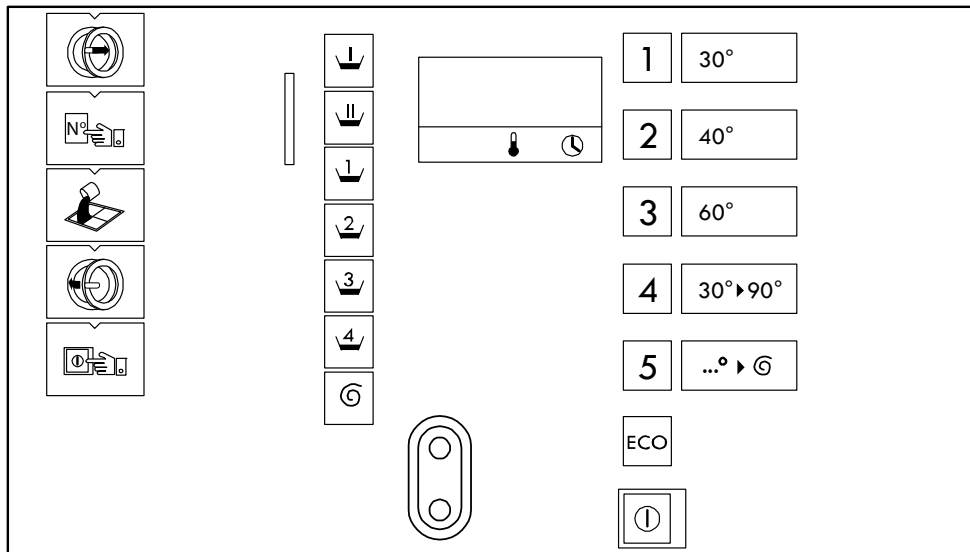


Washer-Extractor

Cygnus Standard OPL Control


Refer to Page 4 for Model Numbers



CFD583N

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>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	WD185_CYGNUS- STANDARD
HD135_CYGNUS- STANDARD	IHU400C	IXU305C	WD235_CYGNUS- STANDARD
HD165_CYGNUS- STANDARD	IHW065C	IXW060C	WD305_CYGNUS- STANDARD
HD235_CYGNUS- STANDARD	IHW075C	IXW065C	WD400_CYGNUS- STANDARD
HD305_CYGNUS- STANDARD	IHW100C	IXW075C	WD65_CYGNUS- STANDARD
HD60_CYGNUS- STANDARD	IHW135C	IXW100C	WD75_CYGNUS- STANDARD
HD65_CYGNUS- STANDARD	IHW150C	IXW135C	WHU065C
HD75_CYGNUS- STANDARD	IHW165C	IXW165C	WHU075C
IHG065C	IHW185C	IXW235C	WHU100C
IHG075C	IHW235C	IXW305C	WHU135C
IHG100C	IHW305C	IXZ060C	WHU150C
IHG135C	IHW400C	IXZ065C	WHU165C
IHG150C	IHZ065C	IXZ075C	WHU185C
IHG165C	IHZ075C	IXZ100C	WHU235C
IHG185C	IHZ100C	IXZ135C	WHU305C
IHG235C	IHZ135C	IXZ165C	WHU400C
IHG305C	IHZ150C	IXZ235C	WXU060C
IHG400C	IHZ165C	IXZ305C	WXU065C
IHN065C	IHZ185C	JHW065C	WXU075C
IHN075C	IHZ235C	JHW075C	WXU100C
IHN100C	IHZ305C	JHW100C	WXU135C
IHN135C	IHZ400C	JHW135C	WXU165C
IHN150C	IXG060C	JHW150C	WXU235C
IHN165C	IXG065C	JHW165C	WXU305C
IHN185C	IXG075C	JHW185C	YHG065C
IHN235C	IXG100C	JHW235C	YHG075C
IHN305C	IXG135C	JHW305C	YHG100C
IHN400C	IXG165C	JHW400C	YHG135C
IHU065C	IXG235C	JXW060C	YHG150C
IHU075C	IXG305C	JXW065C	YHG165C
IHU100C	IXN060C	JXW075C	YHG185C
IHU135C	IXN065C	JXW100C	YHG235C
IHU150C	IXN075C	JXW135C	YHG305C
IHU165C	IXN100C	JXW165C	YHG400C
IHU185C	IXN135C	JXW235C	
IHU235C	IXN165C	JXW305C	
	IXN235C	WD100_CYGNUS- STANDARD	
	IXN305C	WD135_CYGNUS- STANDARD	
	IXU060C	WD150_CYGNUS- STANDARD	
	IXU065C	WD165_CYGNUS- STANDARD	
	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, the water will be drained from the machine and the door can be opened after approximately 3 minutes. If the door is not opened and the power failure is not longer than 2 weeks, the washer-extractor will resume the previously active cycle.

If the door is opened or if the length of the power failure is longer than 2 weeks, the control will end the cycle and the display will revert back to Start Mode.

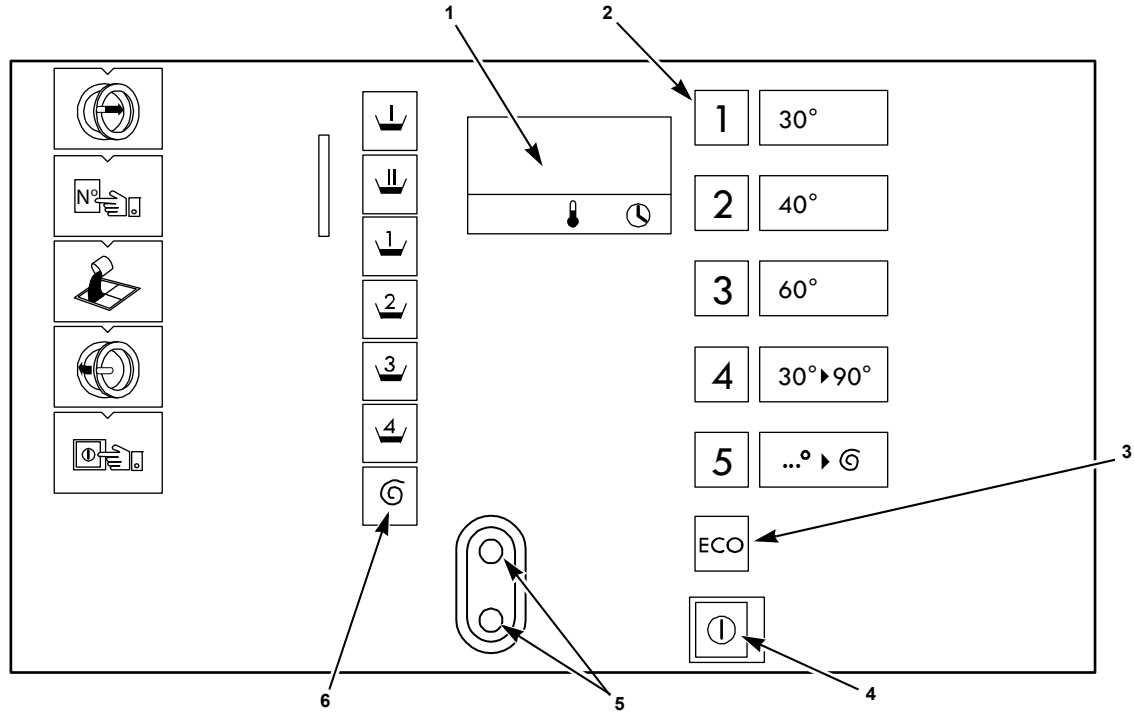
Communications

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

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. (Cygnus Std. can only be programmed by a PC, not manually.)

Control Identification



- 1 Cycle Numbers, Water Temperature and Cycle Time Display
- 2 Program Number Keypads
- 3 ECO Keypad

- 4 Start/Stop Keypad
- 5 Optical Download Window
- 6 Cycle's Segments and Steps

CFD583N

Figure 1

Display Identification

LED Status Lights (Refer to *Figure 1*)

LED Status Lights are used to indicate 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 1 LED

The Rinse 1 LED is lit at the beginning of the rinse 1 portion of the cycle and will remain lit until the rinse 1 is complete.

RINSE 2 LED

The Rinse 2 LED is lit at the beginning of the rinse 2 portion of the cycle and will remain lit until the rinse 2 is complete.

RINSE 3 LED

The Rinse 3 LED is lit at the beginning of the rinse 3 portion of the cycle and will remain lit until the rinse 3 is complete.

RINSE 4 LED

The Rinse 4 LED is lit at the beginning of the rinse 4 portion of the cycle and will remain lit until the rinse 4 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.

Cycle Numbers, Water Temperature and Cycle Time Display

The display is used to show the cycle numbers, 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 machine cycles and hours of operation.

For more information, refer to the **1. Information Sub-Menu “i nFo”** 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 Valve Test
- Relay Test
- Door, Door Lock Out-Of-Balance Switch and Rotation Sensor 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 communications. 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 washer-extractor, if the control was not powered down during a running cycle, it will enter Start Mode.

Start Mode

The control enters this mode when the machine is ready for operation. The display will show the cycle number.

After pressing the ① keypad with the door closed, the door will lock and the cycle will begin.

Run Mode

Upon the start of a cycle, the control's display alternates between the water temperature and the remaining cycle time. The appropriate cycle segment and step LEDs will light while the machine passes through the cycle.

Stop Mode

The control enters this mode if the operator ends the cycle before it is completed by pressing the ① keypad. Once the control does not detect water or cylinder rotation, it will enter End Of Cycle mode.

End of Cycle Mode

When a cycle is complete, the control will display "End" until the door is opened. When the door is opened, the control will return to Start mode.

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, 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

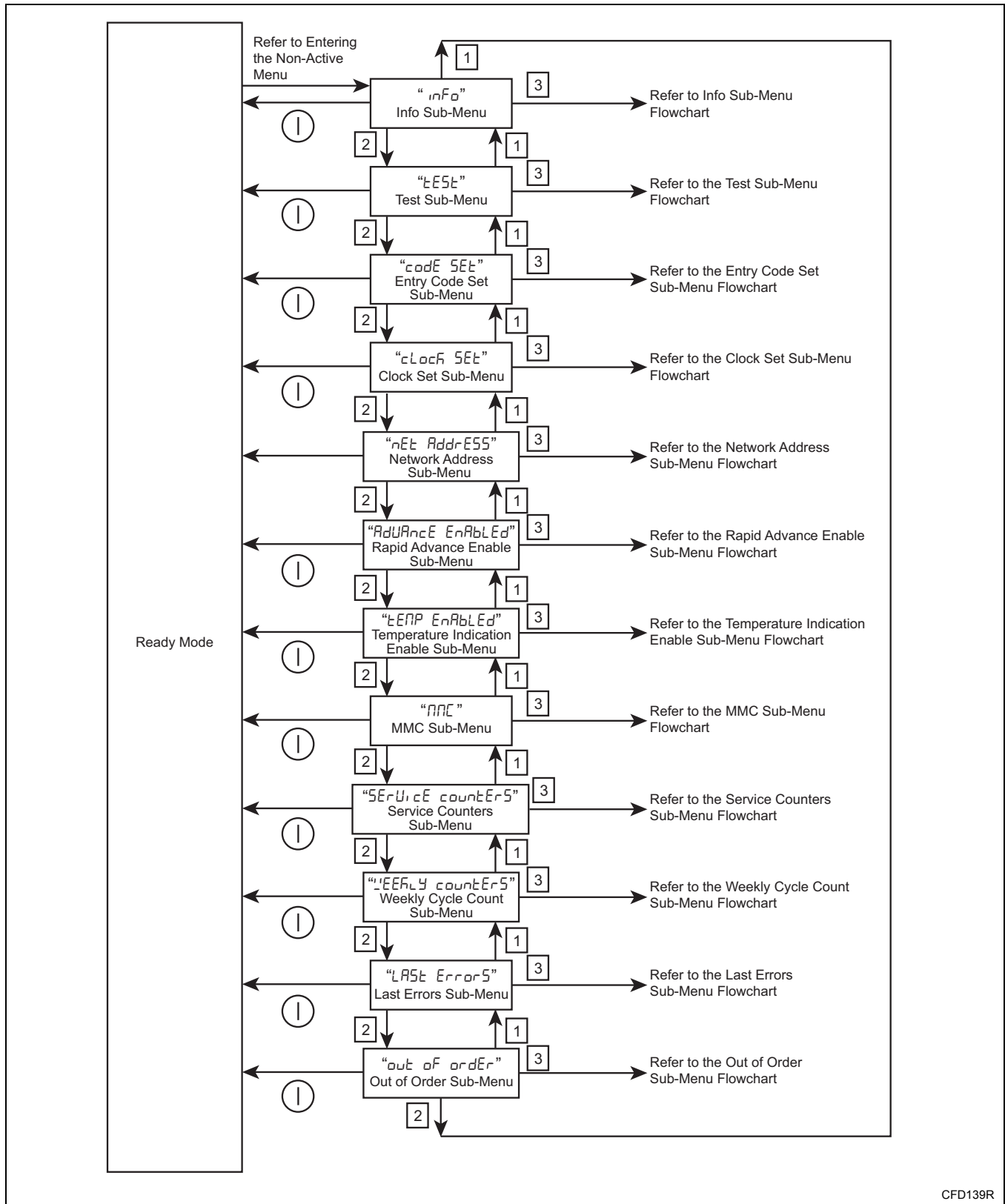
1. Enter the Non-Active Menu (refer to the *Entering the Non-Active Menu* section).
2. Press the 1 or 2 keypads to scroll through the Non-Active Menu options (Refer to *Table 1*).
3. Press the 3 keypad to enter a Non-Active Menu option.
4. Press the ⏻ keypad to exit the Non-Active Menu.

Non-Active Menu Options

Option Number	Option Display	Description
1	"i nFo"	The Information Sub-Menu allows the operator to view information about the control.
a.	"cYcLES"	Total number of cycles performed
b.	"hOurS"	Total hours of operation
c.	"SErIAL nR"	Machine's serial number
d.	"dAt "	Machine's installation date
e.	"PARAM LSt"	Version of drive parameters
2	"tEst"	The Test Sub-Menu allows the operator to test some of the machine's components.
a.	"LEUEL"	Water level test
b.	"i nLEtS"	Water inlet test
c.	"MoTor"	Motor test
d.	"hERt"	Temperature sensor test and calibration
e.	"drAi n"	Drain valve test
f.	"rELAYs"	Relay test
g.	"i nPUtS"	Door, door lock and out-of-balance switch test
h.	"di SPLAY"	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	"SErVi cE 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.
10	"wEEkLY cOuNtErS"	The Weekly Cycle Count Sub-Menu allows the operator to view the number of times each cycle has been run.
11	"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.
12	"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. “CYLES” appears in the display.
4. Press the 1 or 2 keypads until the desired option appears in the display. Refer to *Table 2*.

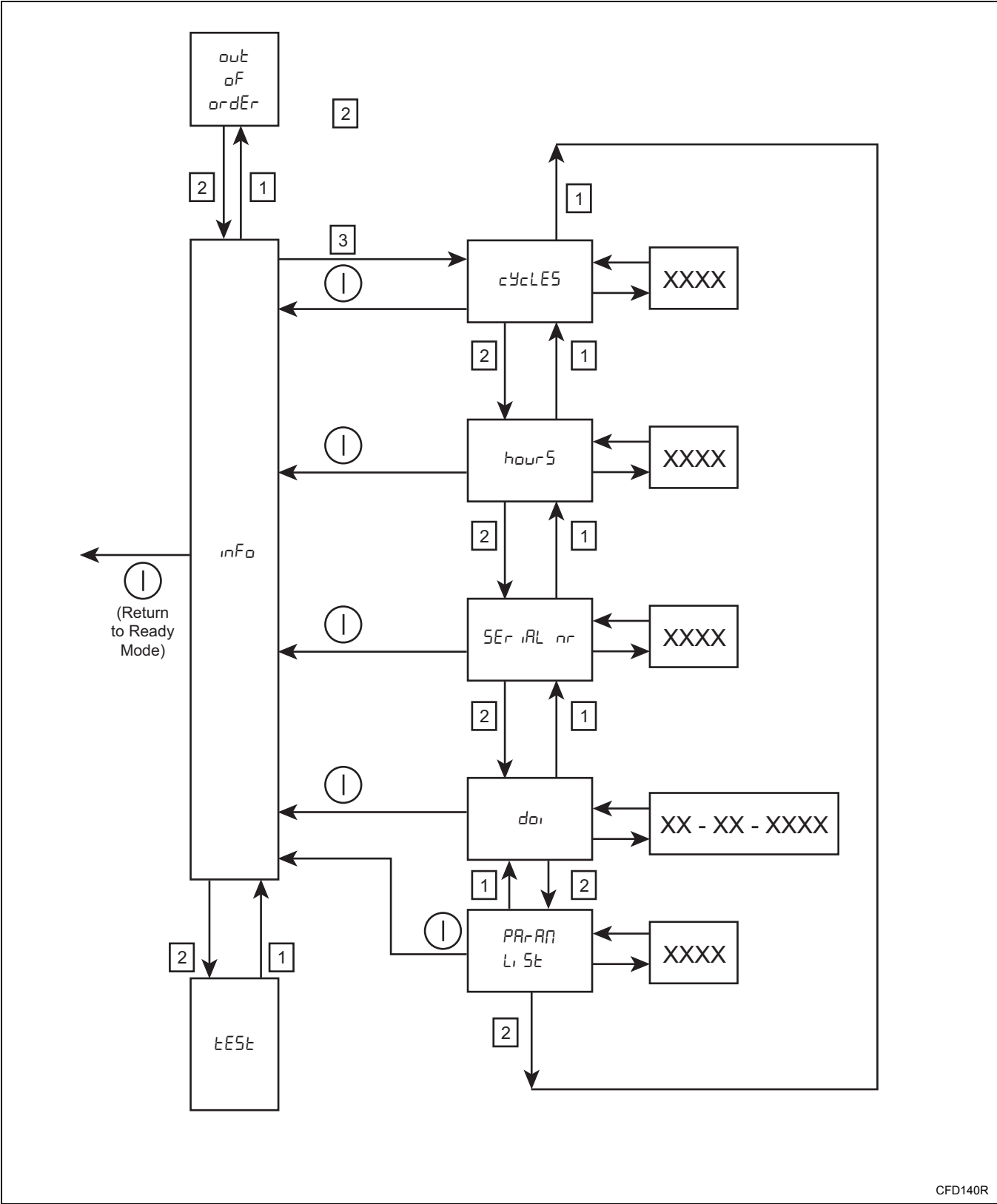
Option Display	Description
“CYLES”	Total number of cycles performed
“HOURS”	Total hours of operation
“SERIAL NR”	Machine's serial number
“DATE”	Machine's installation date NOTE: The date on which the machine completed it's 10th cycle will be recorded by the control as the machine's “installation date” (DD-MM-YYYY).
“PARAM LST”	Version of drive parameters

Table 2

How to Exit the Information Sub-Menu

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

Information Sub-Menu Flowchart



2. Test Sub-Menu “tEt” (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 “tEt” 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. “FLL.” 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 ① keypad. “LEUEL” appears in the display.
- b. Water Inlet Test “i nLEt5”
- i. Press the 3 keypad. “hot l” 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 l”	Hot water 1
“hot 2”	Hot water 2
“hot 3”	Hot water 3
“cld l”	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 l.”).
- iv. Press the 3 keypad to turn off the desired inlet.
- v. Press the ① keypad. “i nLEt5” appears in the display.

(continued)



2. Test Sub-Menu “тЕ5т” (2 of 4)

c. Motor Test “Потор”

- Press the 3 keypad. “тА5т” appears in the display.
- 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
“тА5т”	Motor wash speed
“5Р т”	Motor spin speed
“тунт”	Autotune the inverter drive

Table 4

- Press the 3 keypad to select the desired option.
 - “тА5т”: The motor goes into wash speed and “т XX” or “л XX” appears on the display.
 - “5Р т”: 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.
 - “тунт”: The display shows “тАт т” and then “тЕ5ттт тт тунттор”. The display then flashes “тунт” as the inverter drive is autotuned.

NOTE: The “тунт” option will automatically turn off once the autotune is complete.
- Press the ① keypad to turn off the option.
- Press the ① keypad. “Потор” appears in the display.

d. Temperature Sensor Test and Calibration “тЕтт”.

- Press the 3 keypad. The measured temperature “XX°C” appears in the display. The machine is filled with water to the safety level.
- Press the 1 or 2 keypads to scroll through the Temperature Sensor Test and Calibration sub-menu’s options until the

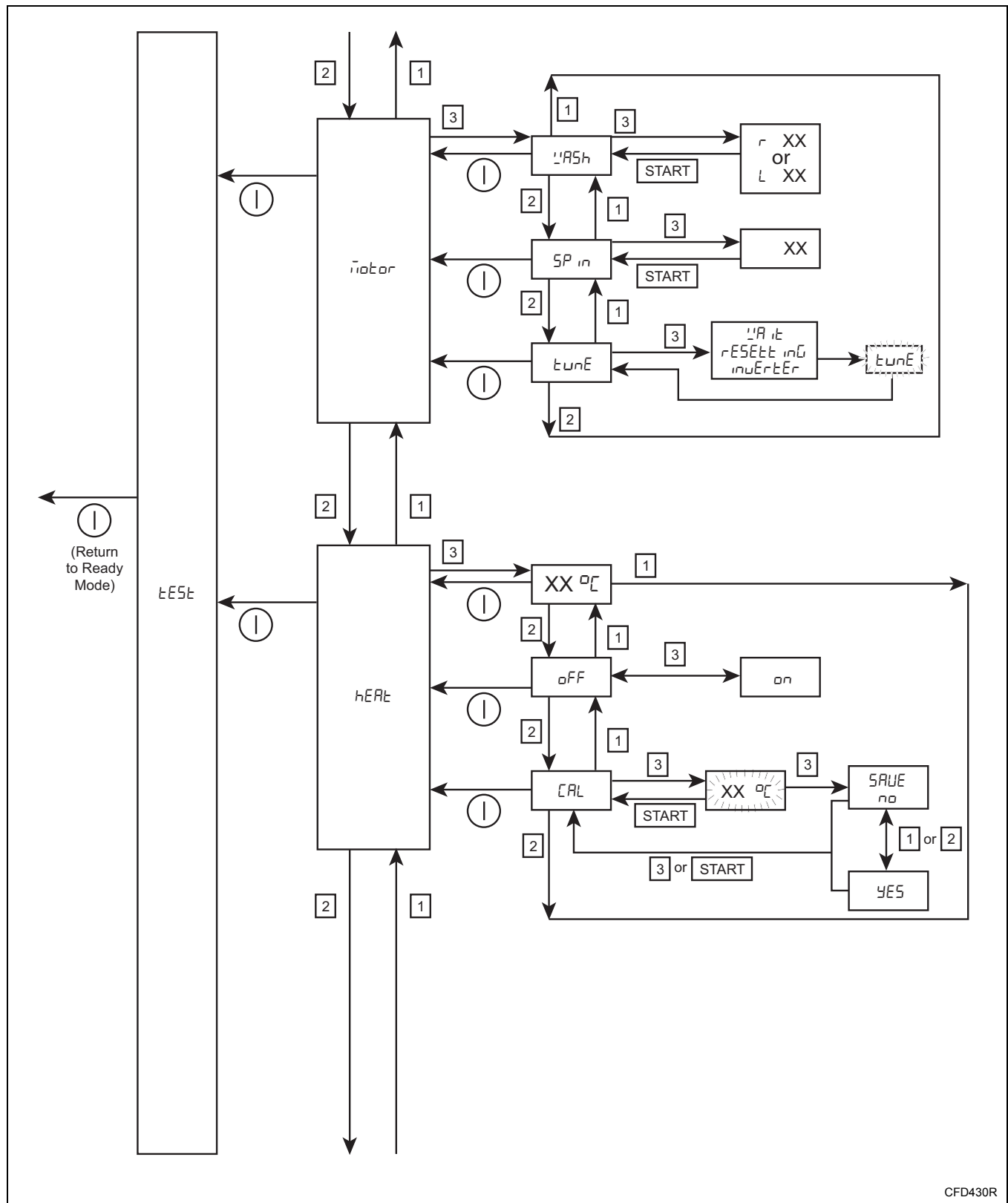
desired option is shown in the display.
Refer to *Table 5*.

Display	Description
“оFF” or “он”	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.
“тАт”	Calibrate the temperature sensor

Table 5

- Press the 3 keypad to select the desired option.
 - “оFF” or “он”: Turn the heating off or on. “оFF” is displayed when the heating is turned off and “он” 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.
 - “тАт”:
 - The measured temperature “XX°C” appears in the display and flashes.
 - Press the 1 or 2 keypads to increase or decrease the temperature displayed as needed.
- Press the 3 keypad. “5АUE тт” appears in the display.
- To save the temperature display change, press the 1 or 2 keypad. “5АUE тЕ5” appears in the display.
- Press the 3 keypad. “тАт” appears in the display.
- Press the ① keypad. “тЕтт” appears in the display.

Test Sub-Menu Flowchart (2 of 4)



2. Test Sub-Menu “EE5E” (3 of 4)

e. Drain Valve Test “drA1 n”

- i. Press the 3 keypad. “F1 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
“F1 LL X.X”	Fill the machine with water
“drA1 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.

- “F1 LL X.X”: Turn the machine’s water inlet valves on and off. “F1 LL X.X” is displayed when the inlet valves are turned off and “F1 LL X.X” is displayed when the inlet valves are turned on.
- “drA1 X.X”: Open and close the drain valve. “drA1 X.X” is displayed when the drain valve is closed and “drA1 . 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 2X.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.

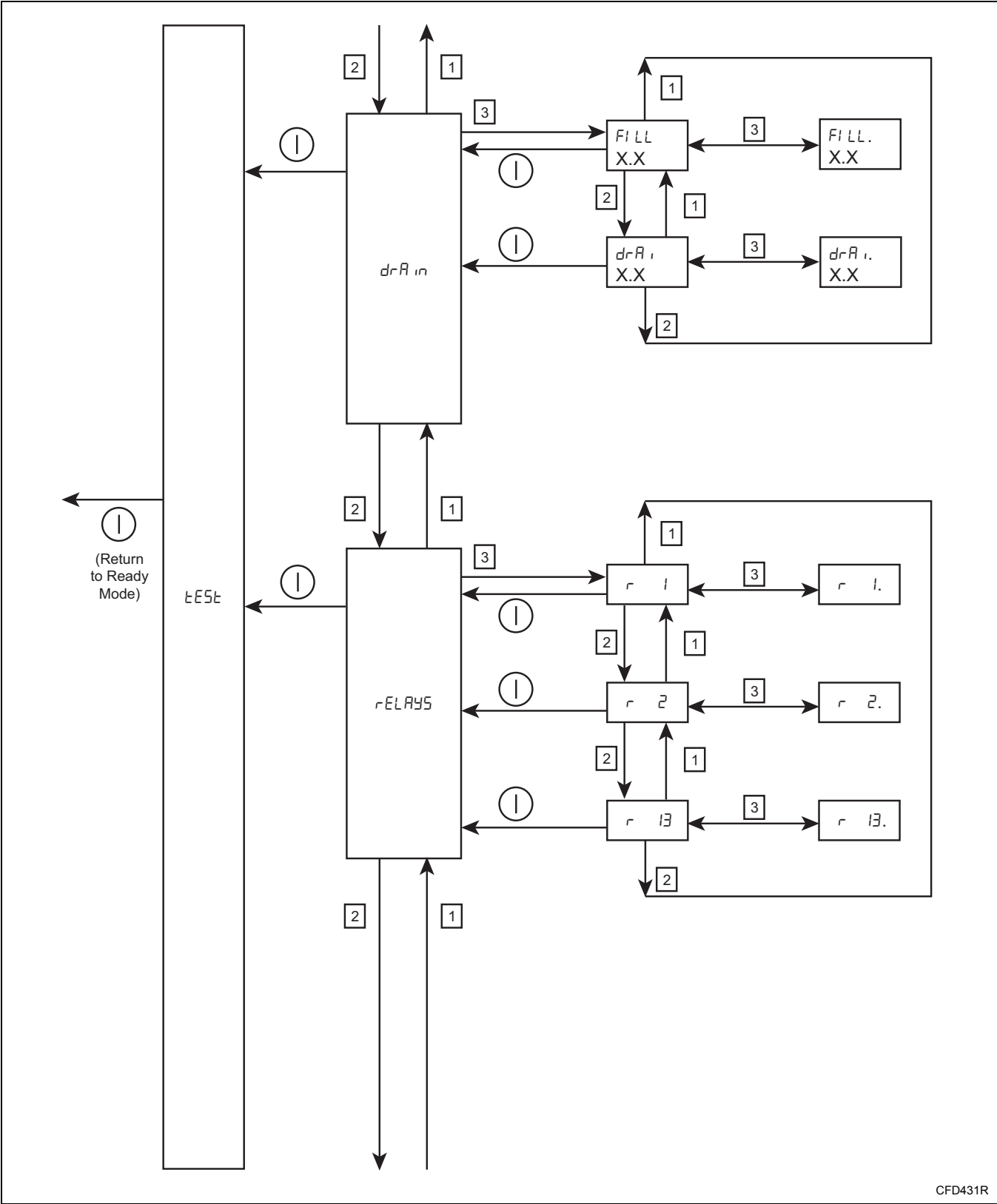
- v. Press the ① keypad. “drA1 n” appears in the display.

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 ① keypad. “rELAY5” appears in the display.
- vi. Only the number of relays that have been configured earlier is shown on the display .

(continued)

Test Sub-Menu Flowchart (3 of 4)



2. Test Sub-Menu “٤٤5٤” (4 of 4)

- g. Inputs Test “١ ١٥٤5”
- Press the 3 keypad. “٤٤٤٤” appears in the display.
 - Press the 1 or 2 keypads to scroll through the inputs until the desired input is shown in the display. Refer to *Table 7*.

Display	Description
“٤٤٤٤”	Door, lock, out-of-balance switch and rotation sensor NOTE: “٤” is displayed when the door is closed, “٤” is displayed when the door is locked, “٤” is displayed when an out-of-balance switch input signal is received and “٤” is displayed when a rotation sensor input signal is received. By pressing “enter” you can lock and unlock the door.
“١ ١ ١”	Input 1 NOTE: The display changes to “١ ١ ١.” when an input signal is received. Only applicable if relays have been configured.
“١ ١ ٢”	Input 2 NOTE: The display changes to “١ ١ ٢.” when an input signal is received.

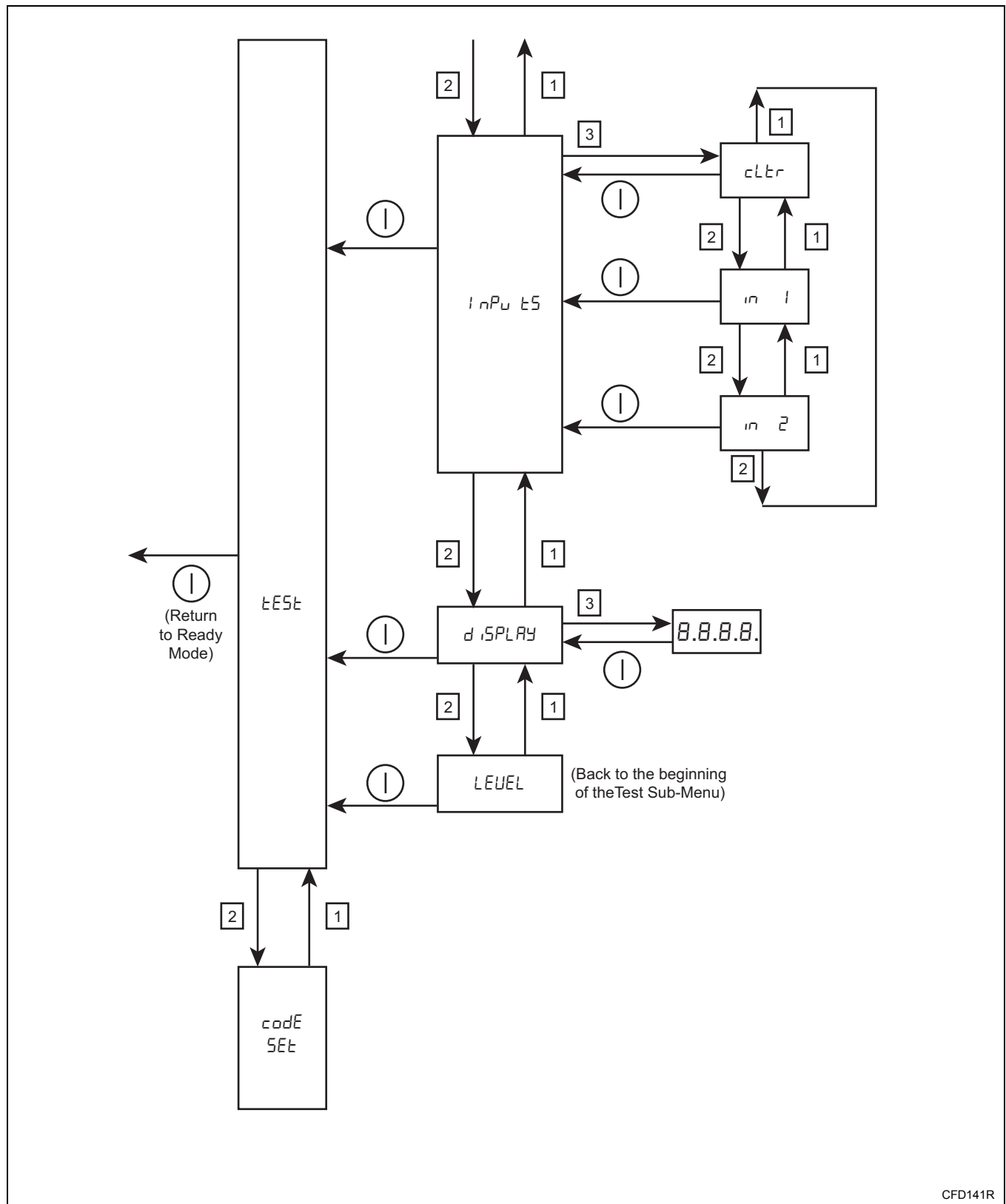
Table 7

- Press the ① keypad. “١ ١٥٤5” appears in the display.
- h. Display Test “د١ 5٥٤٤”
- Press the 3 keypad. All of the display’s LEDs turn on.
 - Press the ① keypad. “د١ 5٥٤٤” is displayed.

How to Exit the Test Sub-Menu

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

Test Sub-Menu Flowchart (4 of 4)



CFD141R

3. Entry Code Set Sub-Menu “codE 5Et”

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

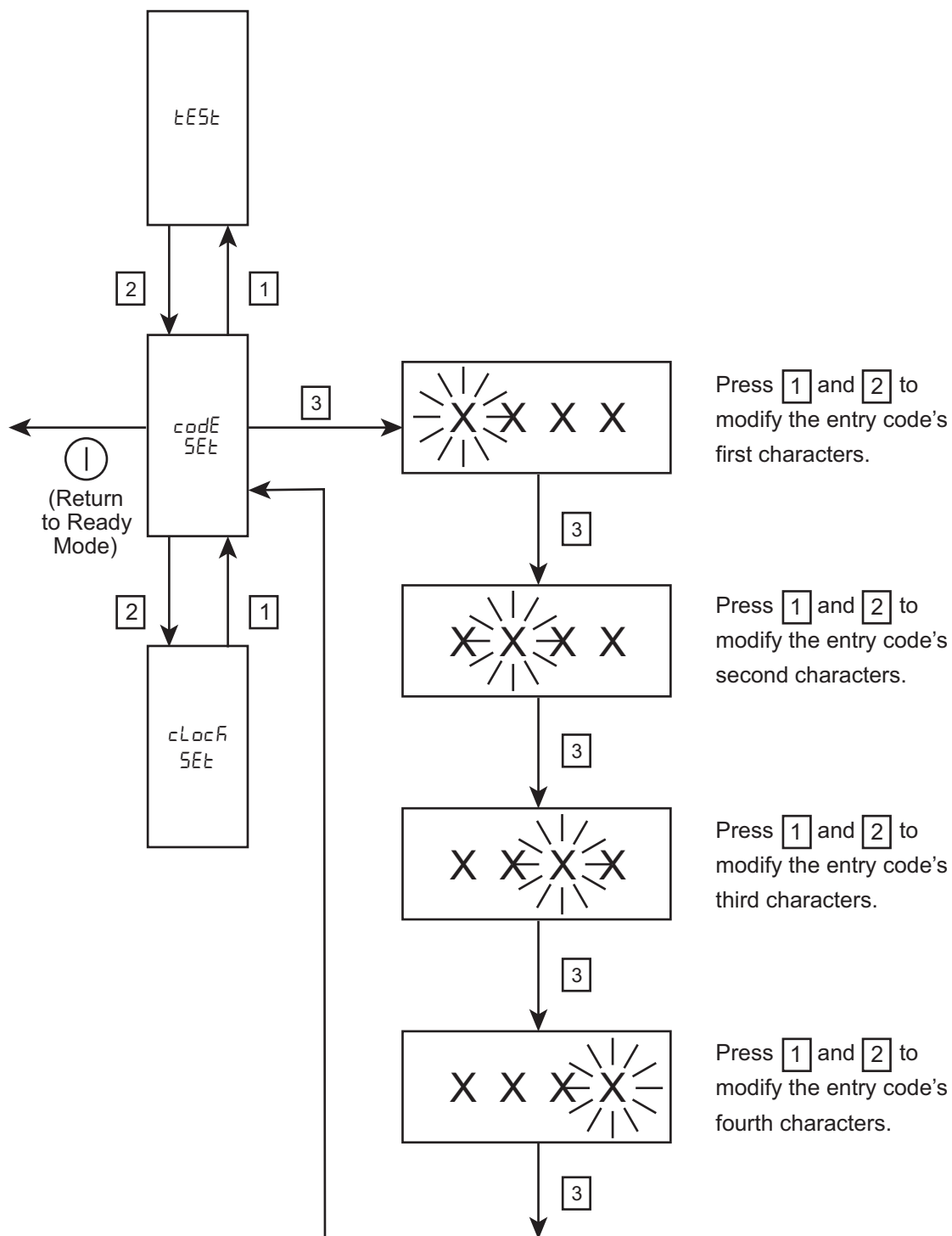
How to Access the Entry Code Set Sub-Menu

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 ① keypad until the control returns to the Ready Mode.

Entry Code Set Sub-Menu Flowchart



CFD432R

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

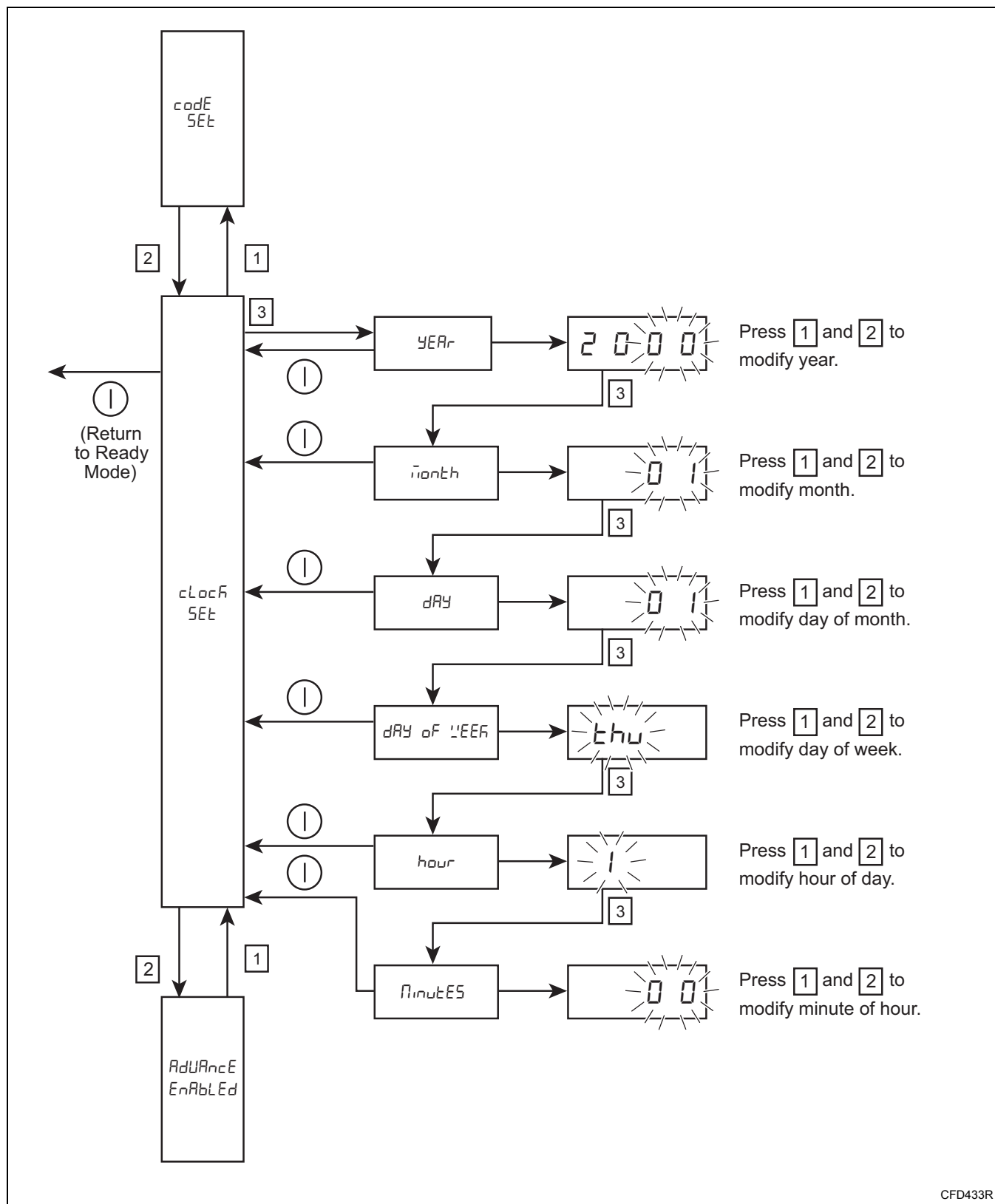
Table 8

5. Press the 1 or 2 keypads to edit the option as needed.
6. Press the 3 keypad. “cLoCk SEt” appears in the display.

How to Exit the Clock Set Sub-Menu

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

Clock Set Sub-Menu Flowchart



CFD433R

5. Network Address Sub-Menu “nEt AddrE55”

Enter a Network Address.

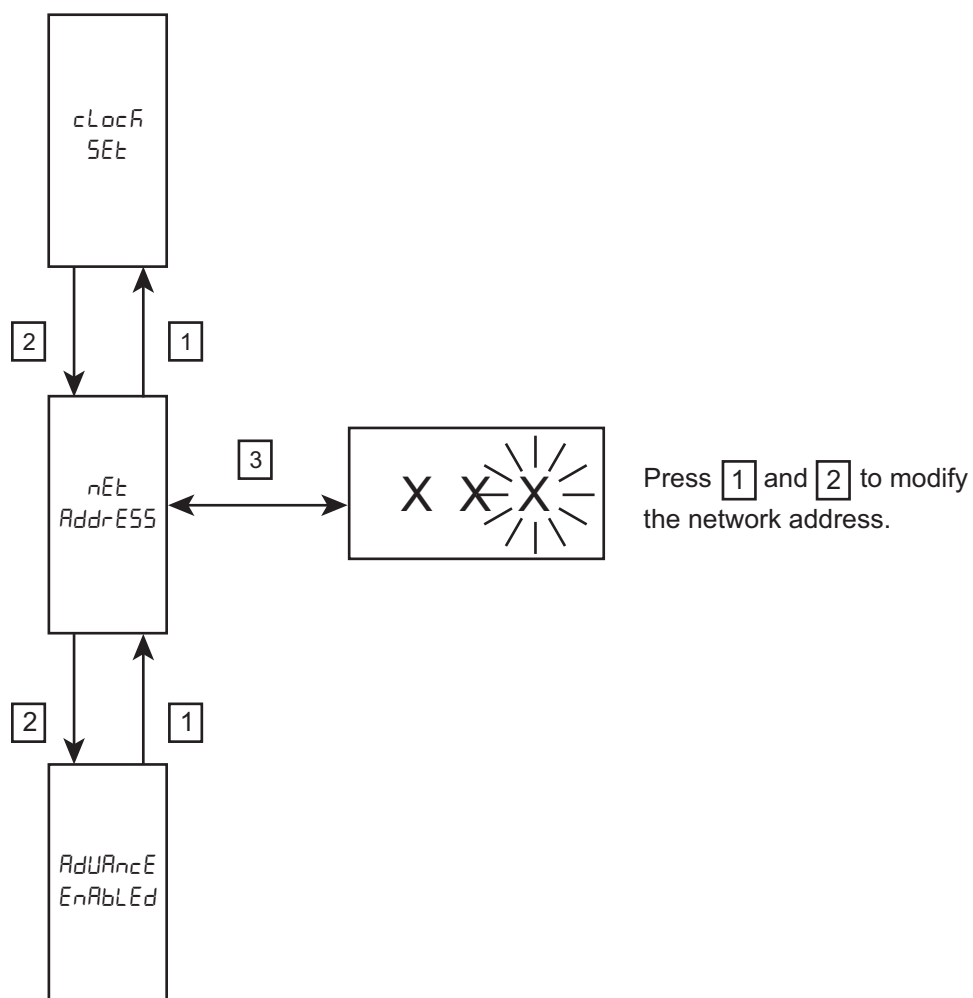
How to access the Network Address Sub-Menu

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.

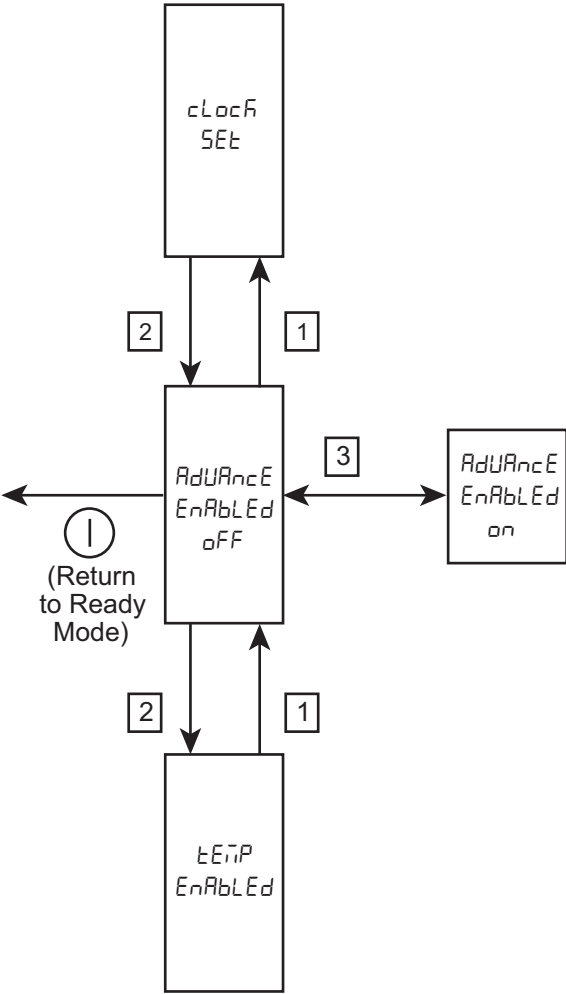
How to Access the Rapid Advance Enable Sub-Menu

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 ① keypad until the control returns to the Ready Mode.

Rapid Advance Enable Sub-Menu
Flowchart



CFD434R

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

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.

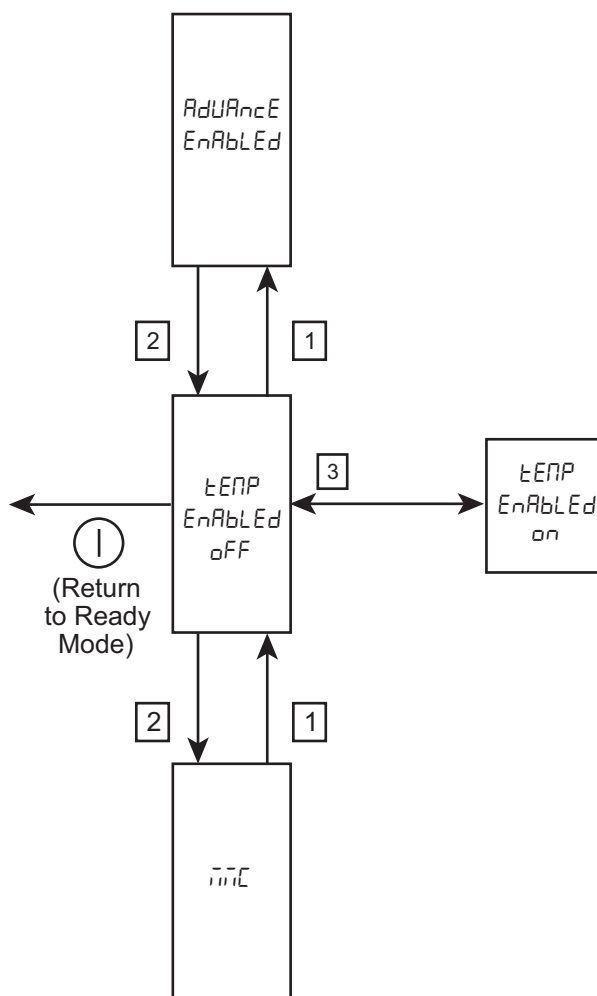
How to Access the Temperature Indication Enable Sub-Menu

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 ENAbLED OFF” or “TEMP ENAbLED ON” appears in the display.
3. Press the 3 keypad to turn the temperature indication option on or off.
“TEMP ENAbLED OFF” appears in the display when the temperature indication option is off and “TEMP ENAbLED ON” appears in the display when the temperature indication option is on.

How to Exit the Temperature Indication Enable Sub-Menu

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

Temperature Indication Enable Sub-Menu Flowchart



CFD435R

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. “U, E, F, L, E, S” 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 “U, E, F, L, E, S”
 - 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 F, L, E, S” appears in the display.

- ii. Press the 1 or 2 keypads to scroll through the wash program files.
- iii. Press the ① keypad. “U, E, F, L, E, S” appears in the display.

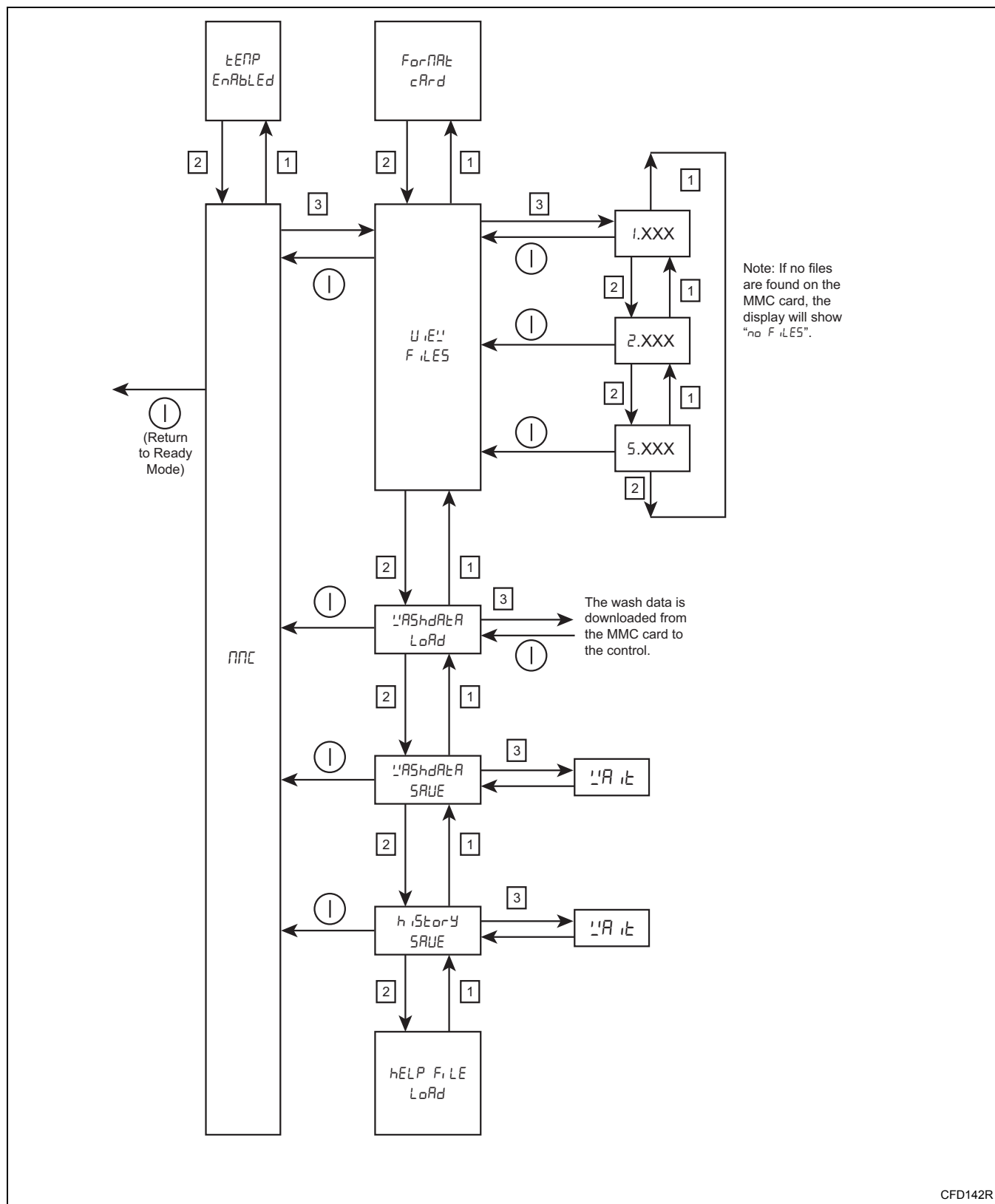
- b. Load Wash Data “L, A, S, H, D, A, T, A, L, O, A, D”
 - i. Press the 3 keypad. The wash data file (“1.XXX”) appears in the display. The first wash data file on the MMC card that is appropriate for the machine’s ID chip and machine type is downloaded to the machine. After the file is downloaded, the 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 this machine can be downloaded to the machine.

- c. Save Wash Data “L, A, S, H, D, A, T, A, S, A, V, E”
 - i. Press the 3 keypad. “L, A, T” appears in the display and the machine’s wash data is saved to the MMC card. Once the save is complete, “L, A, S, H, D, A, T, A, S, A, V, E” appears in the display.
- d. Save History “H, I, S, T, O, R, Y, S, A, V, E”
 - i. Press the 3 keypad. “L, A, T” appears in the display and the machine’s history is saved to the MMC card. Once the save is complete, “H, I, S, T, O, R, Y, S, A, V, E” appears in the display.

(continued)

MMC Sub-Menu Flowchart (1 of 3)



8. MMC Sub-Menu “MMC” (2 of 3)

e. Load Help File “HELP, LE 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.

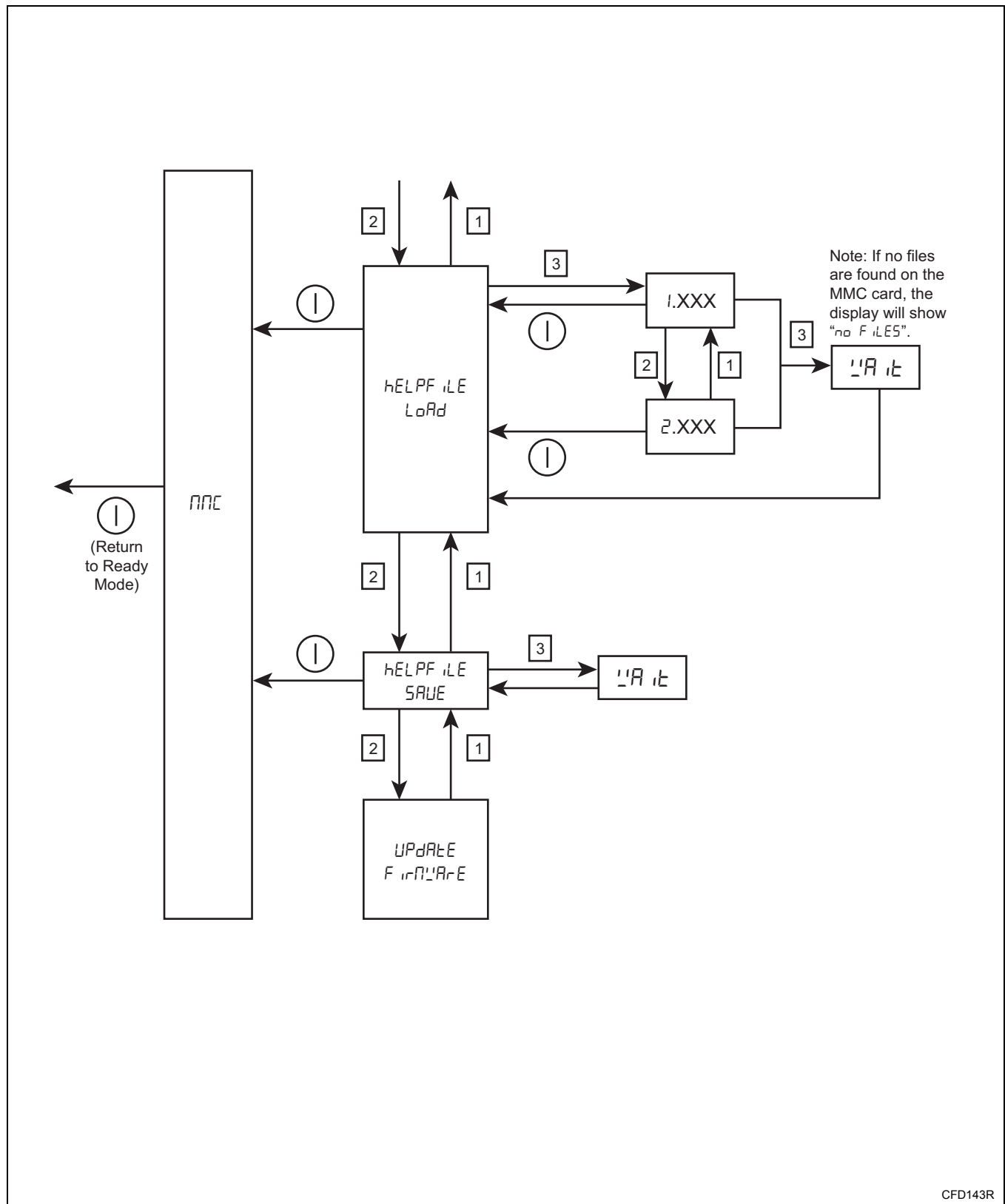
- ii. Press the 1 or 2 keypads to scroll through the help files.
- iii. When the desired help file appears in the display, press the 3 keypad. “1A, E” appears in the display and the help file is downloaded to the machine. After the file is downloaded, the machine is rebooted.
- iv. Press the ① keypad. “HELP, LE Load” appears in the display.

f. Save Help File “HELP, LE SAVE”

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

(continued)

MMC Sub-Menu Flowchart (2 of 3)



8. MMC Sub-Menu “MMC” (3 of 3)

g. 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. “EXIT” 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 ① keypad to cancel the firmware download.

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



9. Service Counters Sub-Menu “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.

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 cOUNTErS” appears in the display.
3. Press the 3 keypad. “hourS OFF” or “hourS 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	
“hourS OFF” or “hourS 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
“cYcLES OFF” or “cYcLES 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

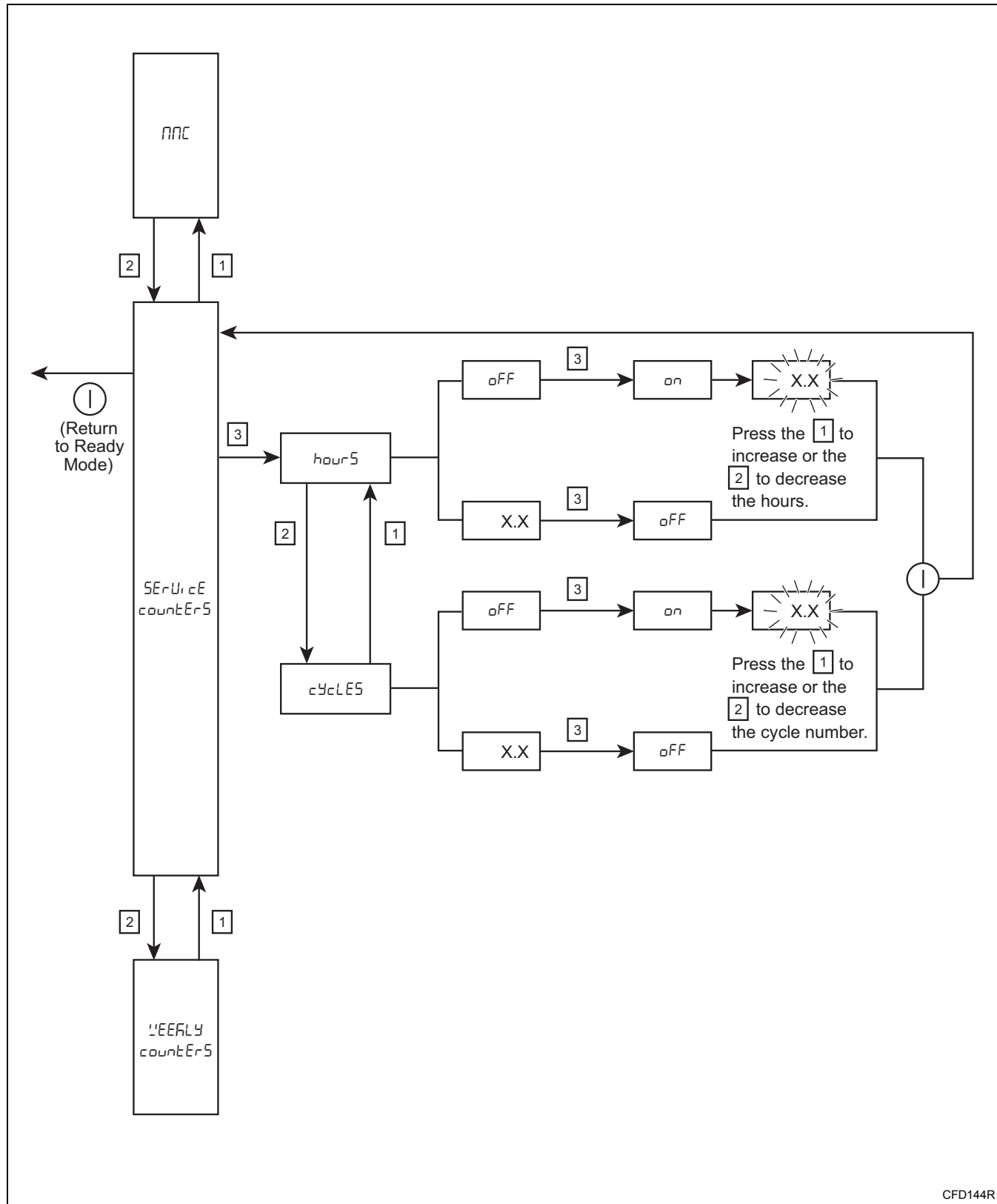
Table 9

5. Press the 3 keypad.
 - If “hourS OFF” or “cYcLES 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 “hourS X.X” or “cYcLES X.X” was displayed, “OFF” appears in the display.

How to Exit the Service Counters Sub-Menu

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

Service Counters Sub-Menu Flowchart



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10. Weekly Cycle Count Sub-Menu “WEEKLY COUNTS”

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

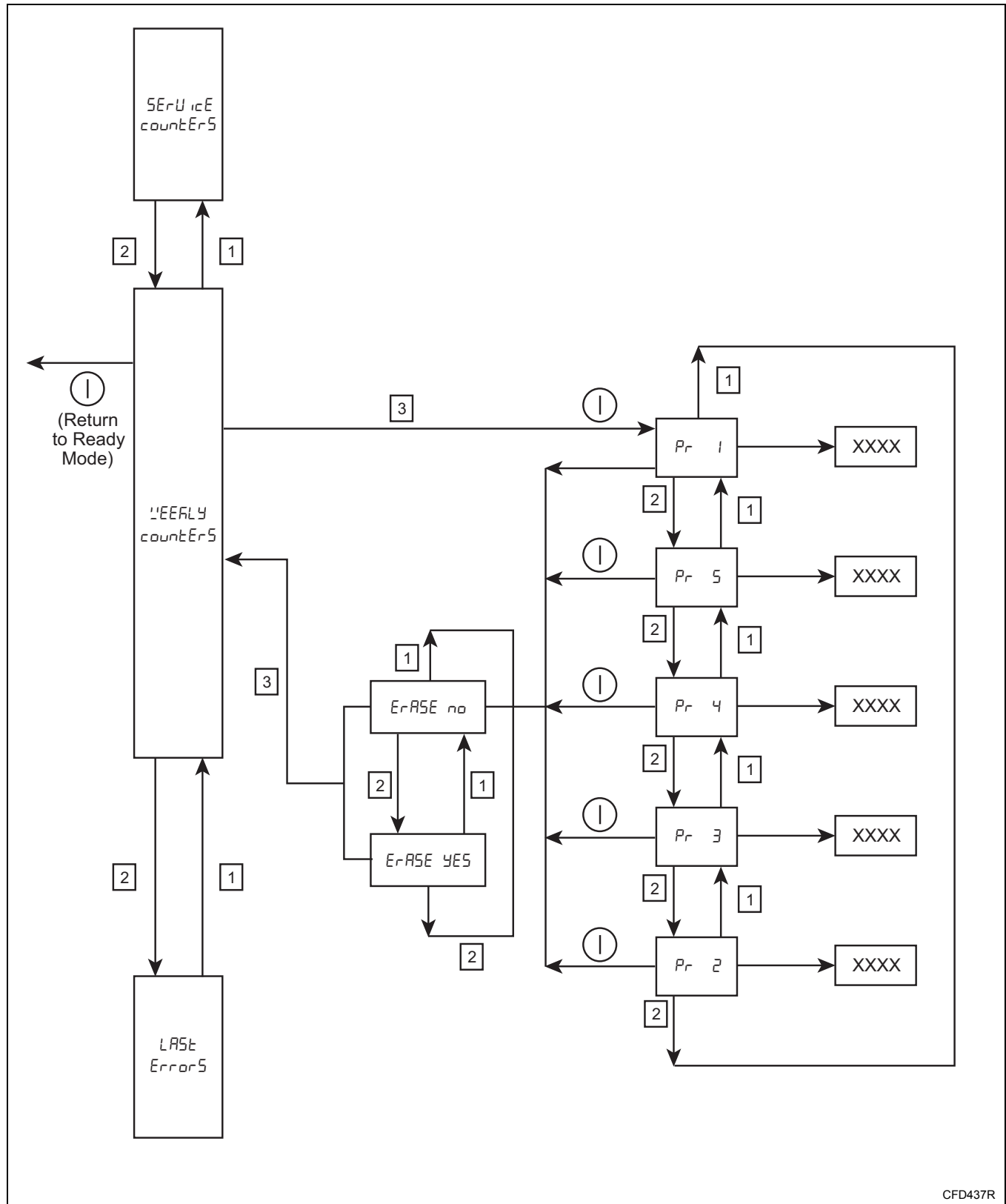
How to Access the Weekly Cycle Count Sub-Menu

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 COUNTS” appears in the display.
3. Press the 3 keypad. Cycle 1 and the number of times Cycle 1 has been run (“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 ① keypad. “ERASE NO” 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 COUNTS” appears in the display.

How to Exit the Information Sub-Menu

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

Weekly Cycle Count Sub-Menu Flowchart



11. 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.

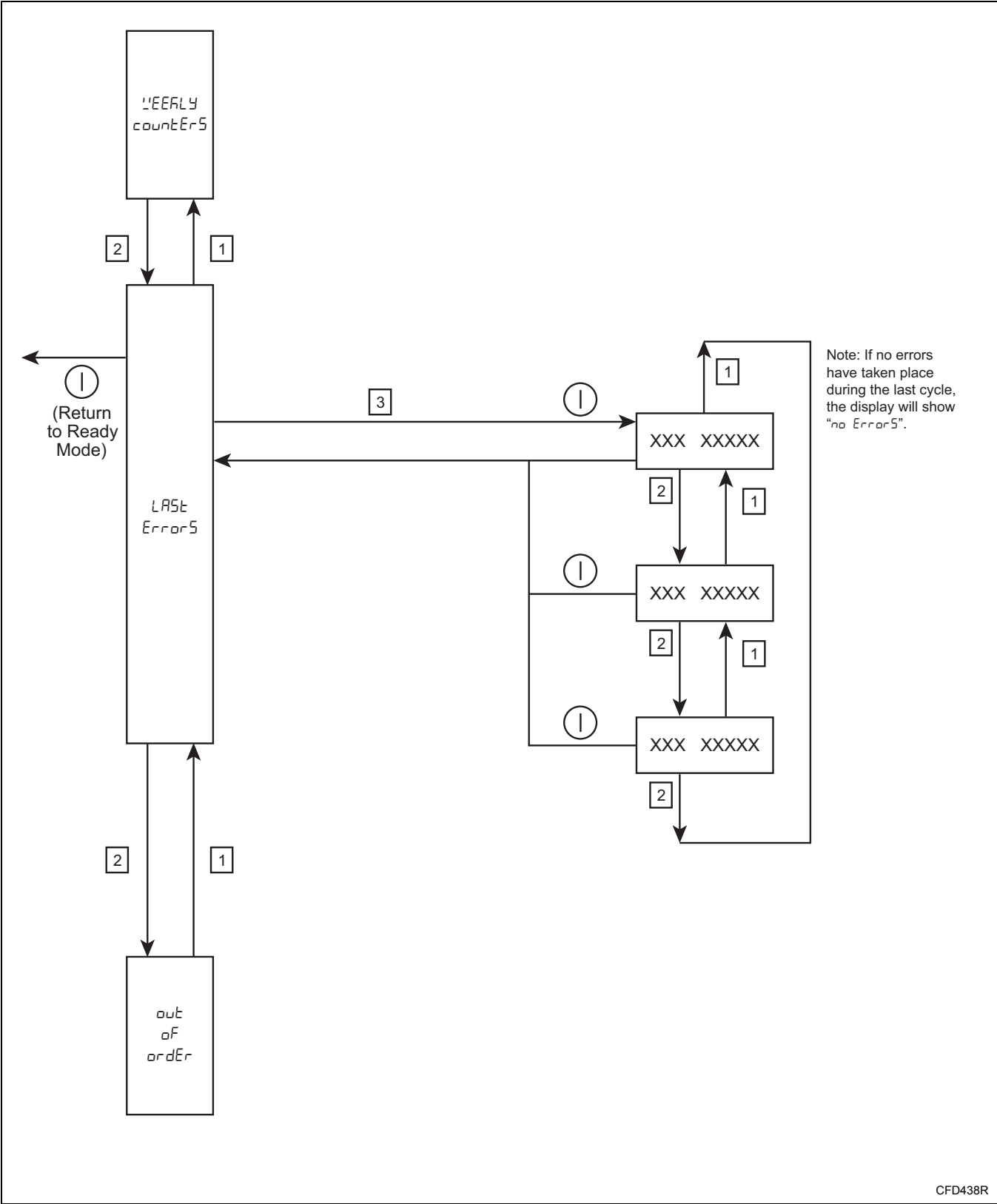
NOTE: If no errors have taken place during the last cycle that was run on the machine, "no Error5" appears in the display.

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 ① keypad until the control returns to the Ready Mode.

Last Errors Sub-Menu Flowchart



12. 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.

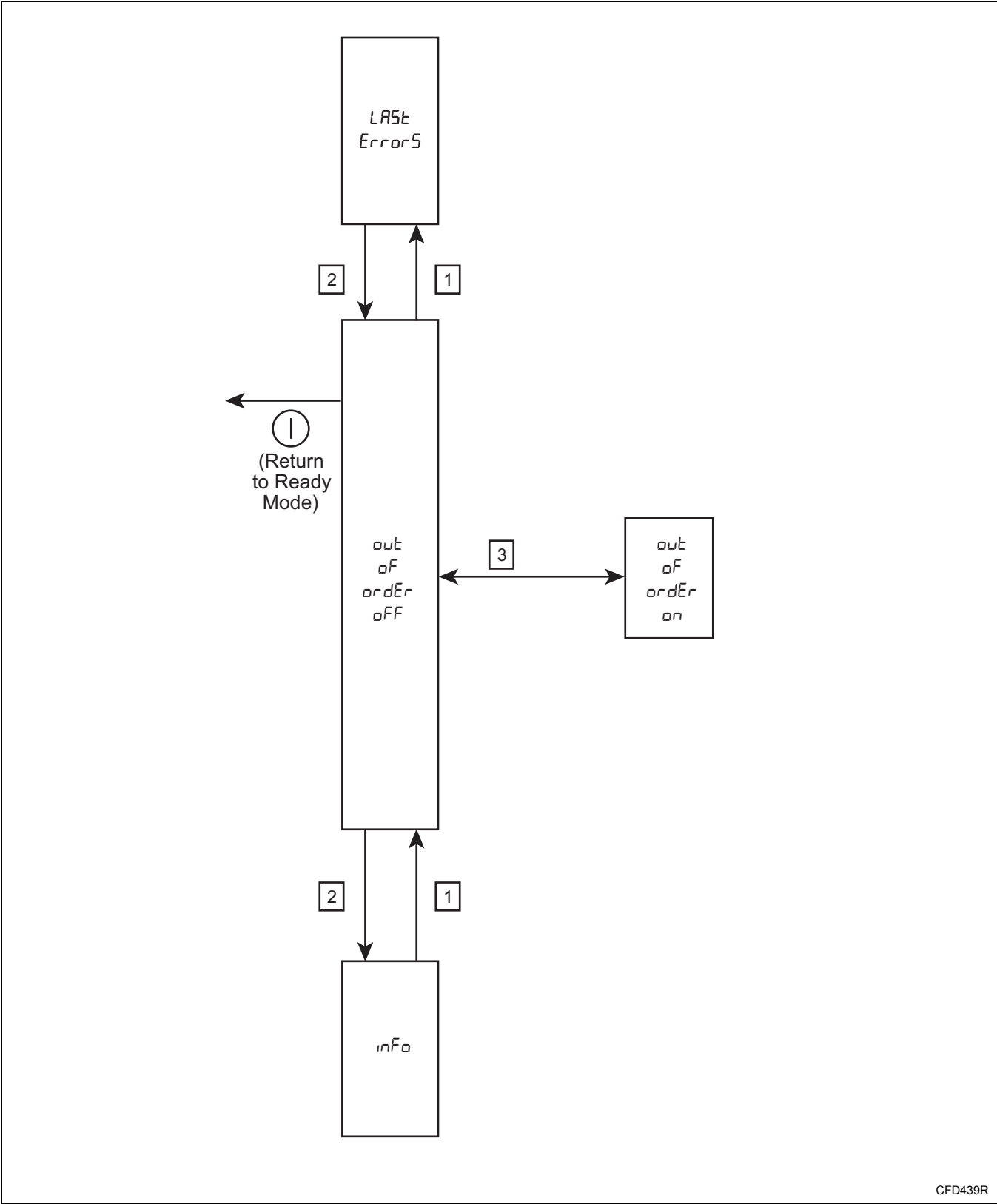
How to Access the Out of Order Sub-Menu

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 ① keypad until the control returns to the Ready Mode.

Out of Order Sub-Menu Flowchart



CFD439R

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 updated 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 size (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.

(continued)

(continued)

Error Message	Possible Cause/Correction
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.
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 107: SOAP ACTIVATION	Supplies activated.
EVENT 108: SMART WAVE RESULT	SMART WAVE routine ended.
EVENT 109: WEIGHT ENTERED	Operator has entered load's weight.
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 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 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 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 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/DATASET	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 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 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* (“AdVAnCE EnAbLEd”) in the 6. *Rapid Advance Enable Sub-Menu* “AdVAnCE 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.

