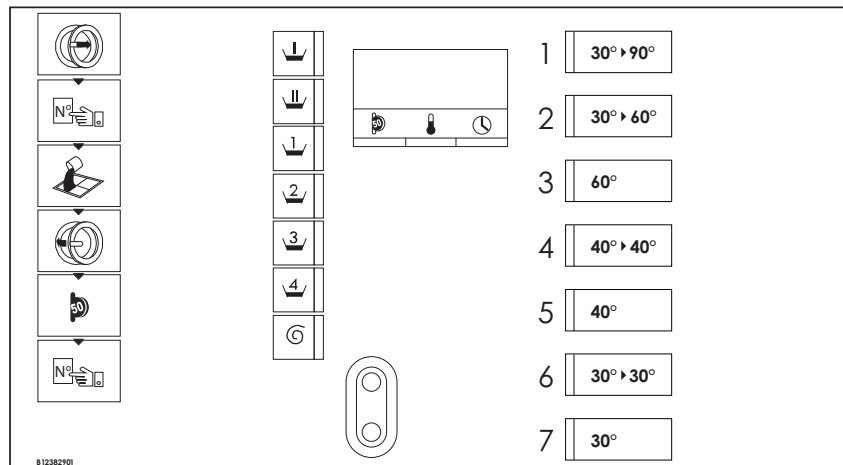


Washer-Extractor

Cygnus Standard Vended Control


Refer to Page 4 for Model Numbers



Keep These Instructions for Future Reference.

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



	WARNING
<p>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.</p> <p style="text-align: right;">W030</p>	

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.

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Model Identification

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

HD100_CYGNUS- STANDARD	IHU305C	IXU235C	WD165_CYGNUS- STANDARD
HD135_CYGNUS- STANDARD	IHU400C	IXU305C	WD185_CYGNUS- STANDARD
HD165_CYGNUS- STANDARD	IHW065C	IXW060C	WD235_CYGNUS- STANDARD
HD235_CYGNUS- STANDARD	IHW075C	IXW065C	WD305_CYGNUS- STANDARD
HD305_CYGNUS- STANDARD	IHW100C	IXW075C	WD400_CYGNUS- STANDARD
HD60_CYGNUS- STANDARD	IHW135C	IXW100C	WD65_CYGNUS- STANDARD
HD65_CYGNUS- STANDARD	IHW150C	IXW135C	WD75_CYGNUS- STANDARD
HD75_CYGNUS- STANDARD	IHW165C	IXW165C	WHU065C
IHG065C	IHW185C	IXW235C	WHU075C
IHG075C	IHW235C	IXW305C	WHU100C
IHG100C	IHW305C	IXZ060C	WHU135C
IHG135C	IHW400C	IXZ065C	WHU150C
IHG150C	IHZ065C	IXZ075C	WHU165C
IHG165C	IHZ075C	IXZ100C	WHU185C
IHG185C	IHZ100C	IXZ135C	WHU235C
IHG235C	IHZ135C	IXZ165C	WHU305C
IHG305C	IHZ150C	IXZ235C	WHU400C
IHG400C	IHZ165C	IXZ305C	WXU060C
IHN065C	IHZ185C	JHW065C	WXU065C
IHN075C	IHZ235C	JHW075C	WXU075C
IHN100C	IHZ305C	JHW100C	WXU100C
IHN135C	IHZ400C	JHW135C	WXU135C
IHN150C	IXG060C	JHW150C	WXU165C
IHN165C	IXG065C	JHW165C	WXU235C
IHN185C	IXG075C	JHW185C	WXU305C
IHN235C	IXG100C	JHW235C	YHG065C
IHN305C	IXG135C	JHW305C	YHG075C
IHN400C	IXG165C	JHW400C	YHG100C
IHU065C	IXG235C	JXW060C	YHG135C
IHU075C	IXG305C	JXW065C	YHG150C
IHU100C	IXN060C	JXW075C	YHG165C
IHU135C	IXN065C	JXW100C	YHG185C
IHU150C	IXN075C	JXW135C	YHG235C
IHU165C	IXN100C	JXW165C	YHG305C
IHU185C	IXN135C	JXW235C	YHG400C
IHU235C	IXN165C	JXW305C	
	IXN235C	WD100_CYGNUS- STANDARD	
	IXN305C	WD135_CYGNUS- STANDARD	
	IXU060C	WD150_CYGNUS- STANDARD	
	IXU065C		
	IXU075C		
	IXU100C		
	IXU135C		
	IXU165C		

Preliminary Information

About the Control

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

The control allows the owner to obtain information from the machine, run test cycles, modify the control's programmable features, set the service counters and view the error code history. Refer to *The Non-Active Menu* section for a list of features.

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 a short time, the cycle status is saved in memory. When the power recovers, the washer-extractor will resume the previously active cycle.

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

Communications

The control may be programmed manually or by infrared communication with an external device.

Infra-red Communications

A PC allows the owner to program and retrieve information from the control without using the machine's keypad, which greatly expands the programming options available to the owner. However, it is not required to program and operate the washer-extractor. The operation of a PC and the advanced features available are covered separately in the instructions included with the PC programming software, Cygnus Assist.

Control Identification

Select Cycle Keypads

(Refer to Figure 1)

Select Cycle keypads are used to select the specific wash cycle. These keypads are numbered 1-7 and allow the operator to select a cycle other than the default cycle. The select cycle keypads are not active after a cycle has been started. Pressing the Select Cycle keypad will confirm the selection and the cycle will begin.

Select cycle keypads are used in various combinations for obtaining information from the machine, running test cycles, modifying the control's programmable features, setting the service counters and viewing the error code history. These instructions cover the manual programming and data retrieval options.

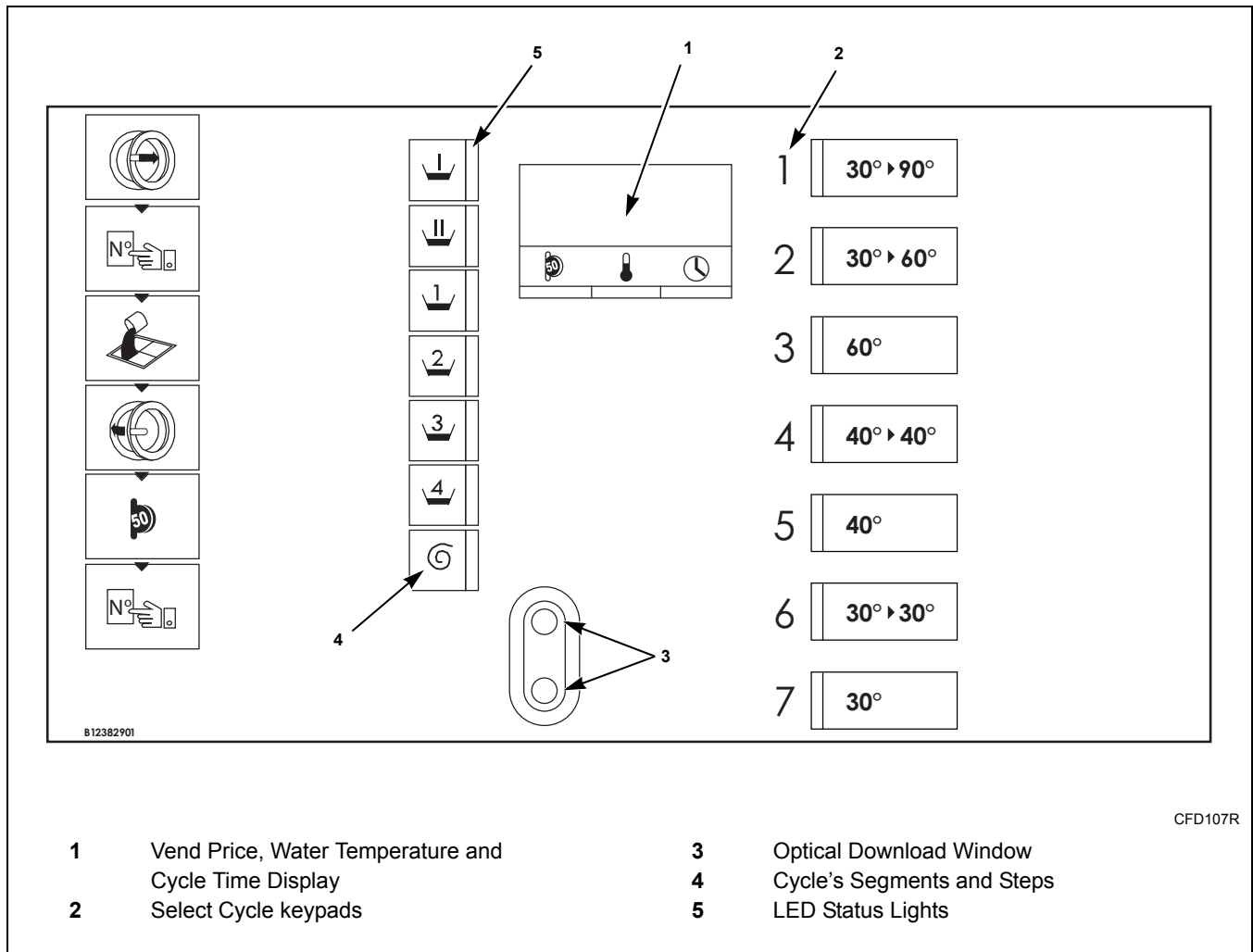


Figure 1

Display Identification

LED Status Lights **(Refer to *Figure 1*)**

LED Status Lights are used to indicate the chosen cycle and the cycle status. See below for information on each LED.

PREWASH LED

The Prewash LED is lit at the beginning of the prewash portion of the cycle and will remain lit until the prewash is complete.

WASH LED

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

RINSE LED

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

FINAL RINSE LED

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

SPIN LED

The Spin LED is lit at the beginning of the spin portion of the cycle and will remain lit until the spin is complete.

Vend Price, Water Temperature and Cycle Time Display

The display is used to show the vend price, water temperature, cycle time, error codes and descriptive codes related to the control's programmable options.

Special Features

Viewing Control Information

The control will store information in its memory that can be retrieved by pressing various combinations of Select Cycle keypads. The control will record total coins inserted, machine cycles and hours of operation.

For more information, refer to the **1. Information Sub-Menu “Info”** section.

Testing Machine Components

By entering the Non-Active Menu’s Test Sub-Menu, the operator may perform the following tests:

- Water Level Test
- Water Inlet Test
- Motor Test
- Temperature Sensor Test and Calibration
- Drain Value Test
- Relay Test
- Door, Door Lock and Out-Of-Balance Switch Test
- Coin Drop Test
- Display Test

For detailed information, refer to the **2. Test Sub-Menu “Test”** section.

Rapid Advance Feature

This feature allows the operator to manually advance through an active cycle. This feature is useful when tests must be performed immediately on a washer-extractor currently in an active cycle.

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

Communication Mode

This feature allows the control to communicate with a PC equipped with the Cygnus Assist software using infra-red communication. This allows the control to be programmed and have its data read without using the machine’s keypad.

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

Washer-Extractor Operation

Start Up

When power is applied to the machine if the control was not powered down during a running cycle, it will enter Ready Mode, Partial Vend Mode or Start Mode.

Ready Mode

In this mode of operation, the control indicates the current selected cycle by lighting the corresponding LED. The full current vend price for the cycle appears in the display.

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

The user will be able to select a different cycle by pressing a cycle keypad when the machine is in Ready Mode.

Partial Vend Mode

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

The user will be able to select a different cycle by pressing a cycle keypad when the machine is in Partial Vend Mode.

Additional Vend Mode

The control enters this mode if a higher priced cycle is selected within two (2) minutes after the coins have been inserted. If the vend price is not satisfied within two (2) minutes, the control will go back to the first selection and the cycle will continue if it was paused. Two (2) minutes after the coins have been inserted, all key presses will be ignored, allowing the washer to go through the complete cycle.

NOTE: The Additional Vend Mode time can be set from 0 to 120 seconds.

Changing Cycles

Cycles can be changed within two (2) minutes after the coins have been inserted. Two (2) minutes after the coins have been inserted, all key presses are ignored.

After the vend price has been satisfied, the cycle will continue with the new selections. If the vend price is not satisfied within two (2) minutes, the washer's control will go back to the previously set cycle.

Start Mode

The control enters this mode when the full vend price is satisfied. The control displays "PRESS START". If Start Mode is entered because the vend price is satisfied, the display will show "START".

After pressing the Select Cycle keypad, the door will lock and the cycle will begin.

Door Locking Mode

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

Cycle Sequence

Upon the start of a cycle, the control's display will alternate between the remaining cycle time and the water temperature. When the temperature is displayed, the temperature LED lights up and when the remaining cycle time is displayed, the time LED lights up. The appropriate LED status lights will light while the machine passes through different cycle steps. The user can change the cycle during the cycle's first two minutes.

Run Mode

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

Door Unlocking Mode

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

End of Cycle Mode

When a cycle is complete, the control will display "END" until the washer door is opened. The display will revert back to Ready Mode if door is opened.

The Non-Active Menu

What is Available in the Non-Active Menu?

The Non-Active menu can be used to obtain information from the machine, run test cycles, modify the control's programmable features, set the service counters and view the error code history.

Entering the Non-Active Menu

NOTE: To enter the Non-Active Menu, the machine's control must first be put into the Ready Mode (that is, a cycle must not be in process).

1. Press and hold the 1 keypad.
2. While continuing to press the 1 keypad, press and release the 2 keypad.
3. Continue to hold the 1 keypad until the display shows the entry code.

NOTE: By default, the entry code is 1000.

4. Modify the entry code as needed and press the 3 keypad. The display shows “INF”, which is the abbreviation for the Info Menu, the first option within the Non-Active Menu.

Non-Active Menu Navigation

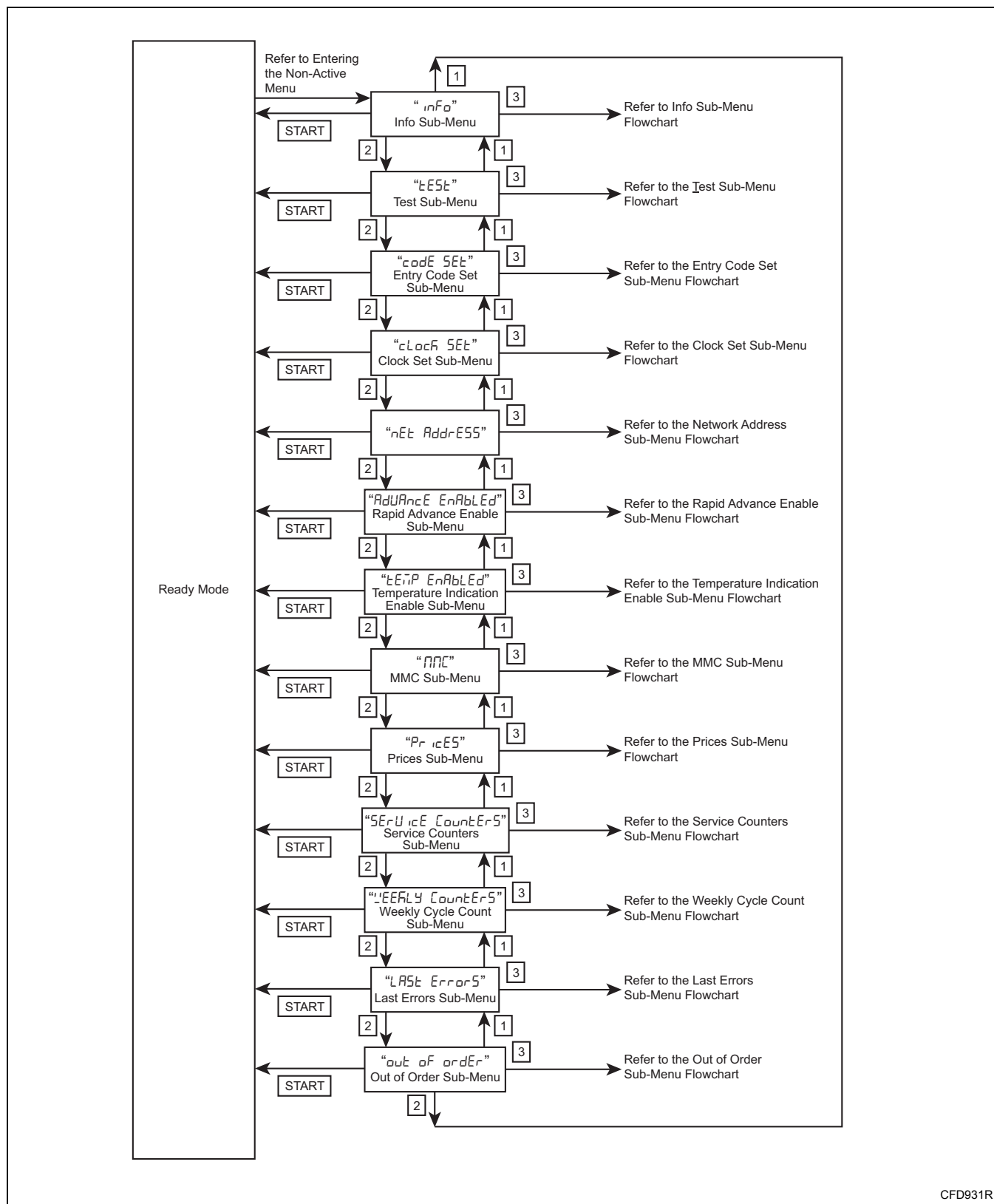
1. Enter the Non-Active Menu (refer to the *Entering the Non-Active Menu* section).
2. Press the 1 or 2 keypads to scroll through the Non-Active Menu options (Refer to *Table 1*).
3. Press the 3 keypad to enter a Non-Active Menu option.
4. Press the START keypad to exit the Non-Active Menu.

Non-Active Menu Options

Option Number	Option Display	Description
1	"iNfo"	The Information Sub-Menu allows the operator to view information about the control.
a.	"coin 1"	Total number of coins inserted into coin 1
b.	"coin 2"	Total number of coins inserted into coin 2
c.	"cycles"	Total number of cycles performed
d.	"hours"	Total hours of operation
e.	"SERIAL nr"	Machine's serial number
f.	"date"	Machine's installation date
g.	"PARAM LIST"	The machine's parameter list
2	"tEST"	The Test Sub-Menu allows the operator to test some of the machine's components.
a.	"LEVEL"	Water level test
b.	"inLETs"	Water inlet test
c.	"Motor"	Motor test
d.	"hERe"	Temperature sensor test and calibration
e.	"drain"	Drain valve test
f.	"rELAYs"	Relay test
g.	"inPUtS"	Door, door lock and out-of-balance switch test
h.	"coinS"	Coin drop test
i.	"diSPLAY"	Display test
3	"codE SEt"	The Entry Code Set Sub-Menu allows the user to modify the machine's entry code.
4	"cLocK SEt"	The Clock Set Sub-Menu allows the user to set the machine's year, month, day, day of the week, hour and minutes.
5	"nEt AdDrESS"	Enter a network address.
6	"AdVAnCE EnAbLEd"	The Rapid Advance Enable Sub-Menu allows the operator to turn the rapid advance option on or off.
7	"tEMP EnAbLEd"	The Temperature Indication Enable Sub-Menu allows the operator to turn the temperature indicator (which appears during a cycle) on or off.
8	"MMC"	The MMC Sub-Menu allows the operator to manage data on the MMC card.
9	"PrICES"	The Prices Sub-Menu allows the operator to modify each cycle's vend price.
10	"SErViCE countErS"	The Service Counters Sub-Menu allows the operator to display service maintenance reminders on the machine's control after the machine has been operated for a specified number of hours or cycles.
11	"WEEKLY countErS"	The Weekly Cycle Count Sub-Menu allows the operator to view the number of times each cycle has been run over the last 7 days.
12	"LASt ErrorS"	The Last Errors Sub-Menu allows the operator to view a list of errors that have occurred during the last cycle that was run on the machine.
13	"out of ordEr"	The Out of Order Sub-Menu allows the operator to place a machine out of service, preventing it from being used.

Table 1

Non-Active Menu Flowchart



1. Information Sub-Menu “INF0”

The Information Sub-Menu allows the operator to view information about the control.

How to Access the Information Sub-Menu

1. Enter the Non-Active menu (refer to the *Entering the Non-Active Menu* section).
2. Press the 1 or 2 keypads to scroll through the Non-Active Menu's sub-menus until “INF0” appears in the display.
3. Press the 3 keypad. “coin 1” appears in the display.
4. Press the 1 or 2 keypads until the desired option appears in the display. Refer to *Table 2*.

Option Display	Description
“coin 1”	Total number of coins inserted into coin 1
“coin 2”	Total number of coins inserted into coin 2
“cycles”	Total number of cycles performed
“hours”	Total hours of operation
“SERIAL nr”	Machine's serial number
“date”	Machine's installation date NOTE: The date on which the machine completed it's 10th cycle will be recorded by the control as the machine's “installation date” (DD-MM-YYYY).
“PARAM LIST”	Version of drive parameteres

Table 2

How to Exit the Information Sub-Menu

Press the START keypad until the control returns to the Ready Mode.



2. Test Sub-Menu “tE5t” (1 of 4)

The Test Sub-Menu allows the operator to test some of the machine’s components.

How to Access the Test Sub-Menu

1. Enter the Non-Active menu (refer to the *Entering the Non-Active Menu* section).
2. Press the 1 or 2 keypads to scroll through the Non-Active Menu’s sub-menus until “tE5t” appears in the display.
3. Press the 3 keypad. “LEUEL” appears in the display.
4. Press the 1 or 2 keypads to scroll through the Test Sub-Menu’s options.
5. Press the 3 keypad to access the desired Test Sub-Menu’s option. Refer to the *Using the Test Sub-Menu’s Options* section for details on each option.

Using the Test Sub-Menu’s Options

- a. Water Level Test “LEUEL”

NOTE: Make sure all water has been drained from the machine.

- i. Press the 3 keypad. “XX.X”, which is the measured water level, appears in the display and flashes.
- ii. Press the 3 keypad. “XX.X”, which is the water level to be measured, appears in the display.
- iii. Note the number shown in the display and mark the middle of the door glass.
- iv. Press the 3 keypad. “FILL.” appears in the display and the machine begins to fill with water.
- v. Fill the machine to the mark made on the middle of the door glass. Press the 2 keypad to turn off the water and the 1 keypad to turn on the water as needed.
- vi. Press the 3 keypad. “XX.X”, which is the current water level, appears in the display and flashes.
- vii. Compare the number shown in the display to the number that was recorded earlier. If necessary, press the 1 or 2 keypads to change the number shown in the display until it matches the number that was recorded earlier.

- viii. Press the 3 keypad. “XX.X”, which is the measured water level, is shown in the display.
- ix. Press the START keypad. “LEUEL” appears in the display.

- b. Water Inlet Test “i nLEt5”

- i. Press the 3 keypad. “hot 1” appears in the display.
- ii. Press the 1 or 2 keypads to scroll through the inlets until the desired inlet is shown in the display. Refer to *Table 3*.

Display	Description
“hot 1”	Hot water 1
“hot 2”	Hot water 2
“hot 3”	Hot water 3
“cld 1”	Cold water 1
“cld 2”	Cold water 2
“cld 3”	Cold water 3
“direct”	Direct

Table 3

- iii. Press the 3 keypad to turn on the desired inlet. The display shows a dot next to the inlet number (e.g., “hot 1.”).
- iv. Press the 3 keypad to turn off the desired inlet.
- v. Press the START keypad. “i nLEt5” appears in the display.

(continued)



2. Test Sub-Menu “٤٤٤” (2 of 4)

c. Motor Test “Ποτόρ”

- i. Press the 3 keypad. “ASH” appears in the display.
- ii. Press the 1 or 2 keypads to scroll through the Motor Test sub-menu’s options until the desired option is shown in the display. Refer to *Table 4*.

Display	Description
"WASH"	Motor wash speed
"SPIN"	Motor spin speed
"TUNE"	Autotune the motor with the inverter drive

Table 4

- iii. Press the 3 keypad to select the desired option.
 - “_!A5h”: The motor goes into wash speed and “r XX” or “L XX” appears on the display.
 - “5P, n”: The motor goes into spin speed and the speed “XX” appears on the display. The machine will accelerate to 500 RPM (if allowed by the machine) and continue at this speed for a few seconds. The machine will then accelerate to it’s maximum spin speed and will continue at this speed for 10 minutes.
 - “tUnE”: The display shows “_!A, t” and then “rESEtt ing inUErtEr”. The display flashes “tUnE” as the inverter drive is autotuned.
 - NOTE: The “tUnE” option will automatically turn off once the autotune is complete.**
 - iv. Press the START keypad to turn off the option.
 - v. Press the START keypad. “nOte” appears in the display.
- d. Temperature Sensor Test and Calibration “hEAL”.
- i. Press the 3 keypad. The measured temperature “XX°C” appears in the display. The machine is filled with water to the safety level.
 - ii. Press the 1 or 2 keypads to scroll through the Temperature Sensor Test and Calibration sub-menu’s options until the

desired option is shown in the display. Refer to *Table 5*.

Display	Description
"OFF" or "ON"	Turn the heating off or on NOTE: This option is only visible if the machine is configured for 1 heating type.
"H 1" or "H 1."	Turn heating type 1 off or on NOTE: This option is only visible if the machine is configured for 2 heating type.
"H 2" or "H 2."	Turn heating type 2 off or on NOTE: This option is only visible if the machine is configured for 2 heating type.
"CAL"	Calibrate the temperature sensor

Table 5

- iii. Press the 3 keypad to select the desired option.
 - “OFF” or “ON”: Turn the heating off or on. “OFF” is displayed when the heating is turned off and “ON” is displayed when the heating is turned on.

NOTE: This option is only visible if the machine is configured for 1 heating type.

 - “H 1” or “H 1.”: Turn heating type 1 off or on. “H 1” is displayed when the heating is turned off and “H 1.” is displayed when the heating is turned on.
- NOTE: This option is only visible if the machine is configured for 2 heating types.**
- “H 2” or “H 2.”: Turn heating type 2 off or on. “H 2” is displayed when the heating is turned off and “H 2.” is displayed when the heating is turned on.
- NOTE: This option is only visible if the machine is configured for 2 heating types.**
- “AL”:
 - a. The measured temperature “XX°C” appears in the display and flashes.
 - b. Press the 1 and 2 keypads to increase or decrease the temperature display as needed.
 - c. Press the 3 keypad. “SAVE ON” appears in the display.
 - d. To save the temperature display change, press the 1 or 2 keypad. “YES” appears in the display.
 - e. Press the 3 keypad. “AL” appears in the display.
- iv. Press the START keypad. “HEAT” appears in the display.

(continued)



2. Test Sub-Menu “E5E” (3 of 4)

e. Drain Valve Test “dR n”

- i. Press the 3 keypad. “F LL X.X” appears in the display.
- ii. Press the 1 or 2 keypads to scroll through the Drain Valve Test sub-menu’s options until the desired option is shown in the display. Refer to *Table 6*.

Display	Description
“F LL X.X”	Fill the machine with water
“dR 1 X.X”	Open and close the drain valve NOTE: This option is only visible if the machine is configured for 1 drain valve.
“dR 1 X.X”	Open and close the first drain valve NOTE: This option is only visible if the machine is configured for 2 drain valves.
“dR 2 X.X”	Open and close the second drain valve NOTE: This option is only visible if the machine is configured for 2 drain valves.

Table 6

- iii. Press the 3 keypad to turn on the desired option.
 - “F LL X.X”: Turn the machine’s water inlet valves on and off. “F LL X.X” is displayed when the inlet valves are turned off and “F LL.X.X” is displayed when the inlet valves are turned on.
 - “dR 1 X.X”: Open and close the drain valve. “dR 1 X.X” is displayed when the drain valve is closed and “dR 1.X.X” is displayed when the drain valve is open.

NOTE: This option is only visible if the machine is configured for 1 drain valve.
 - “dR 1”: Open and close the first drain valve. “dR 1 X.X” is displayed when the drain valve is closed and “dR 1.X.X” is displayed when the drain valve is open.

NOTE: This option is only visible if the machine is configured for 2 drain valves.

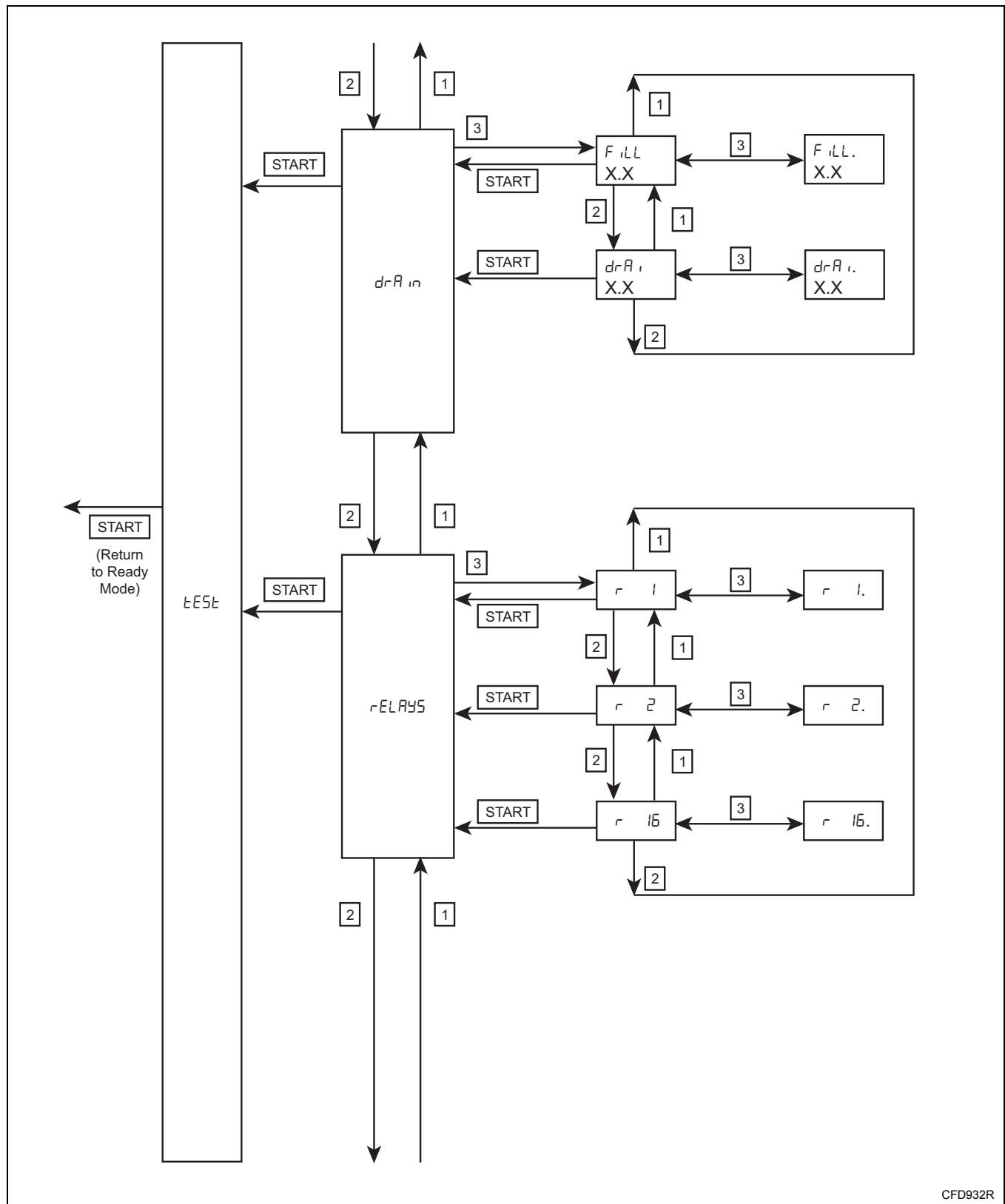
- “dR 2”: Open and close the second drain valve. “dR 2 X.X” is displayed when the drain valve is closed and “dR 2.X.X” is displayed when the drain valve is open.

NOTE: This option is only visible if the machine is configured for 2 drain valves.

- iv. Press the 3 keypad to turn off the desired option.
 - v. Press the START keypad. “dR n” appears in the display.
- f. Relay Test “rELAY5”
- i. Press the 3 keypad. “r 1” appears in the display.
 - ii. Press the 1 or 2 keypads to scroll through the relays until the desired relay is shown in the display.
 - iii. Press the 3 keypad to turn on the desired relay. The display shows a dot next to the inlet number (e.g., “r 1.”).
 - iv. Press the 3 keypad to turn off the desired relay.
 - v. Press the START keypad. “rELAY5” appears in the display.

(continued)

Test Sub-Menu Flowchart (3 of 4)



CFD932R

2. Test Sub-Menu “E5E” (4 of 4)

g. Inputs Test “i n P u t 5”

- Press the 3 keypad. “c l e r” appears in the display.
- Press the 1 or 2 keypads to scroll through the inputs until the desired inlet is shown in the display. Refer to *Table 7*.

Display	Description
“c l e r”	Door, lock, out-of-balance switch and rotation sensor NOTE: “c” is displayed when the door is closed, “l” is displayed when the door is locked, “e” is displayed when an out-of-balance switch input signal is received and “r” is displayed when a rotation sensor input signal is received.
“i n 1”	Input 1 NOTE: The display changes to “i n 1.” when an input signal is received. Only applicable if relays have been configured.
“i n 2”	Input 2 NOTE: The display changes to “i n 2.” when an input signal is received. Only applicable if relays have been configured.

Table 7

- Press the START keypad. “i n P u t 5” appears in the display.

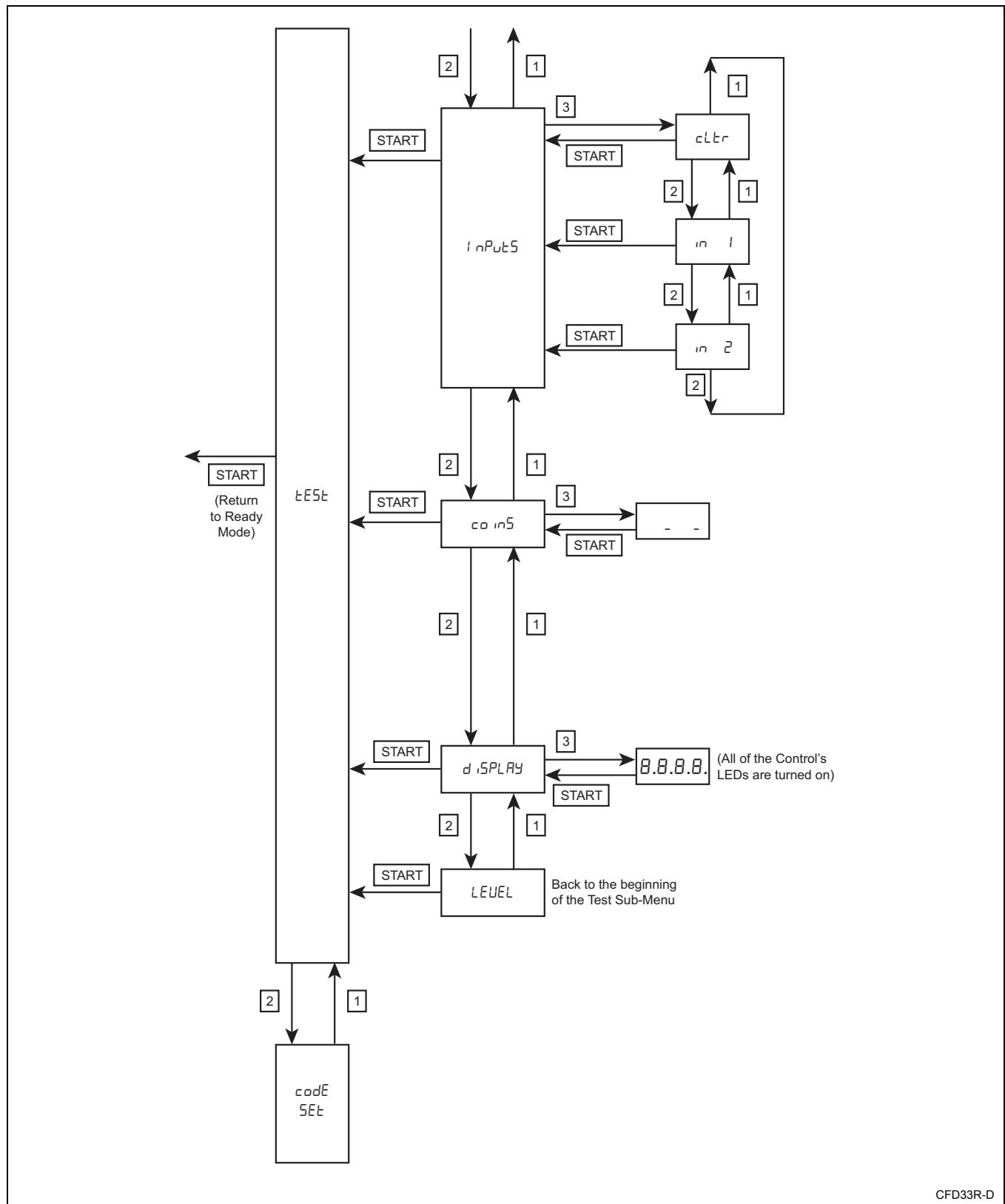
h. Coin Drop Test “c o i n 5”

- Press the 3 keypad.
- “1” appears in the display when coin switch input 1 is activated. “2” appears in the display when coin switch input 2 is activated.
- Press the START keypad. “c o i n 5” is displayed.
- Display Test “d i S P L A Y”
 - Press the 3 keypad. All of the control’s LEDs are turned on.
 - Press the START keypad. “d i S P L A Y” is displayed.

How to Exit the Test Sub-Menu

Press the START keypad until the control returns to the Ready Mode.

Test Sub-Menu Flowchart (4 of 4)



CFD33R-D

3. Entry Code Set Sub-Menu “codE 5Et”

The Entry Code Set Sub-Menu allows the operator to modify the machine's entry code.

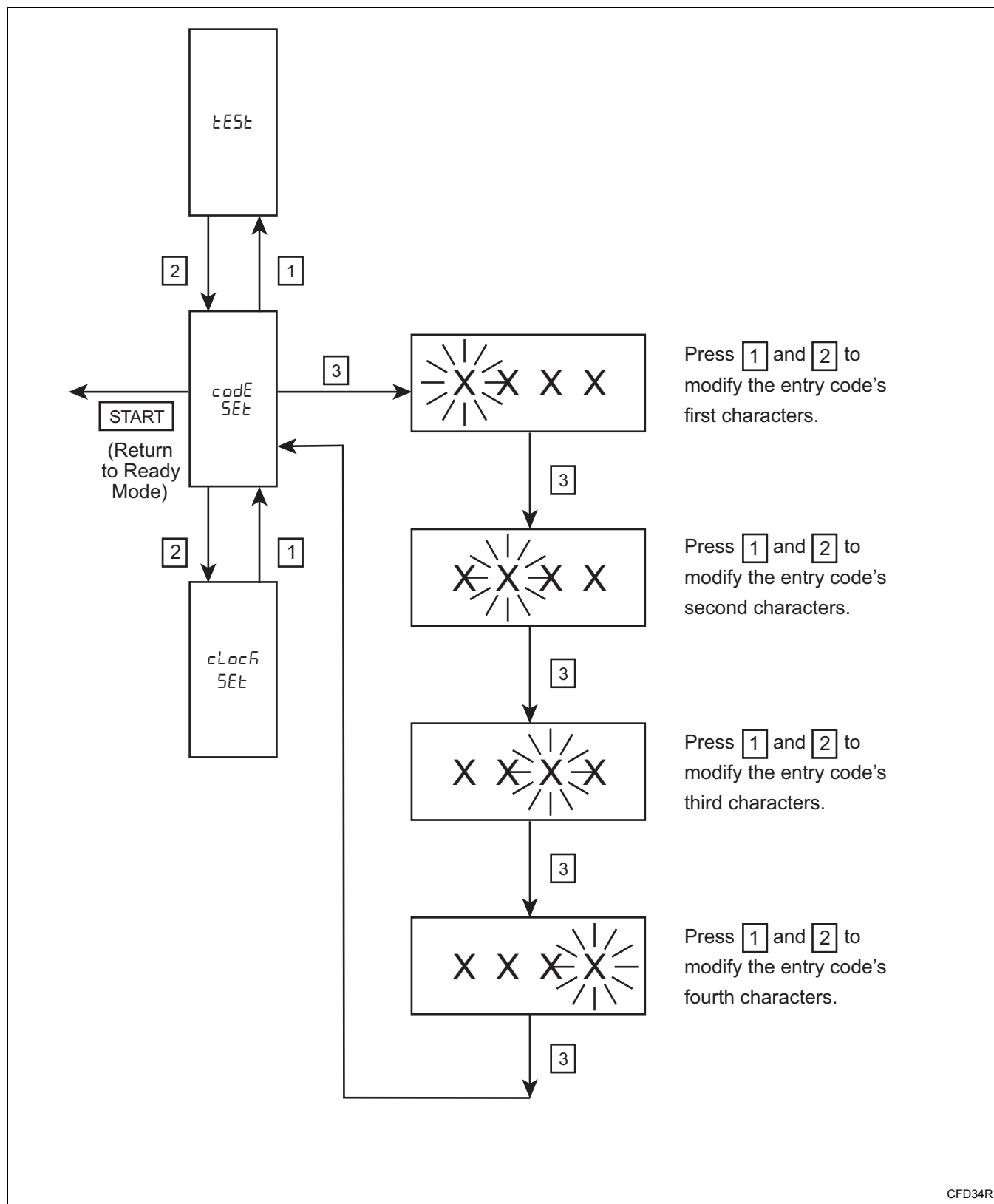
How to Access the Entry Code Set Sub-Menu

1. Enter the Non-Active menu (refer to the *Entering the Non-Active Menu* section).
2. Press the 1 or 2 keypads to scroll through the Non-Active Menu's sub-menus until “codE 5Et” appears in the display.
3. Press the 3 keypad. The entry code appears in the display. The first character flashes on and off.
4. Press the 1 or 2 keypads to modify the entry code's first character as needed.
5. Press the 3 keypad. The second character flashes on and off.
6. Press the 1 or 2 keypads to modify the entry code's second character as needed.
7. Press the 3 keypad. The third character flashes on and off.
8. Press the 1 or 2 keypads to modify the entry code's third character as needed.
9. Press the 3 keypad. The fourth character flashes on and off.
10. Press the 1 or 2 keypads to modify the entry code's fourth character as needed.
11. Press the 3 keypad. “codE 5Et” appears in the display.

How to Exit the Entry Code Set Sub-Menu

Press the START keypad until the control returns to the Ready Mode.

Entry Code Set Sub-Menu Flowchart



4. Clock Set Sub-Menu

“cLoCk SEt”

The Clock Set Sub-Menu allows the operator to set the machine’s year, month, day, day of the week, hour and minutes.

How to Access the Clock Set Sub-Menu

1. Enter the Non-Active menu (refer to the *Entering the Non-Active Menu* section).
2. Press the 1 or 2 keypads to scroll through the Non-Active Menu’s sub-menus until “cLoCk SEt” appears in the display.
3. Press the 3 keypad. “YEAR XXXX” appears in the display.
4. Press the 3 keypad until the desired option appears in the display. Refer to *Table 8*.

Option Display	Description
“YEAR”	Set the machine’s year
“Month”	Set the machine’s month
“day”	Set the machine’s day
“day of WEEK”	Set the machine’s day of the week
“hour”	Set the machine’s hour
“minutes”	Set the machine’s minutes

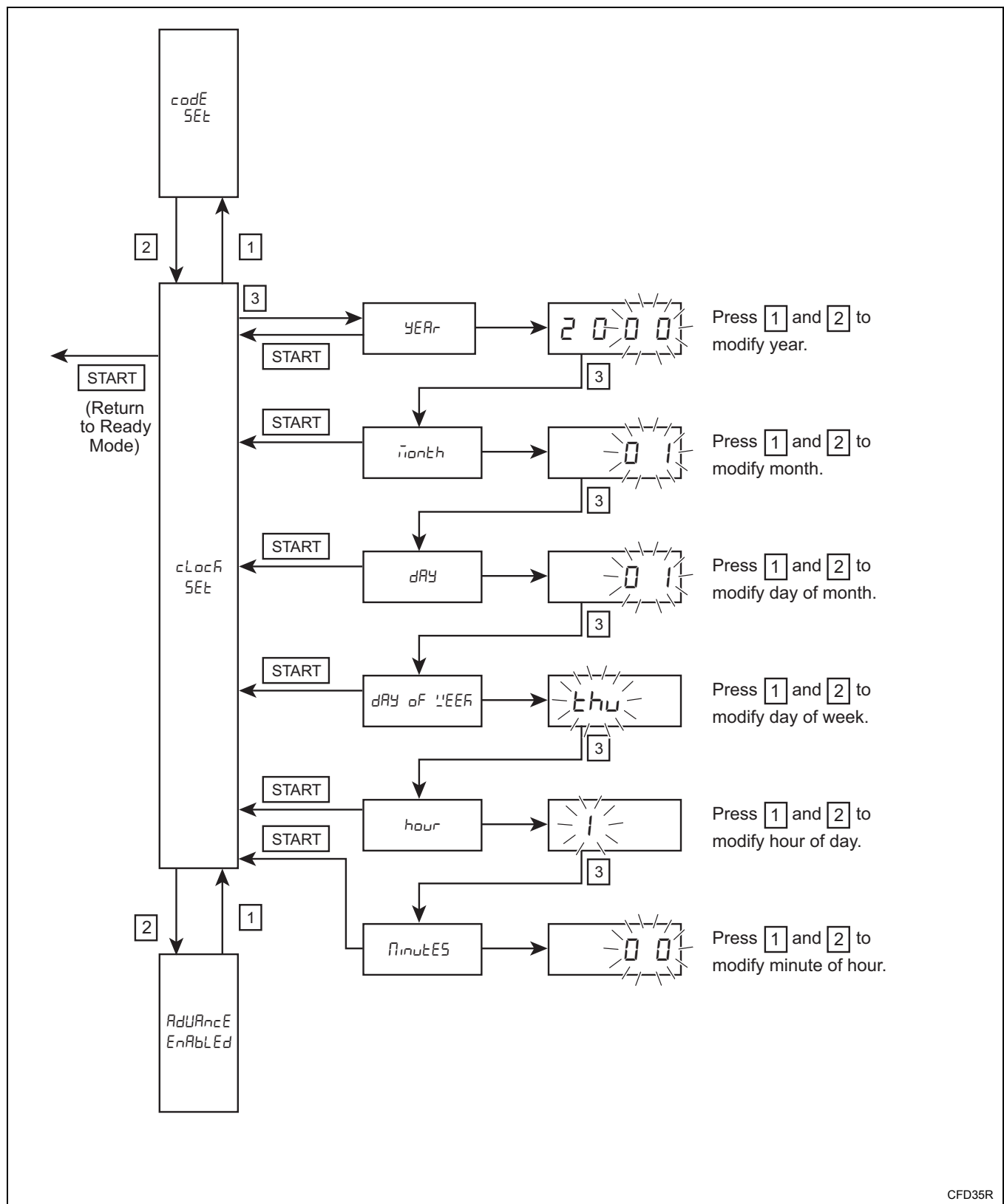
Table 8

5. Press the 1 or 2 keypads to edit the option as needed.
6. Press the START keypad. “cLoCk SEt” appears in the display.

How to Exit the Clock Set Sub-Menu

Press the START keypad until the control returns to the Ready Mode.

Clock Set Sub-Menu Flowchart



5. Network Address Sub-Menu “nEt AddrE55”

Enter a Network Address.

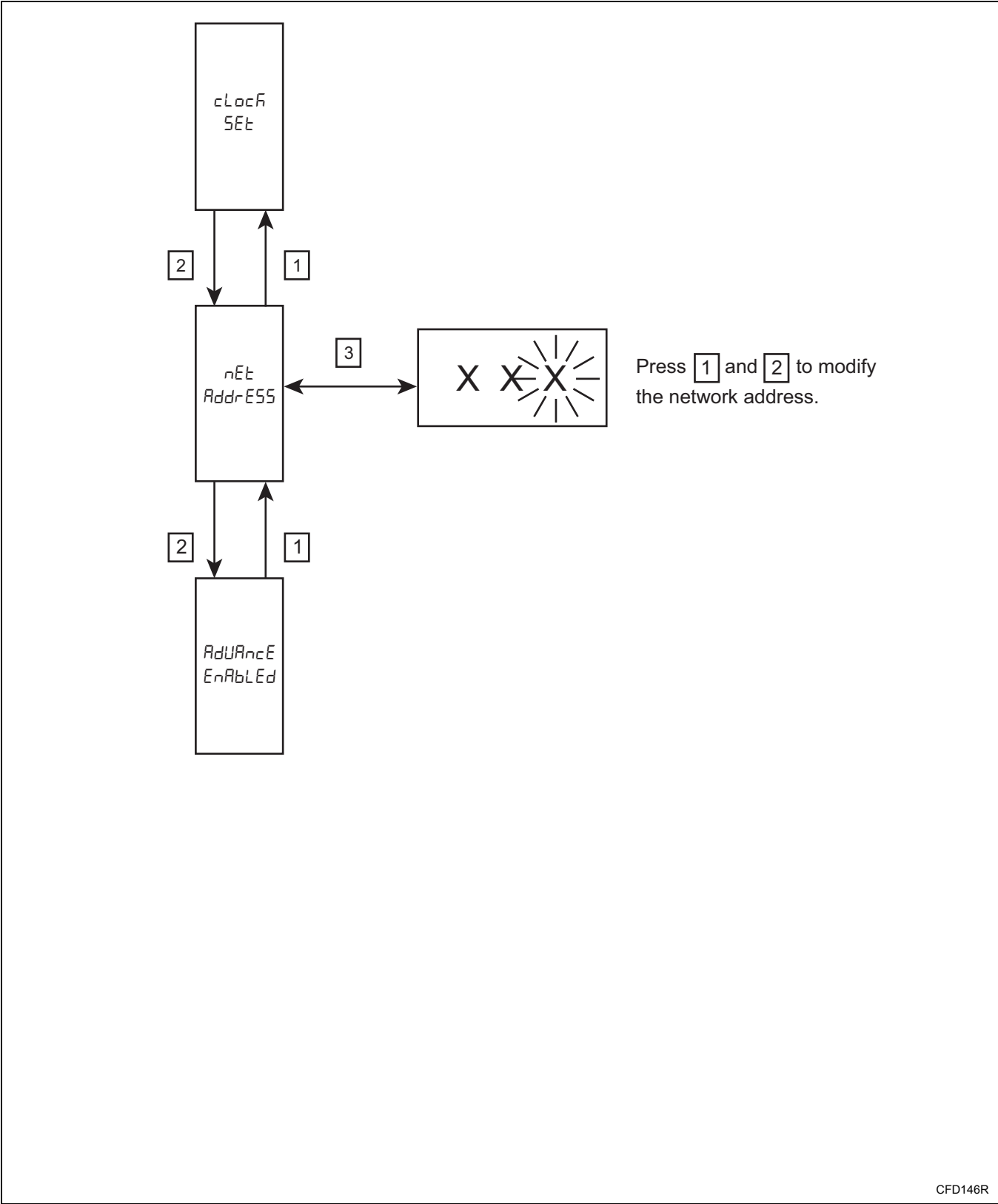
How to access the Network Address Sub-Menu

1. Enter the Non-Active menu (refer to the *Entering the Non-Active Menu* section).
2. Press the 1 or 2 keypads to scroll through the Non-Active Menu's Sub-Menus until “nEt AddrE55” appears in the display.
3. Press the 3 keypad “XXX” appears in the display.
4. Enter the correct Network Address with the 1 and 2 keypads.
5. Enter or confirm with the 3 keypad.

How to Exit the Network Address Enable Sub-Menu

Press the ① keypad until the control returns to the Ready Mode.

Network Address Sub-Menu
Flowchart



CFD146R

6. Rapid advance Enable Sub-Menu “*AdVAnCE EnAbLEd*”

The Rapid Advance Enable Sub-Menu allows the operator to turn the rapid advance option on or off. Setting is remembered until restart.

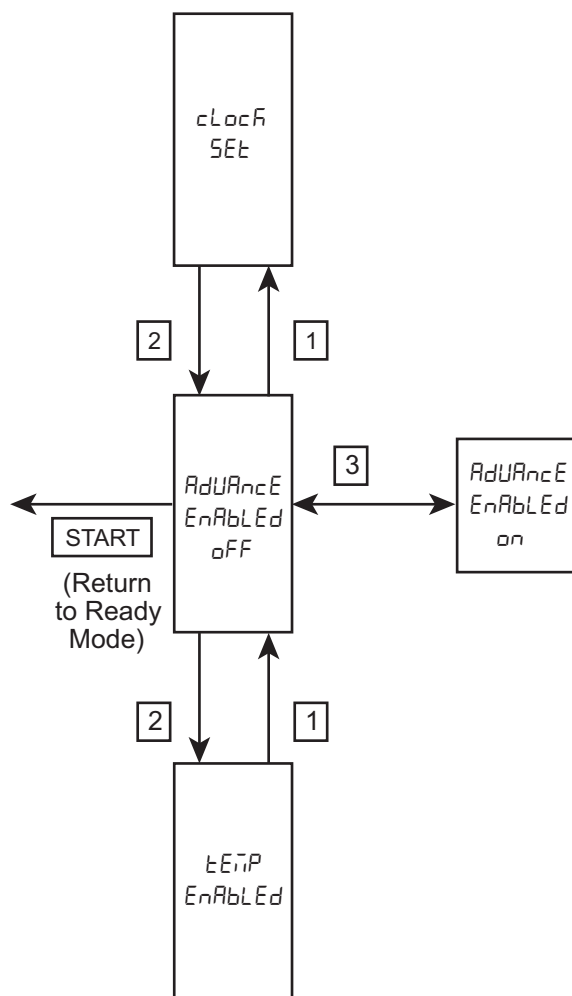
How to Access the Rapid Advance Enable Sub-Menu

1. Enter the Non-Active menu (refer to the *Entering the Non-Active Menu* section).
2. Press the 1 or 2 keypads to scroll through the Non-Active Menu’s sub-menus until “*AdVAnCE EnAbLEd oFF*” or “*AdVAnCE EnAbLEd on*” appears in the display.
3. Press the 3 keypad to turn the rapid advance option on or off. “*AdVAnCE EnAbLEd oFF*” appears in the display when the rapid advance option is off and “*AdVAnCE EnAbLEd on*” appears in the display when the rapid advance option is on.

How to Exit the Rapid Advance Enable Sub-Menu

Press the START keypad until the control returns to the Ready Mode.

Rapid Advance Enable Sub-Menu Flowchart



CFD37R

7. Temperature Indication Enable Sub-Menu “TEMP ENABLE”

The Temperature Indication Enable Sub-Menu allows the operator to turn the temperature indicator (which appears during a cycle) on or off. Setting is remembered until restart.

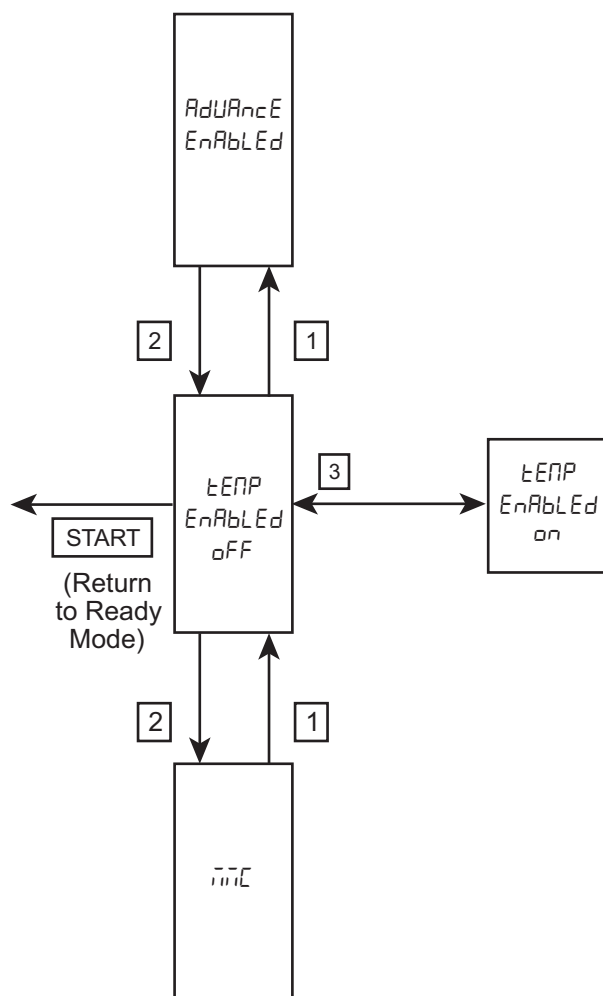
How to Access the Temperature Indication Enable Sub-Menu

1. Enter the Non-Active menu (refer to the *Entering the Non-Active Menu* section).
2. Press the 1 or 2 keypads to scroll through the Non-Active Menu’s sub-menus until “TEMP ENABLE OFF” or “TEMP ENABLE ON” appears in the display.
3. Press the 3 keypad to turn the temperature indication option on or off.
 “TEMP ENABLE OFF” appears in the display when the temperature indication option is off and
 “TEMP ENABLE ON” appears in the display when the temperature indication option is on.

How to Exit the Temperature Indication Enable Sub-Menu

Press the START keypad until the control returns to the Ready Mode.

Temperature Indication Enable Sub-Menu Flowchart



CFD38R

8. MMC Sub-Menu “MMC” (1 of 3)

The MMC Sub-Menu allows the operator to manage data on the MMC card.

How to Access the MMC Sub-Menu

1. Enter the Non-Active menu (refer to the *Entering the Non-Active Menu* section).
2. Press the 1 or 2 keypads to scroll through the Non-Active Menu's sub-menus until “MMC” appears in the display.
3. Press the 3 keypad. “VIEW FILES” appears in the display.
4. Press the 1 or 2 keypads to scroll through the MMC Sub-Menu's options.
5. Press the 3 keypad to access the desired MMC Sub-Menu's option. Refer to the *Using the MMC Sub-Menu's Options* section for details on each option.

Using the MMC Sub-Menu's Options

- a. View MMC Card's Files “VIEW FILES”
 - i. Press the 3 keypad. The first wash program file (“1.XXX”) appears in the display.
- NOTE: If no wash program files are found on the MMC card, “no FILES” appears in the display.**
- ii. Press the 1 or 2 keypads to scroll through the wash program files.
 - iii. Press the START keypad.
“VIEW FILES” appears in the display.

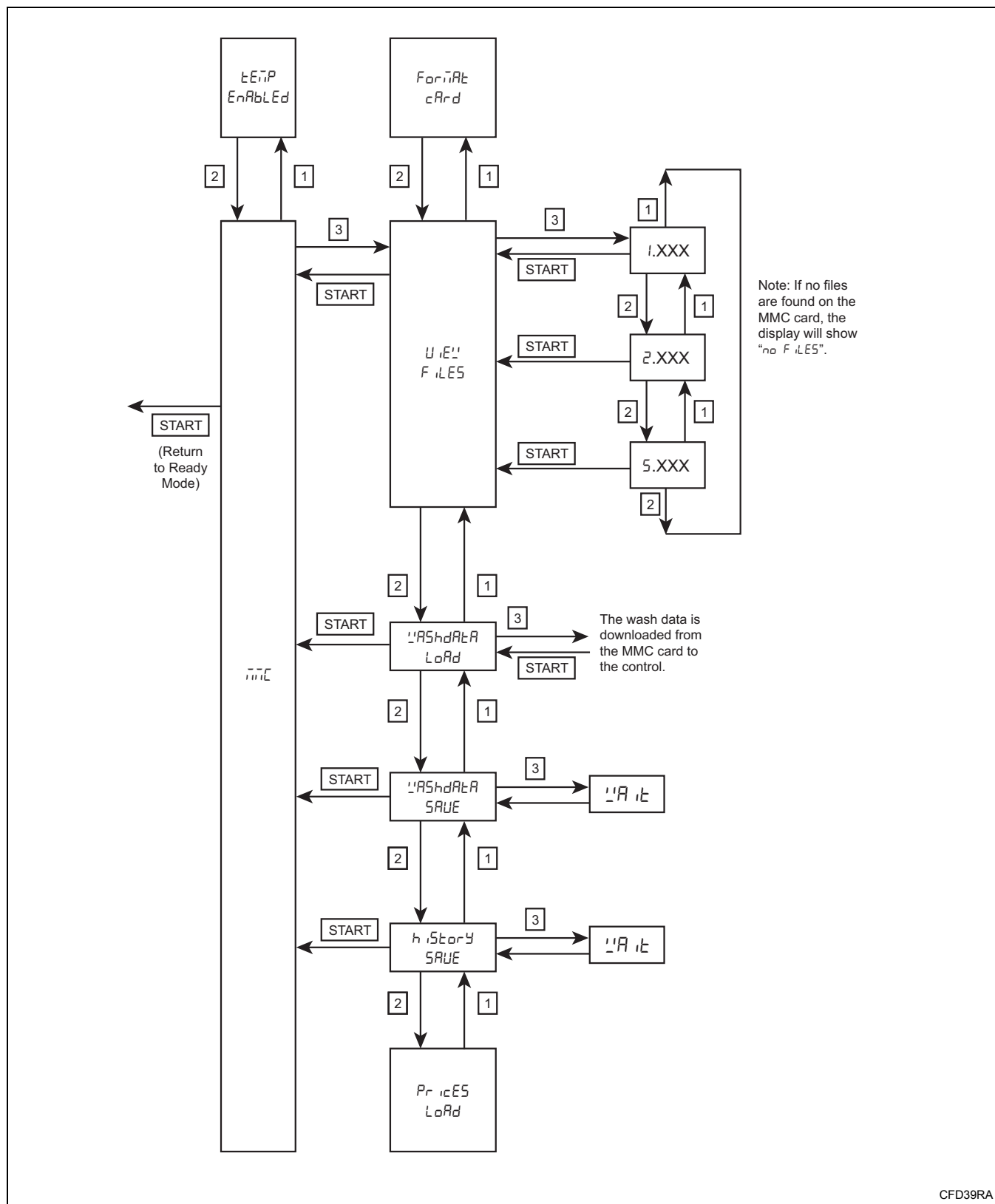
- b. Load Wash Data “WASHDATA Load”
 - i. Press the 3 keypad. The wash data file (“1.XXX”) appears in the display. The first wash data file on the MMC card that is appropriate for the machine's ID chip and machine type is downloaded to the machine. After the file is downloaded, the machine is rebooted. After the machine is rebooted, the wash data version and the type of machine appear in the display.

NOTE: Only wash data that is appropriate for a machine can be downloaded to the machine.

- c. Save Wash Data “WASHDATA SAVE”
 - i. Press the 3 keypad. “WAIT” appears in the display and the machine's wash data is saved to the MMC card. Once the save is complete, “WASHDATA SAVE” appears in the display.
- d. Save History “HISTORY SAVE”
 - i. Press the 3 keypad. “WAIT” appears in the display and the machine's history is saved to the MMC card. Once the save is complete, “HISTORY SAVE” appears in the display.

(continued)

MMC Sub-Menu Flowchart (1 of 3)



8. MMC Sub-Menu “MMC” (2 of 3)

e. Load Prices “PRICE LOAD”

- i. Press the 3 keypad. The first price file (“1.XXX”) appears in the display.

NOTE: If no price files are found on the MMC card, “NO FILES” appears in the display.

- ii. Press the 1 or 2 keypads to scroll through the price files.
- iii. When the desired price file appears in the display, press the 3 keypad. “1A1” appears in the display and the price file is downloaded to the machine. After the file is downloaded, the machine is rebooted.
- iv. Press the START keypad. “PRICE LOAD” appears in the display.

f. Save Prices “PRICE SAVE”

- i. Press the 3 keypad. “1A1” appears in the display and the machine’s price file is saved to the MMC card. Once the save is complete, “PRICE SAVE” appears in the display.

g. Load Help File “HELPFILE LOAD”

- i. Press the 3 keypad. The first help file (“1.XXX”) appears in the display.

NOTE: If no help files are found on the MMC card, “NO FILES” appears in the display.

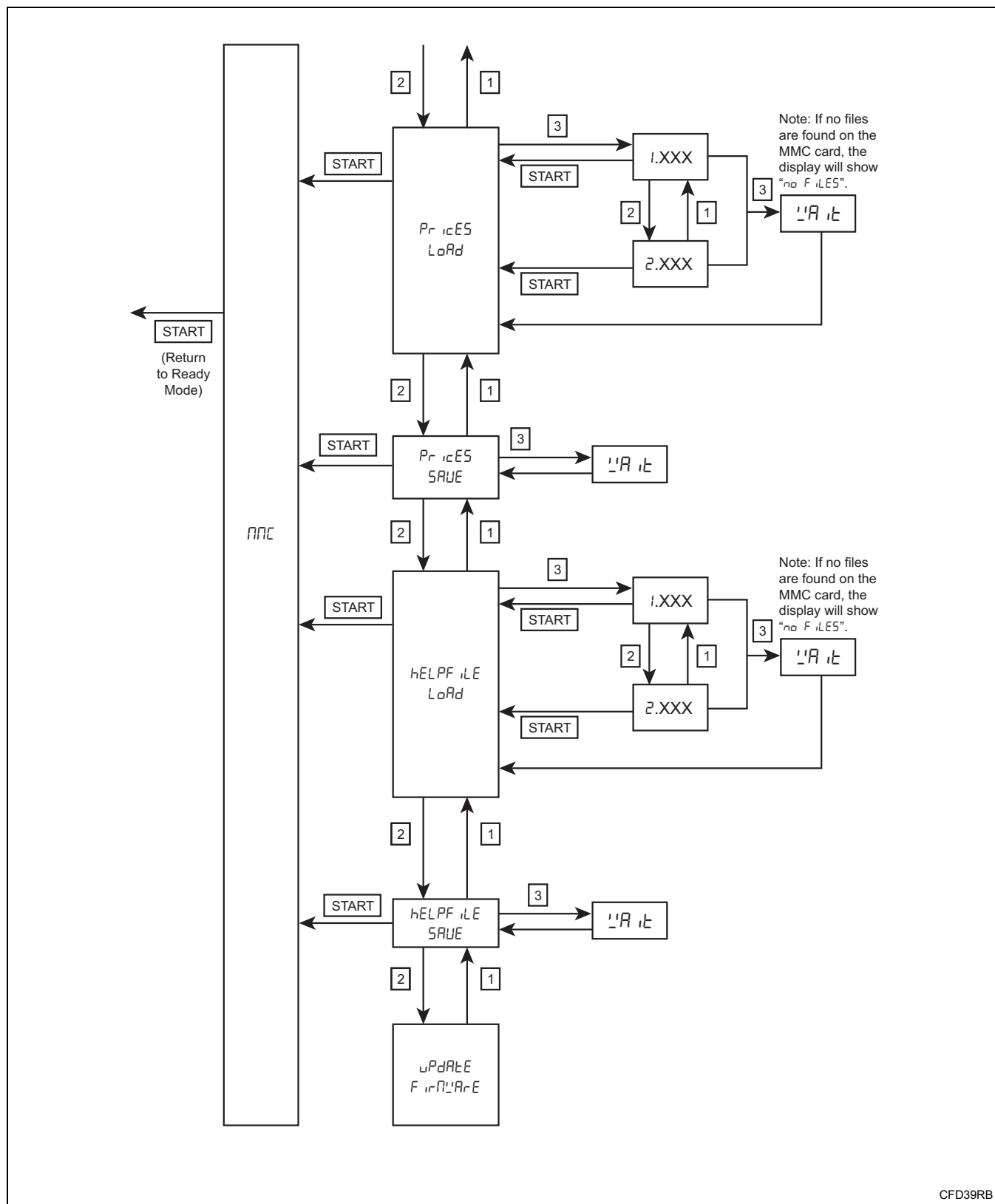
- ii. Press the 1 or 2 keypads to scroll through the help files.
- iii. When the desired help file appears in the display, press the 3 keypad. “1A1” appears in the display and the help file is downloaded to the machine. After the file is downloaded, the machine is rebooted.
- iv. Press the START keypad. “HELPFILE LOAD” appears in the display.

h. Save Help File “HELPFILE SAVE”

- i. Press the 3 keypad. “1A1” appears in the display and the machine’s help file is saved to the MMC card. Once the save is complete, “HELPFILE SAVE” appears in the display.

(continued)

MMC Sub-Menu Flowchart (2 of 3)



CFD39RB

8. MMC Sub-Menu “MMC” (3 of 3)

i. Update Firmware “UPDATE FIRMWARE”

- i. Press the 3 keypad. “SURE NO” appears in the display.

NOTE: If no firmware file is found on the MMC card, “NO FIRMWARE FOUND” appears in the display.

- ii. Press the 1 or 2 keypad. “YES” appears in the display.
- iii. Press the 3 keypad. “LOAD” appears in the display and the firmware file is downloaded to the machine. After the file is downloaded, the machine is rebooted.

NOTE: Press the START keypad to cancel the firmware download.

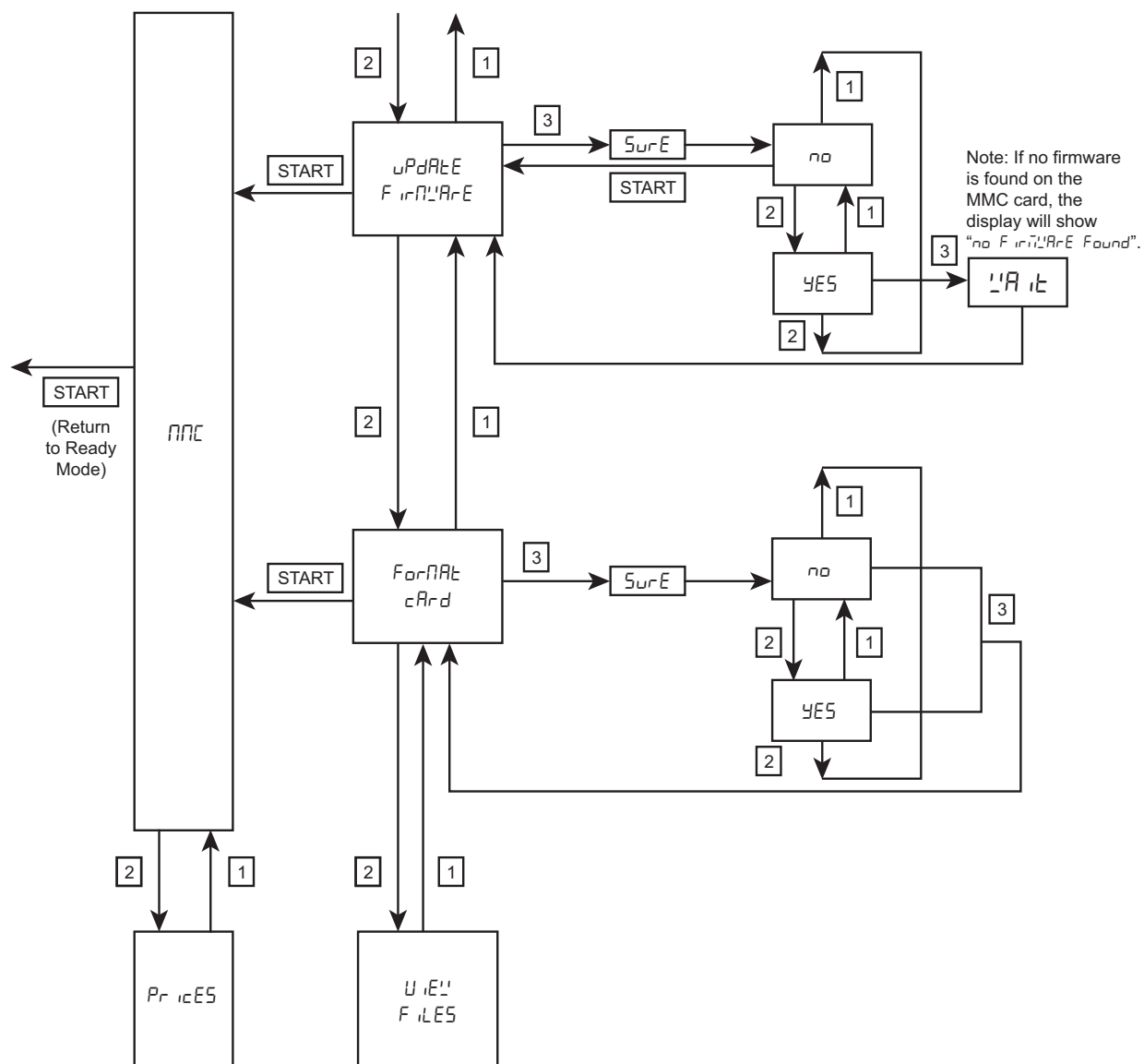
j. Format Card “FORMAT CARD”

- i. Press the 3 keypad. “SURE NO” appears in the display.
- ii. Press the 1 or 2 keypad. “YES” appears in the display.
- iii. Press the 3 keypad. The MMC card is formatted.

How to Exit the MMC Sub-Menu

Press the START keypad until the control returns to the Ready Mode.

MMC Sub-Menu Flowchart (3 of 3)



CFD39RC

9. Prices Sub-Menu “P r, cE5”

The Prices Sub-Menu allows the operator to modify each cycle's vend price.

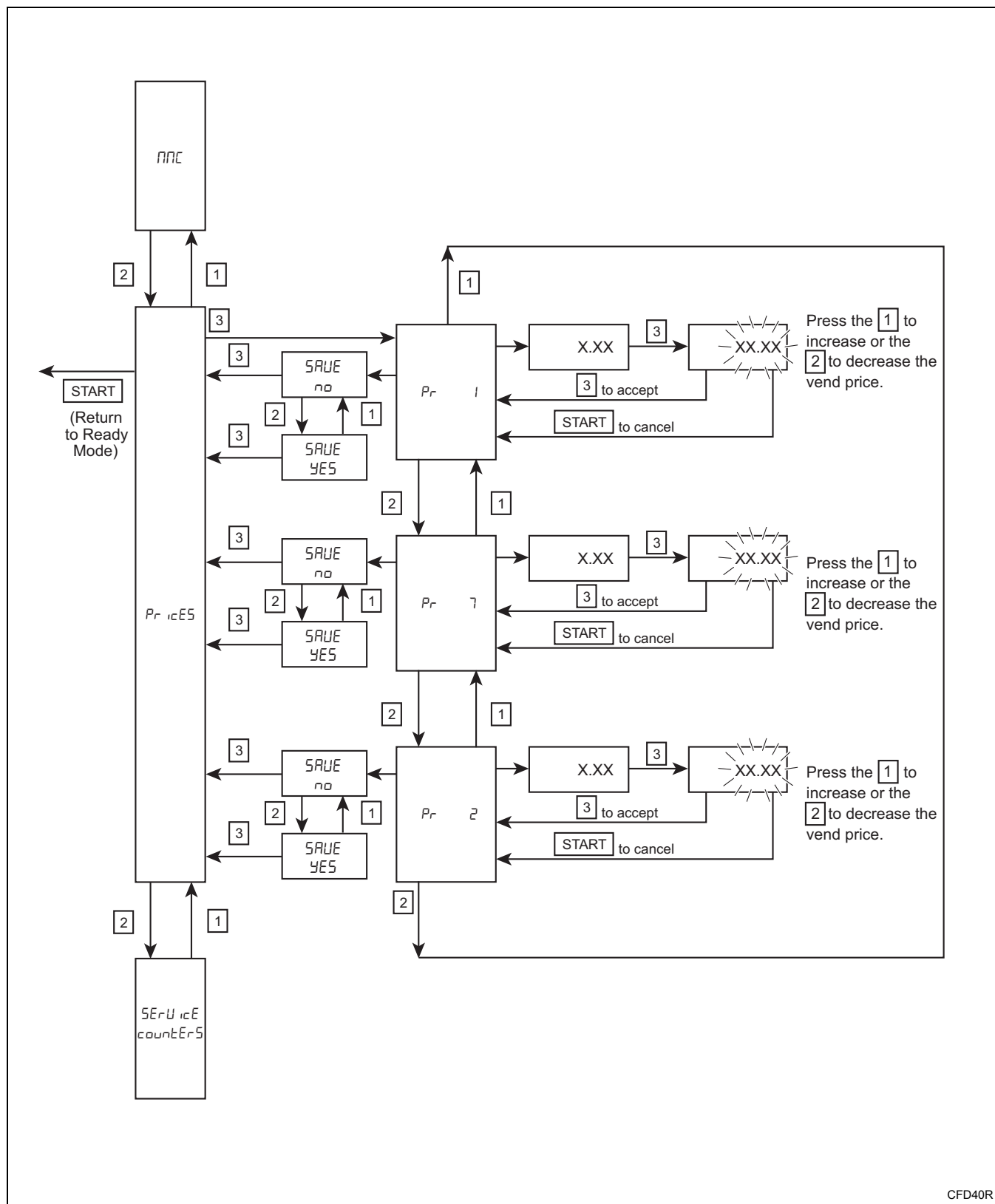
How to Access the Prices Sub-Menu

1. Enter the Non-Active menu (refer to the *Entering the Non-Active Menu* section).
2. Press the 1 or 2 keypads to scroll through the Non-Active Menu's sub-menus until “P r, cE5” appears in the display.
3. Press the 3 keypad. “P r 1 X.XX” appears in the display.
4. Press the 1 or 2 keypads until the desired cycle's vend price appears in the display.
5. Press the 3 keypad. The vend prices flashes on and off, meaning it can be edited.
6. Press the 1 or 2 keypads as needed to edit the vend price.
7. Press the 3 keypad. The vend prices stops flashing.
8. Press the START keypad. “SAVE n0” appears in the display.
9. Press the 1 or 2 keypad. “SAVE 4E5” appears in the display.
10. Press the 3 keypad. “P r, E” appears in the display. After the vend prices is saved, “P r, cE5” appears in the display.

How to Exit the Prices Sub-Menu

Press the START keypad until the control returns to the Ready Mode.

Prices Sub-Menu Flowchart



10. Service Counters Sub-Menu

“SErvice countEr5”

The Service Counters Sub-Menu allows the operator to display service maintenance reminders on the machine's control after the machine has been operated for a specified number of hours or cycles.

How to Access the Service Counters Sub-Menu

1. Enter the Non-Active menu (refer to the *Entering the Non-Active Menu* section).
2. Press the 1 or 2 keypads to scroll through the Non-Active Menu's sub-menus until “SErvice countEr5” appears in the display.
3. Press the 3 keypad. “hour5 oFF” or “hour5 X.X” appears in the display.
4. Press the 1 or 2 keypads until the desired option appears in the display. Refer to *Table 9*.

Option Display	Description	Example
“hour5 oFF” or “hour5 X.X”	Display service maintenance reminders on the machine's control after the machine has been operated for a specified number of hours.	1_0 is 1000 Hours
“cYcLE5 oFF” or “cYcLE5 X.X”	Display service maintenance reminders on the machine's control after the machine has been operated for a specified number of cycles.	1_5 is 1500 Cycles

Table 9

5. Press the 3 keypad.
 - If “hour5 oFF” or “cYcLE5 oFF” was displayed, “on” appears in the display, followed by the number of hours or cycles (“X.X”). Press the 1 or 2 keypads as needed to edit the number of hours or cycles.
 - If “hour5 X.X” or “cYcLE5 X.X” was displayed, “oFF” appears in the display.

How to Exit the Service Counters Sub-Menu

Press the START keypad until the control returns to the Ready Mode.



11. Weekly Cycle Count Sub-Menu “WEEKLY cOUNTEr5”

The Weekly Cycle Count Sub-Menu allows the operator to view the number of times each cycle has been run over the last 7 days.

How to Access the Weekly Cycle Count Sub-Menu

1. Enter the Non-Active menu (refer to the *Entering the Non-Active Menu* section).
2. Press the 1 or 2 keypads to scroll through the Non-Active Menu's sub-menus until “WEEKLY cOUNTEr5” appears in the display.
3. Press the 3 keypad. Cycle 1 and the number of times Cycle 1 has been run over the last 7 days (“Pr 1 XXXX”) appears in the display.
4. Press the 1 or 2 keypads until the desired cycle number appears in the display.
5. Press the START keypad. “ErASE n0” appears in the display.
6. To erase the weekly cycle counts...
 - a. Press the 1 or 2 keypad. “ErASE yES” appears in the display.
 - b. Press the 3 keypad. The weekly cycle counts are erased and “WEEKLY cOUNTEr5” appears in the display.

How to Exit the Information Sub-Menu

Press the START keypad until the control returns to the Ready Mode.



12. Last Errors Sub-Menu

"LAST Error5"

The Last Errors Sub-Menu allows the operator to view a list of errors that have occurred during the last cycle that was run on the machine.

How to Access the Last Errors Sub-Menu

1. Enter the Non-Active menu (refer to the *Entering the Non-Active Menu* section).
2. Press the 1 or 2 keypads to scroll through the Non-Active Menu's sub-menus until "LAST Error5" appears in the display.
3. Press the 3 keypad. The last recorded error appears in the display. Refer to the *Error Messages* section for error definitions.

NOTE: If no errors have taken place during the last cycle that was run on the machine, "no Error5" appears in the display.

4. Press the 1 or 2 keypads to scroll through all of the errors recorded during the last cycle that was run on the machine.

How to Exit the Last Errors Sub-Menu

Press the START keypad until the control returns to the Ready Mode.



13. Out of Order Sub-Menu “out oF ordEr”

The Out of Order Sub-Menu allows the operator to place a machine out of service, preventing it from being used.

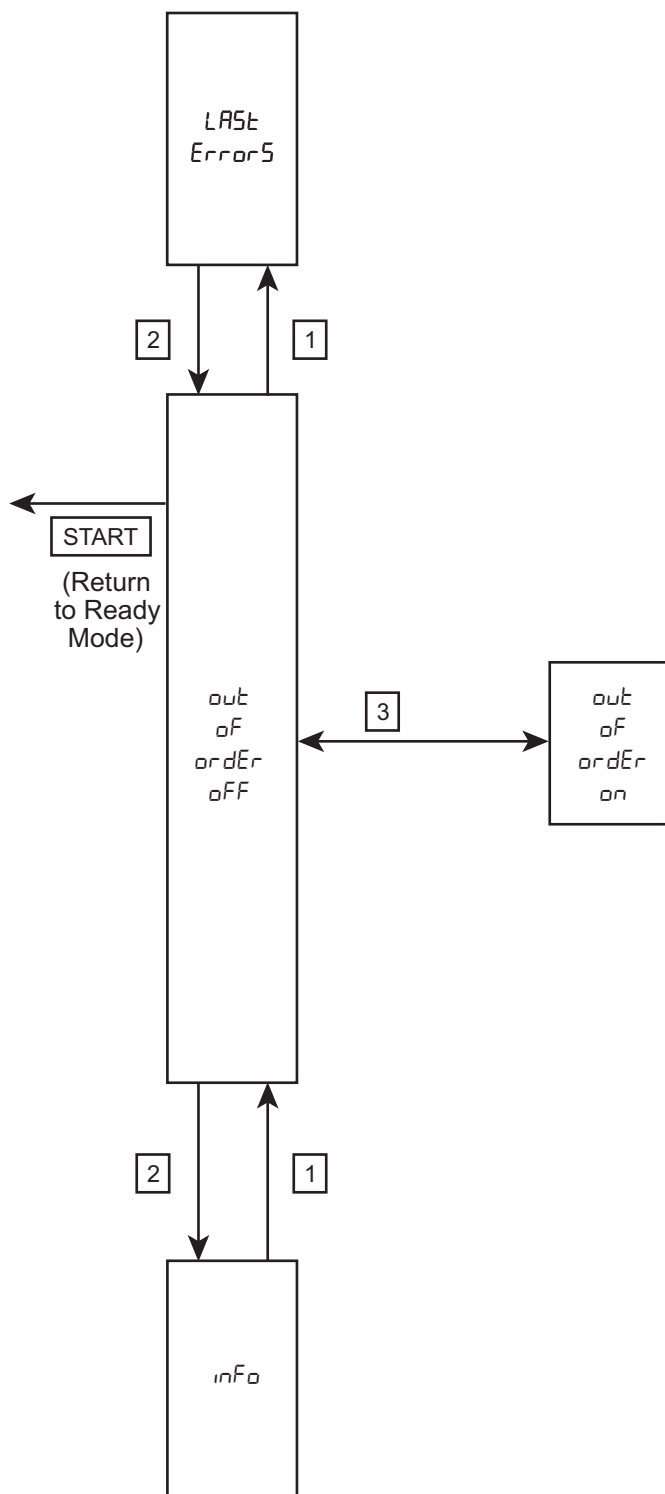
How to Access the Out of Order Sub-Menu

1. Enter the Non-Active menu (refer to the *Entering the Non-Active Menu* section).
2. Press the 1 or 2 keypads to scroll through the Non-Active Menu's sub-menus until “out oF ordEr oFF” (if the out of order option is currently off) or “out oF ordEr on” (if the out of order option is currently on) appears in the display.
3. Press the 3 keypad. “out oF ordEr on” or “out oF ordEr oFF” appears in the display.

How to Exit the Out of Order Sub-Menu

Press the START keypad until the control returns to the Ready Mode.

Out of Order Sub-Menu Flowchart



CFD44R

Error Messages

Error Messages

Following is a list of possible error messages that may be displayed.

Error Message	Possible Cause/Correction
ERROR 1: PROGRAM TITLE ERROR	Program titles are missing from display board. After installing new display board, program titles were not copied from main board to display board.
ERROR 2: COMPONENT UNKNOWN	Wash program contains unknown component.
ERROR 3: COMPONENT ERROR	Wash program contains component with incorrect length.
ERROR 4: SUBROUTINE NOT FOUND	Wash program contains unknown component.
ERROR 5: WRONG PASSWORD	Incorrect password entered.
ERROR 6: WASH DATA ERROR	Incorrect or incomplete wash data. Restore wash data from display board. Reload wash data using MMC card or PC.
ERROR 7: INVERTER COMMUNICATION ERROR	No communication from main board. Inspect inverter board wiring. No communication between inverter and main board. Inspect inverter wiring.
ERROR 8: INVERTER AUTOTUNING ERROR	Incorrect status during autotuning.
ERROR 9: INVERTER PARAMETER ERROR	Inverter refused parameters. Error while entering parameters into inverter.
ERROR 10: INVERTER STATUS ERROR	Inspect inverter for error messages. <ul style="list-style-type: none"> • OC1: Overcurrent accelerating • OC2: Overcurrent constant speed • OC3: Overcurrent decelerating • OV1: Overvoltage accelerating • OV2: Overvoltage constant speed • OV3: Overvoltage decelerating • PE: EEPROM failure • PUE: Communication error • RET: Retries exceeded • P24: 24V short circuit • E.3: Option fault 3 • E.6: CPU error 6 • E.7: CPU error 7 • THT: Inverter overload • THM: Motor overload • FIN: Heatsink overheat • OLT: Stall prevention • BE: Brake alarm • GF: Ground fault • LF: Output phase failure • OHT: Thermal relay operation • OPT: Option alarm
ERROR 11: REAL TIME CLOCK ERROR	Check control's date and time setting on the setting menu. Check voltage on main board.
ERROR 12: TILT SWITCH ERROR	Check tilt switch's position. Check connection of tilt switch on display board. Using test program, check tilt switch's input signal.

(continued)

Error Messages

(continued)

Error Message	Possible Cause/Correction
ERROR 14: TEMPERATURE ERROR	Inspect temperature sensor. Inspect heating resistances/relays and wiring. Check input/output voltage of temperature sensor on main board. Using test program, test temperature sensor.
ERROR 15: LEVEL SENSOR ERROR	Check calibration of water level switch.
ERROR 16: CAN COMMUNICATION ERROR	Inspect wiring between main board and display board.
ERROR 17: WRONG MACHINE TYPE	Check that programmed machine type matches actual machine type.
ERROR 18: WRONG WASH DATA ERROR	Washdata on main board does not correspond with machine type.
ERROR 19: ID CHIP READ ERROR	Inspect ID chip connection on main board.
ERROR 20: ID CHIP WRITE ERROR	Inspect ID chip connection on main board.
ERROR 21: MMC TRANSFER ERROR	Error during MMC card data transfer.
ERROR 22: DOORLOCK ERROR	Door does not lock. Check wiring between door lock board and door lock. Using test program, check input signals S1 and S2.
ERROR 24: WRONG DISPLAY TYPE ERROR	Wash data does not correspond to display type.
ERROR 25: WASH DATA BACKUP ERROR	When the main board is replaced, the wash data cannot be copied from the display board to the main board.
ERROR 26: NEW ID CHIP ERROR	When an ID chip is replaced at the same time as the main board, a programmed ID chip must be installed.
ERROR 27: INVALID FILE SIZE ERROR	An invalid file (larger than 128 kbytes) has been selected.
ERROR 28: RTC READ ERROR	The real time clock cannot be read.
ERROR 29: RTC WRITE ERROR	The real time clock cannot be written.
ERROR 30: EEPROM READ ERROR	The main board's eeprom cannot be read.
ERROR 31: EEPROM WRITE ERROR	The main board's eeprom cannot be written.
ERROR 32: WATER LEVEL TOO LOW	Water level is too low during heating cycle.
ERROR 33: SOFTWARE VERSION ERROR	When the main board or display board is replaced, the cards have different software versions.
ERROR 34: MCU FAILURE ERROR	The processor isn't functioning properly.
ERROR 50: LEVEL STOP ERROR	Programmed water level not reached. Inspect water pressure and water inlet valve filters. Inspect water inlet valves and wiring. Inspect water level sensor and wiring. Inspect drain valve and wiring. Using test program, test water inlet valves, water level sensor and drain valves.
ERROR 51: HEAT STOP ERROR	Programmed temperature not reached. Inspect heating resistances, heating relays, water level switch and wiring. Using test program, test heating resistances and water level switch.
ERROR 52: DRAIN ERROR	Inspect drain valve, drain pipe and water level hose. Using test program, test function of drain valve.
ERROR 53: HEATING ERROR	Programmed temperature not reached. Inspect heating resistances, heating relays, water level switch and wiring. Using test program, test heating resistances and water level switch.
ERROR 54: FILL ERROR	Programmed water level not reached. Inspect water pressure and water inlet valve filters. Inspect water inlet valves and wiring. Inspect water level sensor and wiring. Inspect drain valve and wiring. Using test program, test water inlet valves, water level sensor and drain valve.
ERROR 55: ROTATION SENSOR ERROR	Control does not sense basket rotation. Using test program, test function of rotation sensor. Check position of rotation sensor. Check connection between main board and inverter. Check status of inverter.

(continued)

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Error Message	Possible Cause/Correction
ERROR 56: SPIN RETRY ERROR	Programmed number of imbalances is reached. Check tilt switch's connection and position of tilt switch. Using test program, test function of tilt switch. Check machine to make sure it is loaded properly. Check machine's shock absorbers (if present).
ERROR 59: DOOR OPEN WHILE WASHING ERROR	Door is open or unlocked during machine operation. Check wiring between door lock board and door lock. Check position of switches S1 and S2. Using test program, test input signals of S1 and S2. Using test program, test function of door lock.

Error Messages

Events

Following is a list of events that may be recorded.

Event	Description
EVENT 100: PROGRAM STARTED	Program start time and date.
EVENT 101: PROGRAM ENDED	Program end time and date.
EVENT 102: PROGRAM ABORTED	Program is aborted or stopped.
EVENT 103: LEVEL REACHED	Programmed water level reached.
EVENT 104: TEMPERATURE REACHED	Programmed temperature reached.
EVENT 105: HUMIDITY REACHED	Programmed humidity reached.
EVENT 106: SPIN RETRY	Spin is repeated because of tilt switch or water detection.
EVENT 107: SOAP ACTIVATION	Supplies activated.
EVENT 108: ABSO RESULT	SMART WAVE routine ended.
EVENT 109: WEIGHT ENTERED	Operator has entered load's weight.
EVENT 110: STALLING	The motor is stalling. The control decreases the frequency by 10%.
EVENT 111: SPIN INFO	The total number of spins is written to a log file.
EVENT 112: FINAL SPIN RPM	After the spin, the spin speed is recorded.
EVENT 113: USER HAS ADVANCED	Rapid advance function used.
EVENT 114: INVERTER NOT RUNNING	Inverter is communicating with motor, but motor is not running. Control resets inverter and resumes wash cycle.
EVENT 115: PROGRAM INTERRUPTED	Operator interrupts the cycle (coin models only).
EVENT 116: AUDIT INFO	Operating hours, cycles and the coin counter is stored.
EVENT 150: FIRST EVENT / WASH DATA EDITED	Wash data has been modified using machine's control.
EVENT 151: WASH DATA DOWNLOADED	Wash data has been modified by using PC.
EVENT 152: WASH DATA FROM MMC	Wash data has been modified by using MMC card.
EVENT 153: FIRMWARE FROM MMC	Firmware has been updated by using MMC card.
EVENT 154: PRICES EDITED	The cycles' prices have been edited.
EVENT 155: PRICES DOWNLOADED	The cycle's prices have been downloaded via infrared cable.
EVENT 156: PRICES FROM MMC	The cycle's prices have been copied from an MMC card to the machine.
EVENT 157: HELP FILE DOWNLOADED	A help file has been downloaded via infrared cable.
EVENT 158: HELP FILE FROM MMC	A help file has been copied from an MMC card to the machine.
EVENT 159: POWER UP	The machine has been powered up.
EVENT 160: POWER UP WASHING	The machine was powered down during a cycle, but the power was restored.
EVENT 161: NEW ID CHIP	A new ID chip has been installed.
EVENT 163: NEW MAINBOARD	A new main board has been installed.
EVENT 164: NEW DISPLAY BOARD	A new display board has been installed.
EVENT 165: BACKUP WASH DATA	The main board's wash data has been copied to the display board.
EVENT 166: RESTORE WASH DATA	The wash data has been restored from the display board to the main board.
EVENT 167: COPY DISPLAY FIRMWARE	The firmware has been copied from the display board to the main board.
EVENT 168: COPY MAINBOARD FIRMWARE	The firmware has been copied from the main board to the display board.
EVENT 169: RESTORE DISPLAY FIRMWARE	The firmware has been restored from the main board to the display board.
EVENT 170: RESTORE MAINBOARD FIRMWARE	The firmware has been restored from the display board to the main board.
EVENT 171: NEW BOOT	The boot software in the main board has been modified.
EVENT 172: COPY BOOT	The boot software in the main board has been copied to the display board.
EVENT 173: COPY PRICES	The price file is copied to the display board.

(continued)

(continued)

Event	Description
EVENT 174: RESTORE PRICES	The price file has been restored from the display board to the main board.
EVENT 175: POWER FAILURE	The power was disconnected.
EVENT 176: POWER RESTORED	The power was lost but was then restored.
EVENT 177: BURN IN TEST STARTED	The burn-in test was started.
EVENT 178: CODE RESET	The entry code has been reset.
EVENT 179: TIME/DATESET	The date and time have been set via infrared cable or network.

Rapid Advance Feature

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

How to Use Rapid Advance

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

While a cycle is in process, pressing the active cycle's 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 active cycle's keypad will advance the washer into the agitate cycle step.

NOTE: The Rapid Advance feature must be turned on for Rapid Advance to work. Refer to *option 6* ("AdUAnCE EnAbLEd") in the 6. *Rapid Advance Enable Sub-Menu* "AdUAnCE EnAbLEd" section.

Communication Mode

Infra-red Communications

The Infra-red Communication feature allows the control to communicate with a PC via the Cygnus Assist Software. The control can be programmed and have its data read without using the keypad.

