.**

### How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## 15. Programmable Cycle Time Display “PCtd”

**NOTE: This option is available on Software Version 2 only.**

This option allows the owner to display either the normal remaining cycle time or the programmed time during a machine cycle.

### How to Program the Programmable Cycle Time Display

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCyC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “PCtd” appears in the display.
4. When “PCtd” appears in the display, press the START (enter) keypad. The current Programmable Cycle Time Display status will appear in the display.
   “0” = Option Disabled
   “1” = Option Enabled
5. Press the #3 (∧) or the #6 (∨) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, “SdAd”, will appear in the display.

**NOTE: To program “SdAd” (Slow Drain Detection Adjust), refer to *option 16*. To program other options, refer to the appropriate section.**

### How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

# 16. Slow Drain Detection Adjust “SdAd”

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

## How to Program the Pause/Resume Mode

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “SdAd” appears in the display.
4. When “SdAd” appears in the display, press the START (enter) keypad. The current Slow Drain Detection Adjust Value will appear in the display.
   “on” = Option Enabled
   “oFF” = Option Disabled
5. Press the #3 (∧) or the #6 (∨) keypad to change the current value.
6. Press the START (enter) keypad when the desired value appears in the display. The next option, “rtc”, will appear in the display.

**NOTE: To program “rtc” (Set Real-Time Clock), refer to *option 17*. To program other options, refer to the appropriate section.**

## How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## 17. Set Real-Time Clock “rtC-”’

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

### How to Program the Time and Date

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “rtC-” appears in the display. Press the START keypad and “rtC1” will appear in the display.
4. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options. Refer to *Figure 10*.

| | |
|---|---|
| “rtC1” | Programs Minutes |
| “rtC2” | Programs Hours |
| “rtC3” | Programs Day of Week |
| “rtC4” | Programs Date of Month |
| “rtC5” | Programs Month |
| “rtC6” | Programs Year |
| “rtC7” | Programs Daylight Saving |

Table 10

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 #3 (∧) or the #6 (∨) keypad to increase or decrease the minutes, hours, day of week, date of the month, month, year to the correct time or date.

**NOTE: The hours will be displayed in military time. For day of week, Sunday is considered day one (001), Monday is day two (002) and so on. For year, the year 2000 is “00”, the year 2001 is “01” and so on.**

If programming Daylight Saving, “rtc7”, “on” enables Daylight Saving Time and “oFF” disables Daylight Saving Time.

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

**NOTE: To program “dAEn” (Manual Diagnostics [on/off]), press the #5 (<) keypad and refer to *option 18*. To program other options, refer to the appropriate section.**

### How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## 18. Manual Diagnostics (On/Off) “dAEn”

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.

### How to Program the Manual Diagnostics (On/Off)

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “dAEn” appears in the display.
4. When “dAEn” appears in the display, press the START (enter) keypad. The current Manual Diagnostics status will appear in the display.
   “on” = Option Enabled
   “oFF” = Option Disabled
5. Press the #3 (∧) or the #6 (∨) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, “FLo”, will appear in the display.

**NOTE: To program “FLo” (Low Water Level), refer to *option 19*. To program other options, refer to the appropriate section.**

### How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## 19. Low Water Level “FLo”

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

### How to Program Low Water Level

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “FLo” appears in the display.
4. When “FLo” appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current low water level during tumble and fill of all cycles.
5. Press the #3 (∧) or the #6 (∨) keypad to increase or decrease the current water level to the desired water level.

**NOTE: The Low Water Level value can be set from 1 to 10.**

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

**NOTE: To program “FnEd” (Medium Water Level), refer to *option 20*. To program other options, refer to the appropriate section.**

### How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## 20. Medium Water Level “FnEd”

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

### How to Program Medium Water Level

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “FnEd” appears in the display.
4. When “FnEd” appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current medium water level during tumble and fill of all cycles.
5. Press the #3 (∧) or the #6 (∨) keypad to increase or decrease the current water level to the desired water level.

**NOTE: The Medium Water Level value can be set from 11 to 20.**

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

**NOTE: To program “FHI” (High Water Level), refer to *option 21*. To program other options, refer to the appropriate section.**

### How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## 21. High Water Level “FHI”

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

### How to Program High Water Level

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “FHI” appears in the display.
4. When “FHI” appears in the display, press the START (enter) keypad. A number will appear in the display. This number corresponds to the current high water level during tumble and fill of all cycles.
5. Press the #3 (∧) or the #6 (∨) keypad to increase or decrease the current water level to the desired water level.

**NOTE: The High Water Level value can be set from 21 to 30.**

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

**NOTE: To program “tCF” (Temperature Controlled Fill), refer to *option 22*. To program other options, refer to the appropriate section.**

### How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## 22. Temperature Controlled Fill Enable/Disable “tCF”

This option allows the owner to enable or disable a Temperature Controlled Fill. When enabled, the control will regulate the temperature of the fill to the temperature programmed in *options 8*, *9* and *10*.

### How to Program Temperature Controlled Fill

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCYC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “tCF” appears in the display.
4. When “tCF” appears in the display, press the START (enter) keypad. A number will appear in the display. This number (found below) corresponds to the current Temperature Controlled Fill status.
   “on” = Temperature Controlled Fill Enabled
   “oFF” = Temperature Controlled Fill Disabled
5. Press the #3 (∧) or the #6 (∨) keypad to change the current status.
6. Press the START (enter) keypad when the desired status appears in the display. The next option, “ALd”, will appear on the display.

**NOTE: To program “ALd” (Auto-Water Leak Detection), refer to *option 23*. To program other options, refer to the appropriate section.**

### How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Start Mode.

## 23. Auto-Water Leak Detection “ALd”

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

### How to Program Auto-Water Leak Detection

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until “Prog” appears in the display. Press the START (enter) keypad and “dCyC” will appear in the display.
3. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options until “ALd-” appears in the display. Press the START keypad and “ALd1” will appear in the display.
4. Press the #3 (∧) or the #6 (∨) keypad to scroll through the programmable options. Refer to *Table 11*.

| | |
|---|---|
| “ALd1” | Auto-Water Leak Detection (“oFF” or “0” through “127” cycles [on] - Number of completed cycles after which this test will occur) |
| “ALd2” | Auto-Water Leak Detection Hour (“0” - “23” - Hour of the day this test will occur) |
| “ALd3” | Auto-Water Leak Detection Day of Week (“0” - “127” - Refer to *Table 4*) |

Table 11

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 #3 (∧) or the #6 (∨) keypad to enable during cycles, disable, increase or decrease the hours or day.

**NOTE: The hours will be displayed in military time. For day, Sunday is considered day one (001), Monday is day two (002) and so on.**

7. Press the START (enter) keypad when the correct value appears in the display. The next option, “dCyC” will appear in the display.

**NOTE: To program “dCyC” (Default Cycle), refer to *option 1*. To program other options, refer to the appropriate section.**

### How to Exit Programming Feature

Press the #5 (<) keypad until the control returns to Ready Mode.

# Collecting Audit Information

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

## How to Enter Audit Feature

1. Control must be in Manual Mode to start. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until "AUdt" appears.
3. Press the START (enter) keypad. "CyC" will appear.

## How to Read Audit Data

1. Use the #3 (∧) or the #6 (∨) keypad to scroll through various options until the desired option is shown in the display. Refer to the Audit Options List, *Table 12*, for an explaination of the audit options available.

| Audit Options List | | |
|---|---|---|
| **#** | **Display** | **Description** |
| 1 | "CyC" | Total # of machine cycles |
| 2 | "rCyC"* | Total # of rapid advance cycles |

*This option is not available on Software Version 1.

Table 12

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

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

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

## How to Exit Audit Feature

Press the #5 (<) keypad.

# Manual Reset

This feature allows the owner to reset the washer-extractor control's programming data to the factory default settings by pressing a sequence of pads on the control. For an explanation of the Factory Default Settings, refer to ***Default Washer Settings***.

## How to Enter Manual Reset

1. Control must be in Manual Mode to start. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until "rSEt" appears.
3. Press the START (enter) keypad. The control will be blank until the programming is complete. Once the program has been reset, the control will display the next Manual Mode option, "dIAg".

# Testing Machine and Electronic Control Functions

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

- Front End Control Software Version Number
- Output Board Control Software Version Number
- Output Board Water Level Sensor Trim Value
- Access Panel Opening Test
- Door Switch Input Test
- Door Lock Input Test
- Show Fill Time Test
- Show Drain Time Test
- Temperature Sensor Display Test
- VFD Balance Input Test
- 24 VAC Switch Input Test
- VFD Drive Fault Input Test
- Frame Balance Switch Input Test
- VFD Balance Weight Test
- Water Purge Test
- Water Leak Detection Test

## How to Enter Testing Feature

1. Control must be in Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the #3 (∧) or the #6 (∨) keypad until "dIAg" appears.
3. Press the START (enter) keypad. Display will change to "d001" indicating the front end control software version number test.
4. Press the #3 (∧) or the #6 (∨) keypad to scroll through the diagnostic test options.

## How to Start Tests

To start a diagnostic test, refer to the quick reference chart below (*Table 13*). 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 #5 (<) keypad. The display will return to the previous mode of operation.

| Diagnostic (Testing) Mode – Quick Reference Chart | | |
|---|---|---|
| **Test Number** | **Diagnostic Mode** | **Display** |
| “d001” | Front End Control Software Version # Test | “S xx” |
| “d002” | Output Board Control Software # Test | “o xx” |
| “d003” | Output Board Water Level Sensor Trim Value | “txxx” |
| “d004” | Access Panel Opening Test | “A oP” or “A CL” |
| “d009” | Door Switch Input Test | “drCL” or “drOP” |
| “d010” | Door Lock Input Test | “drUL” or “drLO” |
| “d011” | Show Fill Time Test | “Fxxx” |
| “d012” | Show Drain Time Test | “dxxx” |
| “d013” | Temperature Sensor Display Test | “xxxF” or “xxxC” |
| “d014” | Start Pulse Test | “Stxx” |
| “d015” | VFD Balance Input Test | “bAoP” or “bACL” |
| “d016” | 24 VAC Switch Input Test | “ACoP” or “ACCL” |
| “d017” | VFD Drive Fault Input Test | “dFoP” or “dFCL” |
| “d018” | Frame Balance Switch Input Test | “FSoP” or “FSCL” |
| “d019” | VFD Balance Weight Test | “bAL” |
| “d020” | Water Purge Test | “PUrg” |
| “d021” | Water Leak Detection Test | “Ld” |

Table 13

# Diagnostic Test Descriptions

## Front End Control Software Version Number Test

This option displays the front end control software version number. To start test, control must be in the 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 "S xx" where "xx" is the front end control software version number.

To exit the Front End Control Software Version Number Test, press the #5 (<) keypad. The control will return to the testing mode.

## Output Board Control Software Version Number

This option displays the output board control software version number. To start test, control must be in the 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 "o xx" where "xx" is the output board control software version number.

To exit the Output Board Control Software Version Number Test, press the #5 (<) keypad. The control will return to the testing mode.

## Output Board Water Level Sensor Trim Value

This option displays the output board water level sensor trim value. To start test, control must be in the 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 "txxx" where "xxx" is the trim value sent from the output board to the front end control.

To exit the Output Board Water Level Sensor Trim Value, press the #5 (<) keypad. The control will return to the testing mode.

## Access Panel Opening Test

This option tests the access panel 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 "A oP" when the access panel switch is open and "A CL" when the access panel switch is closed.

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

To exit the Access Panel Opening Test, press the #5 (<) keypad. The control will return to the testing mode.

## Door Switch Input Test

This test will display whether the washer door 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 door is closed, the display will show "drCL". If the door is open, the display will show "drOP".

To exit the test, press the #5 (<) keypad. The control will return to the testing mode.

## Door Lock Input Test

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

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

To exit the test, press the #5 (<) keypad. The control will return to the testing mode.

## Show Fill Time Test

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

To start test, control must be in the 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 “Fxxx”. The “xxx” will be the average fill time in seconds.

To exit the Show Fill Time Test, press the #5 (<) keypad. The control will return to the testing mode.

## Show Drain Time Test

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

To start test, control must be in the 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 “dxxx”. The “xxx” will be the average drain time in seconds.

To exit the Show Drain Time Test, press the #5 (<) keypad. The control will return to the testing mode.

## Temperature Sensor Display Test

This test is only available on machines equipped with a temperature sensor. This option displays the temperature sensed at the 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 “xxxF” for the temperature in degrees Fahrenheit or “xxxC” for the temperature in degrees Celcius. The display will show “SH” if the sensor is shorted or “oP” if the control senses an open sensor.

To exit the Temperature Sensor Display Test, press the #5 (<) keypad. The control will return to the testing mode.

## VFD Balance Input Test

This option tests the VFD balance 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. If the VFD balance switch is open, indicating poor balance, the display will show “bAoP”. If the switch is closed, indicating good balance, the display will show “bACL”.

To exit the test, press the #5 (<) keypad. The control will return to the testing mode.

## 24 VAC Switch Input Test

This option tests the 24 VAC 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. If the 24 VAC switch is open, the display will show “ACoP”. If the switch is closed, the display will show “ACCL”.

To exit the test, press the #5 (<) keypad. The control will return to the testing mode.

## VFD Drive Fault Input Test

This option tests the drive fault input.

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 drive fault input is open, the display will show “dFoP”. If the switch is closed, the display will show “dFCL”.

To exit the test, press the #5 (<) keypad. The control will return to the testing mode.

## Frame Balance Switch Input Test

This option tests the frame balance 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. If the frame balance switch is open, the display will show “FSoP”. If the switch is closed, the display will show “FSCL”.

To exit the test, press the #5 (<) keypad. The control will return to the testing mode.

### VFD Balance Weight Test

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

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 "bAL" and the START keypad LED will flash. Close the door. Press the START (enter) keypad. The door will lock. The motor will turn at distribution speed. The control monitors the VFD balance switch for frequency and displays a corresponding message. Refer to *Table 14*.

| VFD Balance Switch Frequency | Description | Display |
|---|---|---|
| 0 | Switch is always closed | "CLoS" |
| 1 Hz | | "1 H" |
| 2 Hz | | "2 H" |
| 3 Hz | | "3 H" |
| | Switch is always open | "oPEn" |

Table 14

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

### Water Purge Test

This option empties all water 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 "PUrg" and the START keypad LED will flash. Close the door. Press the START (enter) keypad. The door will lock. The display will show "FLSH". The control will energize all water valves and supply outputs while keeping the drain valves open.

The test will end, return to Water Purge Test start prompt, and door will unlock if any keypad is pressed, the door is unlocked or opened, if an end test communication is received or if two minutes has occured since the test began. The control will prevent the door from being unlocked until there is no water in the machine.

## Production Test Cycle

### To Enter Production Test Cycle

1. Be certain control is in Ready Mode and access panel or coin vault is open.
2. While pressing and holding the #3 keypad with one hand, press the #7 keypad with the other hand.
3. When the control enters the Production Test Cycle, it will first display "S xx" with the "xx" showing the software version of the front end control.
4. The control will advance through the sequence of test steps whenever any key is pressed. Refer to *Table 15* for all tests in the Production Test Cycle.

### To Exit Production Test Cycle

To exit a test step, power down the machine.

### Water Leak Detection Test

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

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

| Production Test Cycle Quick Reference Chart | | |
|---|---|---|
| **Display** | **Test Cycle Step** | **Comments** |
| “S xx” | FEC Control Software Version | xx is the software version number. |
| “o xx” | Output Board Software Version | xx is the software version number. |
| “Ct 3” | Control Type | xx is the control type. |
| “oPL” | Control Type | OPL. |
| “USA” | Control Type | Domestic |
| “drAn” or “PUnP” | Drain Type | Drain or Pump. |
| “tEnP” | Temp Sensor | Step skipped if not Temperature Sensor-equipped. |
| “HEAt” | Heater | Step skipped if not heater-equipped. |
| “rot” | Rotation Sensor | Step skipped if not Rotation Sensor-equipped. |
| “L dC” or “L AC” | Door Lock Type | “L dC” if 24 VDC lock or “L AC” if 240 VAC unlock solenoid. |
| “droP” or “drCL” | Door Status | Door open or closed. |
| “drUL” or “drLo” | Door Lock Status | Door will lock. |
| “8.8.8.8.” + all LEDs | Display Test | All display elements are lit. |
| “PAxx” where xx = 1 through 12 | Keypad Test step | Advance after all keypads are pressed. |
| “A xx” | Access Panel Switch Test | xx is either “CL” for closed or “oP” for open. |
| “Cxxx” or “Pxxx” | Machine Type/Size | |
| “HFIL” | Hot Fill to Low Level | All water turned off when Low Level reached. |
| “CFIL” | Cold Fill to Low Level | All water turned off when Low Level reached. |
| “bFIL” | Warm Fill to Low Level | All water turned off when Low Level reached. |
| “bFIH” | Warm Fill to High Level | All water turned off when High Level reached. |
| “S1” for supply or “C2Co” for compartment | Supply #1 or Compartment #2 Cold Fill | |
| “S2” for supply or “C2Ho” for compartment | Supply #2 or Compartment #2 Hot Fill | |
| “S3” for supply or “C3Co” for compartment | Supply #3 or Compartment #3 Cold Fill | |
| “S4” for supply or “C4Ho” for compartment | Supply #4 or Compartment #4 Hot Fill | |
| “oFLo” | Warm Fill to Overflow | |
| “xxxF” degrees F or “xxxC” degrees C depending on the Fahrenheit/Celsius programming parameter | Heat water to 110°F or display temperature | xxx is degree temperature. This step skipped if not temp-sensor-equipped. Heater turned off when temperature reached. |

Table 15 (continued)

Table 15 (continued)

| Production Test Cycle Quick Reference Chart | | |
|---|---|---|
| **Display** | **Test Mode** | **Comments** |
| “LoAg” then “ xxx” | Reduced Wash Speed Forward with no agitation action | This step skipped on 2-Speed models. |
| “ Ag” then “ xxx” | Wash Speed Forward with no agitation action | |
| “ rAg” then “ xxx” | Wash Speed Reverse with no agitation action | |
| “drAI” then “ xxx” | Drain Distribution Speed | |
| “PUrg” | Factory Valve Purge | |
| “SP 1” then “ xxx” | Extract Speed #1 “very low” | This step skipped on 2-Speed models. |
| “SP 2” then “ xxx” | Extract Speed #2 “low” | This step skipped on 2-Speed models. |
| “SP 3” then “ xxx” | Extract Speed #3 “medium” | This step skipped on 2-Speed models. |
| “SPIn” (2-Speed models) then “ xxx” | | This step skipped on VFD models. |
| “SP 5” then “ xxx” | Extract Speed #5 “very high” | This step skipped on 2-Speed models. |
| “Prdn” | End of test | Turn Power off |

Table 15

**NOTE: On Models equipped with a rotation sensor, “xxx” will represent RPM’s and it will alternate with the other display.**

# Error Codes

Following is a list of possible error codes for an electronic control. Errors beginning with “EI” refer to external device Infra-red communication errors. All other errors refer to machine errors.

| Display | Description | Cause/ Corrective Action |
|---|---|---|
| EI01 | Transmission Failure | Communication failure. Re-aim external device and try again. |
| EI02 | Time-out Error | Communication failure. Re-aim external device and try again. |
| EI03 | 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. |
| EI04 | Expecting Upload Request | Communication failure. Re-aim external device and try again. |
| EI05 | Invalid or Out-of-Range Data | The value in at least one of the programming options is invalid or out of range. Recheck the programming option’s value and try again. |
| EI09 | CRC-16 Error | Communication failure. Re-aim external device and try again. |
| EI0A | Framing Error | Communication error. Re-aim external device and try again. |
| EI0C | Time-out Exceeded | Communication error. Re-aim external device and try again. |
| EI0E | Encryption Error | Communication error. Re-aim external device and try again. If the problem persists, check that the security code is correct. |
| EI0F | Infra-red Disabled | Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again. |
| E FL | Fill Error | Programmed water level not reached within 10 minutes (or other programmed length of time) in any fill agitate cycle. End cycle. Power down machine to clear. |
| E SP | SPI Communications Error | Front End control cannot communicate with output board. Power down the machine, power up and try again. |

Table 16 (continued)

Table 16 (continued)

| Display | Description | Cause/ Corrective Action |
|---|---|---|
| E dL | Door Lock Error | Door does not lock immeadiately upon closing (open and reclose door) or doesn't unlock 5 seconds after cycle completion. Power down machine and retry. |
| E do | Door Open Error | Control detects door open. Caused by pulling on door while locked or about to lock. Correct inoperative door locking system. End cycle. Power down machine to clear. |
| E Ub | Unbalance Error | Unable to balance load. Redistribute load and run cycle. |
| door | Door Open Indicator | Door is not closed in Start Mode. If door is closed, check for improper wiring or faulty door switch. |
| E dr | Drain Alarm Error | Machine not drained within 15 minutes (or other programmed length of time) in any drain step. End cycle. Power down machine to clear. |
| E Ht | Heat Alarm Error | Programmed heat alarm time of 120 minutes or other programmed length of time is exceeded. Turns off heater output for remainder of cycle. |
| E oP | Open Temperature Sensor Error | Control senses temperature less than 0°F (-18°C) in machine equipped with temperature sensor. Heater and thermistor related operations are disabled. |
| E SH | Shorted Temperature Sensor Error | Control senses temperature greater than 220°F (104°C) in machine equipped with temperature sensor. Heater and thermistor related operations are disabled for remainder of cycle. |
| E ro | Rotation Sensor Error | Invalid signal received from Rotation Sensor. Control will activate coast times to complete cycle. |
| E FS | Frame Balance Switch Error | Control detects Frame Balance Switch open. End cycle. |
| E db | Drive Balance Switch Error | Control detects VFD Balance Switch input closed at start of drain step. End cycle. Power down machine to clear. |
| E Ld | Water Leak Detection Error | If control senses a drop in water level during diagnostic testing, power down machine to clear. When error occurs during a cycle, "E Ld" is displayed for one minute after opening the door at the end of the cycle. When the error occurs during the test, "E Ld" is displayed immediately after the test until the machine is powered down to clear the error. |
| ESd | Slow Drain Error | If control shows error after door is open (when cycle is completed) for one minute, the error information will be logged in audit data. |

Table 16

# Rapid Advance Feature

The Rapid Advance feature allows the owner to quickly advance through active cycles.

## How to Use Rapid Advance

Control must be in an active cycle to use the Rapid Advance feature.

While in the Rapid Advance Mode, pressing the START (enter) keypad will advance the washer-extractor to the next cycle step. The cycle indicator lights will tell which cycle step the washer-extractor is in.

For Example: If the washer is in the first fill cycle step, pressing the START (enter) keypad will advance the washer into the Agitate cycle step.

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

## How to Exit Rapid Advance Feature

1. Advance through the cycles until reaching the Start Mode.

**NOTE: The Rapid Advance option must be turned on for Rapid Advance to work. Refer to *option 13* in *Programming Control*.**

# Communications Mode

## Infra-red Communications

The Infra-red Communications feature allows the control to communicate with an external device. The control can be programmed and have its data read without using the keypad. It may also be used to start and stop various diagnostic tests.

### How to Begin Communications with An External Device

The control will go blank and the display will show "-C-" until the communication is complete. If an error occurs that terminates communication, the display will show "EIXX" ("XX" represents the error code).

**NOTE: The Infra-red Communications option must be turned on. Refer to *option 6* in *Programming Control*.**

# Default Cycles

| Cycle Stops | Perm Press Light Soil | Cotton/Terry Light Soil | Perm Press Medium Soil | Cotton/Terry Medium Soil | Perm Press Heavy Soil | Cotton/Terry Heavy Soil | Rags Heavy Soil |
|---|---|---|---|---|---|---|---|
| **Cycle reference (display in Program Mode)** | **CY01** | **CY02** | **CY03** | **CY04** | **CY05** | **CY06** | **CY07** |
| **Agitation type** | **18/3/18 Normal** | **18/3/18 Normal** | **18/3/18 Normal** | **18/3/18 Normal** | **18/3/18 Normal** | **18/3/18 Normal** | **18/3/18 Normal** |
| | | | | | | | |
| Wash 1 (Wash - ON/OFF) | ON | ON | ON | ON | ON | ON | ON |
| Time for agitation (min.) | 7 | 7 | 2 | 2 | 2 | 2 | 2 |
| Fill Temperature | Hot | Hot | Warm | Warm | Warm | Warm | Warm |
| Fill Level | Low | Low | High | High | High | High | High |
| Supply | S1, S2 | S1, S2 | OFF | OFF | OFF | OFF | OFF |
| Heat (if enabled) | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Drain | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | |
| Wash 2 (Wash - ON/OFF) | OFF | OFF | ON | ON | ON | ON | ON |
| Time for agitation (min.) | 2 | 2 | 6 | 6 | 7 | 7 | 10 |
| Fill Temperature | Cold | Cold | Hot | Hot | Hot | Hot | Hot |
| Fill Level | Low | Low | Low | Low | Low | Low | Low |
| Supply | OFF | OFF | S1 | S1 | S1 | S1 | S1 |
| Heat (if enabled) | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Drain | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | |
| Wash 3 (Wash - ON/OFF) | OFF | OFF | ON | ON | ON | ON | ON |
| Time for agitation (min.) | 2 | 2 | 6 | 7 | 7 | 7 | 6 |
| Fill Temperature | Cold | Cold | Hot | Hot | Hot | Hot | Hot |
| Fill Level | Low | Low | Low | Low | Low | Low | High |
| Supply | OFF | OFF | S2 | S2 | S2 | S2 | S2 |
| Heat (if enabled) | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Drain | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | |
| Wash 4 (Wash - ON/OFF) | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| Time for agitation (min.) | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Fill Temperature | Cold | Cold | Cold | Cold | Cold | Cold | Cold |
| Fill Level | Low | Low | Low | Low | Low | Low | Low |
| Supply | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| Heat (if enabled) | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Drain | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(continued)

## Default Cycles

(continued)

| Cycle Stops | | Perm Press Light Soil | Cotton/Terry Light Soil | Perm Press Medium Soil | Cotton/Terry Medium Soil | Perm Press Heavy Soil | Cotton/Terry Heavy Soil | Rags Heavy Soil |
|---|---|---|---|---|---|---|---|---|
| **Cycle reference (display in Program Mode)** | | **CY01** | **CY02** | **CY03** | **CY04** | **CY05** | **CY06** | **CY07** |
| **Agitation type** | | **18/3/18 Normal** | **18/3/18 Normal** | **18/3/18 Normal** | **18/3/18 Normal** | **18/3/18 Normal** | **18/3/18 Normal** | **18/3/18 Normal** |
| | | | | | | | | |
| Rinse 1 (Rinse - ON/OFF) | | ON | ON | ON | ON | ON | ON | ON |
| Time for agitation (min.) | | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Fill Temperature | | Warm | Warm | Hot | Hot | Hot | Hot | Hot |
| Fill Level | | High | High | Low | Low | Low | Low | High |
| Supply | | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| Heat (if enabled) | | No | No | No | No | No | No | No |
| Drain | | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | |
| Rinse 2 (Rinse - ON/OFF) | | ON | ON | ON | ON | ON | ON | ON |
| Time for agitation (min.) | | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Fill Temperature | | Warm | Warm | Warm | Warm | Warm | Warm | Warm |
| Fill Level | | High | High | High | High | High | High | High |
| Supply | | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| Heat (if enabled) | | No | No | No | No | No | No | No |
| Drain | | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | | 1 (High) | 1 (High) | 1 (High) | 1 (High) | 1 (High) | 1 (High) | 0 |
| | | | | | | | | |
| Rinse 3 (Rinse - ON/OFF) | | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| Time for agitation (min.) | | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Fill Temperature | | Cold | Cold | Cold | Cold | Cold | Cold | Cold |
| Fill Level | | Low | Low | Low | Low | Low | Low | Low |
| Supply | | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| Heat (if enabled) | | No | No | No | No | No | No | No |
| Drain | | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | |
| Rinse 4 (Rinse - ON/OFF) | | ON | ON | ON | ON | ON | ON | ON |
| Time for agitation (min.) | | 4 | 4 | 4 | 5 | 4 | 5 | 4 |
| Fill Temperature | | Warm | Warm | Warm | Warm | Warm | Warm | Warm |
| Fill Level | | Low | Low | Low | Low | Low | Low | Low |
| Supply | | S3, S4 | S3, S4 | S3, S4 | S3, S4 | S3, S4 | S3, S4 | S3, S4 |
| Heat (if enabled) | | No | No | No | No | No | No | No |
| Drain | | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | | 4 (Very High) | 5 (Very High) | 4 (Very High) | 5 (Very High) | 4 (Very High) | 5 (Very High) | 5 (Very High) |
| | | | | | | | | |
| Default Cycle Time (hh:mm:ss) | UW 2-speed | 00:29:20 | 00:30:20 | 00:41:50 | 00:43:50 | 00:42:50 | 00:44:50 | 00:44:50 |
| | UW V-speed and M-speed | 00:30:50 | 00:31:50 | 00:43:20 | 00:45:20 | 00:44:20 | 00:46:20 | 00:45:35 |

(continued)

(continued)

| Cycle Stops | Reclaim | Delicates Cold | 90C | 60C | 40C | 90C Perm Press | 60C Perm Press |
|---|---|---|---|---|---|---|---|
| **Cycle reference (display in Program Mode)** | **CY08** | **CY09** | **CY10** | **CY11** | **CY12** | **CY13** | **CY14** |
| **Agitation type** | **18/3/18 Normal** | **10/20/10 Gentle** | **18/3/18 Normal** | **18/3/18 Normal** | **18/3/18 Normal** | **18/3/18 Normal** | **18/3/18 Normal** |
| | | | | | | | |
| Wash 1 (Wash - ON/OFF) | ON | ON | ON | ON | ON | ON | ON |
| Time for agitation (min.) | 2 | 6 | 2 | 2 | 2 | 2 | 2 |
| Fill Temperature | Warm | Cold | Warm | Warm | Warm | Warm | Warm |
| Fill Level | High | High | Low | Low | Low | Low | Low |
| Supply | OFF | S1 | OFF | OFF | OFF | OFF | OFF |
| Heat (if enabled) | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Drain | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | |
| Wash 2 (Wash - ON/OFF) | ON | ON | ON | ON | ON | ON | ON |
| Time for agitation (min.) | 12 | 2 | 6 | 6 | 6 | 6 | 6 |
| Fill Temperature | Hot | Cold | Hot | Hot | Hot | Hot | Hot |
| Fill Level | Low | High | Low | Low | Low | Low | Low |
| Supply | S1 | OFF | S1, S2 | S1, S2 | S1, S2 | S1, S2 | S1, S2 |
| Heat (if enabled) | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Drain | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | |
| Wash 3 (Wash - ON/OFF) | ON | OFF | OFF | OFF | OFF | OFF | OFF |
| Time for agitation (min.) | 12 | 2 | 2 | 2 | 2 | 2 | 2 |
| Fill Temperature | Hot | Cold | Cold | Cold | Cold | Cold | Cold |
| Fill Level | High | Low | High | High | High | High | High |
| Supply | S2 | OFF | OFF | OFF | OFF | OFF | OFF |
| Heat (if enabled) | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Drain | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | |
| Wash 4 (Wash - ON/OFF) | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| Time for agitation (min.) | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Fill Temperature | Cold | Cold | Cold | Cold | Cold | Cold | Cold |
| Fill Level | Low | Low | Low | Low | Low | Low | Low |
| Supply | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| Heat (if enabled) | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Drain | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(continued)

## Default Cycles

(continued)

| Cycle Stops | | Reclaim | Delicates Cold | 90C | 60C | 40C | 90C Perm Press | 60C Perm Press |
|---|---|---|---|---|---|---|---|---|
| **Cycle reference (display in Program Mode)** | | **CY08** | **CY09** | **CY10** | **CY11** | **CY12** | **CY13** | **CY14** |
| **Agitation type** | | **18/3/18 Normal** | **10/20/10 Gentle** | **18/3/18 Normal** | **18/3/18 Normal** | **18/3/18 Normal** | **18/3/18 Normal** | **18/3/18 Normal** |
| | | | | | | | | |
| Rinse 1 (Rinse - ON/OFF) | | ON | ON | ON | ON | ON | ON | ON |
| Time for agitation (min.) | | 4 | 2 | 2 | 2 | 2 | 2 | 2 |
| Fill Temperature | | Cold | Cold | Cold | Cold | Cold | Cold | Cold |
| Fill Level | | High | High | High | High | High | High | High |
| Supply | | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| Heat (if enabled) | | No | No | No | No | No | No | No |
| Drain | | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | |
| Rinse 2 (Rinse - ON/OFF) | | ON | OFF | ON | ON | ON | ON | ON |
| Time for agitation (min.) | | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Fill Temperature | | Warm | Cold | Cold | Cold | Cold | Cold | Cold |
| Fill Level | | High | Low | High | High | High | High | High |
| Supply | | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| Heat (if enabled) | | No | No | No | No | No | No | No |
| Drain | | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | | 1 (High) | 0 | 1 (High) | 1 (High) | 1 (High) | 1 (High) | 1 (High) |
| | | | | | | | | |
| Rinse 3 (Rinse - ON/OFF) | | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| Time for agitation (min.) | | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Fill Temperature | | Cold | Cold | Cold | Cold | Cold | Cold | Cold |
| Fill Level | | Low | Low | Low | Low | Low | Low | Low |
| Supply | | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| Heat (if enabled) | | No | No | No | No | No | No | No |
| Drain | | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | |
| Rinse 4 (Rinse - ON/OFF) | | ON | ON | ON | ON | ON | ON | ON |
| Time for agitation (min.) | | 4 | 4 | 3 | 3 | 3 | 3 | 3 |
| Fill Temperature | | Warm | Cold | Cold | Cold | Cold | Cold | Cold |
| Fill Level | | Low | High | High | High | High | High | High |
| Supply | | S3, S4 | S3, S4 | S3, S4 | S3, S4 | S3, S4 | S3, S4 | S3, S4 |
| Heat (if enabled) | | No | No | No | No | No | No | No |
| Drain | | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | | 5 (Very High) | 3 (Low) | 5 (Very High) | 5 (Very High) | 5 (Very High) | 3 (Very High) | 3 (Very High) |
| | | | | | | | | |
| Default Cycle Time (hh:mm:ss) | UW 2-speed | 00:55:50 | 00:26:20 | 00:32:20 | 00:32:20 | 00:32:20 | 00:30:20 | 00:30:20 |
| | UW V-speed and M-speed | 00:57:20 | 00:27:05 | 00:33:50 | 00:33:50 | 00:33:50 | 00:31:50 | 00:31:50 |

(continued)

(continued)

| Cycle Stops | 40C Perm Press | 70C Perm Press | 50C Gentle | 30C Gentle | Blank |
|---|---|---|---|---|---|
| **Cycle reference (display in Program Mode)** | **CY15** | **CY16** | **CY17** | **CY18** | **CY19-CY30** |
| **Agitation type** | **18/3/18 Normal** | **18/3/18 Normal** | **10/20/10 Gentle** | **10/20/10 Gentle** | **18/3/18 Normal** |
| | | | | | |
| Wash 1 (Wash - ON/OFF) | ON | ON | ON | ON | OFF |
| Time for agitation (min.) | 2 | 2 | 2 | 2 | 2 |
| Fill Temperature | Warm | Warm | Warm | Cold | Cold |
| Fill Level | Low | Low | Low | High | Low |
| Supply | OFF | OFF | OFF | OFF | OFF |
| Heat (if enabled) | Yes | Yes | Yes | Yes | Yes |
| Drain | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | 0 | 0 | 0 | 0 | 0 |
| | | | | | |
| Wash 2 (Wash - ON/OFF) | ON | ON | ON | ON | OFF |
| Time for agitation (min.) | 6 | 6 | 6 | 3 | 2 |
| Fill Temperature | Hot | Hot | Hot | Cold | Cold |
| Fill Level | Low | Low | Low | High | Low |
| Supply | S1, S2 | S1, S2 | S1, S2 | S1, S2 | OFF |
| Heat (if enabled) | Yes | Yes | Yes | Yes | Yes |
| Drain | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | 0 | 0 | 0 | 0 | 0 |
| | | | | | |
| Wash 3 (Wash - ON/OFF) | OFF | OFF | OFF | OFF | OFF |
| Time for agitation (min.) | 2 | 2 | 2 | 2 | 2 |
| Fill Temperature | Cold | Cold | Cold | Cold | Cold |
| Fill Level | Low | High | High | Low | Low |
| Supply | OFF | OFF | OFF | OFF | OFF |
| Heat (if enabled) | Yes | Yes | Yes | Yes | Yes |
| Drain | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | 0 | 0 | 0 | 0 | 0 |
| | | | | | |
| Wash 4 (Wash - ON/OFF) | OFF | OFF | OFF | OFF | OFF |
| Time for agitation (min.) | 2 | 2 | 2 | 2 | 2 |
| Fill Temperature | Cold | Cold | Cold | Cold | Cold |
| Fill Level | Low | Low | Low | Low | Low |
| Supply | OFF | OFF | OFF | OFF | OFF |
| Heat (if enabled) | Yes | Yes | Yes | Yes | Yes |
| Drain | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | 0 | 0 | 0 | 0 | 0 |

(continued)

## Default Cycles

(continued)

| Cycle Stops | | 40C Perm Press | 70C Perm Press | 50C Gentle | 30C Gentle | Blank |
|---|---|---|---|---|---|---|
| **Cycle reference (display in Program Mode)** | | **CY15** | **CY16** | **CY17** | **CY18** | **CY19-CY30** |
| **Agitation type** | | **18/3/18 Normal** | **18/3/18 Normal** | **10/20/10 Gentle** | **10/20/10 Gentle** | **18/3/18 Normal** |
| | | | | | | |
| Rinse 1 (Rinse - ON/OFF) | | ON | ON | ON | ON | OFF |
| Time for agitation (min.) | | 2 | 2 | 2 | 2 | 2 |
| Fill Temperature | | Cold | Cold | Cold | Cold | Cold |
| Fill Level | | High | High | High | High | Low |
| Supply | | OFF | OFF | OFF | OFF | OFF |
| Heat (if enabled) | | No | No | No | No | No |
| Drain | | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | | 0 | 0 | 0 | 0 | 0 |
| | | | | | | |
| Rinse 2 (Rinse - ON/OFF) | | ON | ON | ON | ON | OFF |
| Time for agitation (min.) | | 2 | 2 | 2 | 2 | 2 |
| Fill Temperature | | Cold | Cold | Cold | Cold | Cold |
| Fill Level | | High | High | High | High | Low |
| Supply | | OFF | OFF | OFF | OFF | OFF |
| Heat (if enabled) | | No | No | No | No | No |
| Drain | | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | | 1 (High) | 1 (High) | 1 (Low) | 1 (Low) | 0 |
| | | | | | | |
| Rinse 3 (Rinse - ON/OFF) | | OFF | OFF | OFF | OFF | OFF |
| Time for agitation (min.) | | 2 | 2 | 2 | 2 | 2 |
| Fill Temperature | | Cold | Cold | Cold | Cold | Cold |
| Fill Level | | Low | Low | Low | Low | Low |
| Supply | | OFF | OFF | OFF | OFF | OFF |
| Heat (if enabled) | | No | No | No | No | No |
| Drain | | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | | 0 | 0 | 0 | 0 | 0 |
| | | | | | | |
| Rinse 4 (Rinse - ON/OFF) | | ON | ON | ON | ON | OFF |
| Time for agitation (min.) | | 3 | 3 | 3 | 3 | 2 |
| Fill Temperature | | Cold | Cold | Cold | Cold | Cold |
| Fill Level | | High | High | High | High | Low |
| Supply | | S3, S4 | S3, S4 | S3, S4 | S3, S4 | OFF |
| Heat (if enabled) | | No | No | No | No | No |
| Drain | | Yes | Yes | Yes | Yes | Yes |
| Spin (min.) | | 3 (Very High) | 3 (Very High) | 3 (Low) | 2 (Low) | 0 |
| | | | | | | |
| Default Cycle Time (hh:mm:ss) | UW 2-speed | 00:30:20 | 00:30:20 | 00:30:20 | 00:26:20 | 00:00:20 |
| | UW V-speed and M-speed | 00:31:50 | 00:31:50 | 00:31:50 | 00:27:50 | 00:00:20 |