Washer-Extractor

Cygnus Premium Coin
Refer to Page 4 for Model Numbers

1	40° ▸ 90°
2	30° ▸ 90°
3	30° ▸ 60°
4	60°
5	40° ▸ 40°
6	40°
7	30° ▸ 30°
8	30°
9	...° ▸ ⟳
10	⟳

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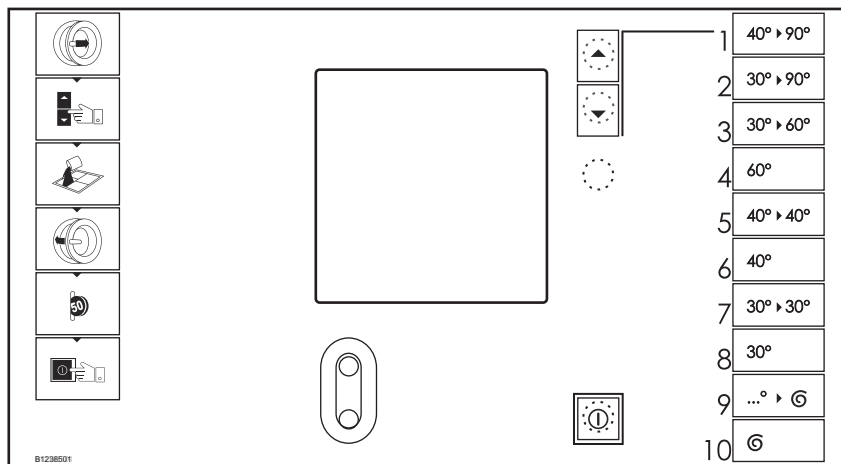
Keep These Instructions for Future Reference.
(If this machine changes ownership, this manual must accompany machine.)

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Laundry Systems

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

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

Table of Contents

Model Identification

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

HD100_CYGNUS-PREM	IHN185Y	IXN075Y	WD400_CYGNUS-PREM
HD135_CYGNUS-PREM	IHN235Y	IXN100Y	WD65_CYGNUS-PREM
HD165_CYGNUS-PREM	IHN305Y	IXN135Y	WD75_CYGNUS-PREM
HD235_CYGNUS-PREM	IHN400Y	IXN165Y	
HD305_CYGNUS-PREM	IHU065Y	IXN235Y	JHW065Y
HD60_CYGNUS-PREM	IHU075Y	IXN305Y	JHW075Y
HD65_CYGNUS-PREM	IHU100Y	IXU060Y	JHW100Y
HD75_CYGNUS-PREM	IHU135Y	IXU065Y	JHW135Y
HF455_CYGNUS-PREM_OPL	IHU150Y	IXU075Y	JHW150Y
HF575_CYGNUS-PREM_OPL	IHU165Y	IXU100Y	JHW165Y
HF730_CYGNUS-PREM_OPL	IHU185Y	IXU135Y	JHW185Y
HF900_CYGNUS-PREM_OPL	IHU235Y	IXU165Y	JHW235Y
IHF455	IHU305Y	IXU235Y	JHW305Y
IHF575	IHU400Y	IXU305Y	JHW400Y
IHF730	IHW065Y	IXW060Y	JXW060Y
IHF900	IHW075Y	IXW065Y	JXW065Y
IHG065Y	IHW100Y	IXW075Y	JXW075Y
IHG075Y	IHW135Y	IXW100Y	JXW100Y
IHG100Y	IHW150Y	IXW135Y	JXW135Y
IHG135Y	IHW165Y	IXW165Y	JXW165Y
IHG150Y	IHW185Y	IXW235Y	JXW235Y
IHG165Y	IHW235Y	IXW305Y	JXW305Y
IHG185Y	IHW305Y	IXZ060Y	PHU065Y
IHG235Y	IHW400Y	IXZ065Y	PHU075Y
IHG305Y	IHZ065Y	IXZ075Y	PHU100Y
IHG400Y	IHZ075Y	IXZ100Y	PHU135Y
IHN065Y	IHZ100Y	IXZ135Y	PHU150Y
IHN075Y	IHZ135Y	IXZ165Y	PHU165Y
IHN100Y	IHZ150Y	IXZ235Y	PHU185Y
IHN135Y	IHZ165Y	IXZ305Y	PHU235Y
IHN150Y	IHZ185Y	WD100_CYGNUS-PREM	PHU305Y
IHN165Y	IHZ235Y	WD135_CYGNUS-PREM	PHU400Y
	IHZ305Y	WD150_CYGNUS-PREM	PXU060Y
	IHZ400Y	WD165_CYGNUS-PREM	PXU065Y
	IXG060Y	WD185_CYGNUS-PREM	PXU075Y
	IXG065Y	WD235_CYGNUS-PREM	PXU100Y
	IXG075Y	WD305_CYGNUS-PREM	PXU135Y
	IXG100Y		PXU165Y
	IXG135Y		PXU235Y
	IXG165Y		PXU305Y
	IXG235Y		
	IXG305Y		
	IXN060Y		
	IXN065Y		

Preliminary Information

About the Control

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

The control allows the operator 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.

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 shorter 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.

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

Up and Down Keypads

(Refer to *Figure 1*)

The cycle number is shown in the display. Press the up and down keypads to change the cycle number. Press the start keypad to start the cycle.

The up and down 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.

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1	Cycle Number, Cycle Timer, Water Temperature, Cycle Status and Machine Information Display Cycle Time Display	2	Enter keypad (hidden keypad)
		3	Up and Down keypads
		4	Start/Stop keypad
		5	Optical Download Window

Figure 1

D1352 (EN)
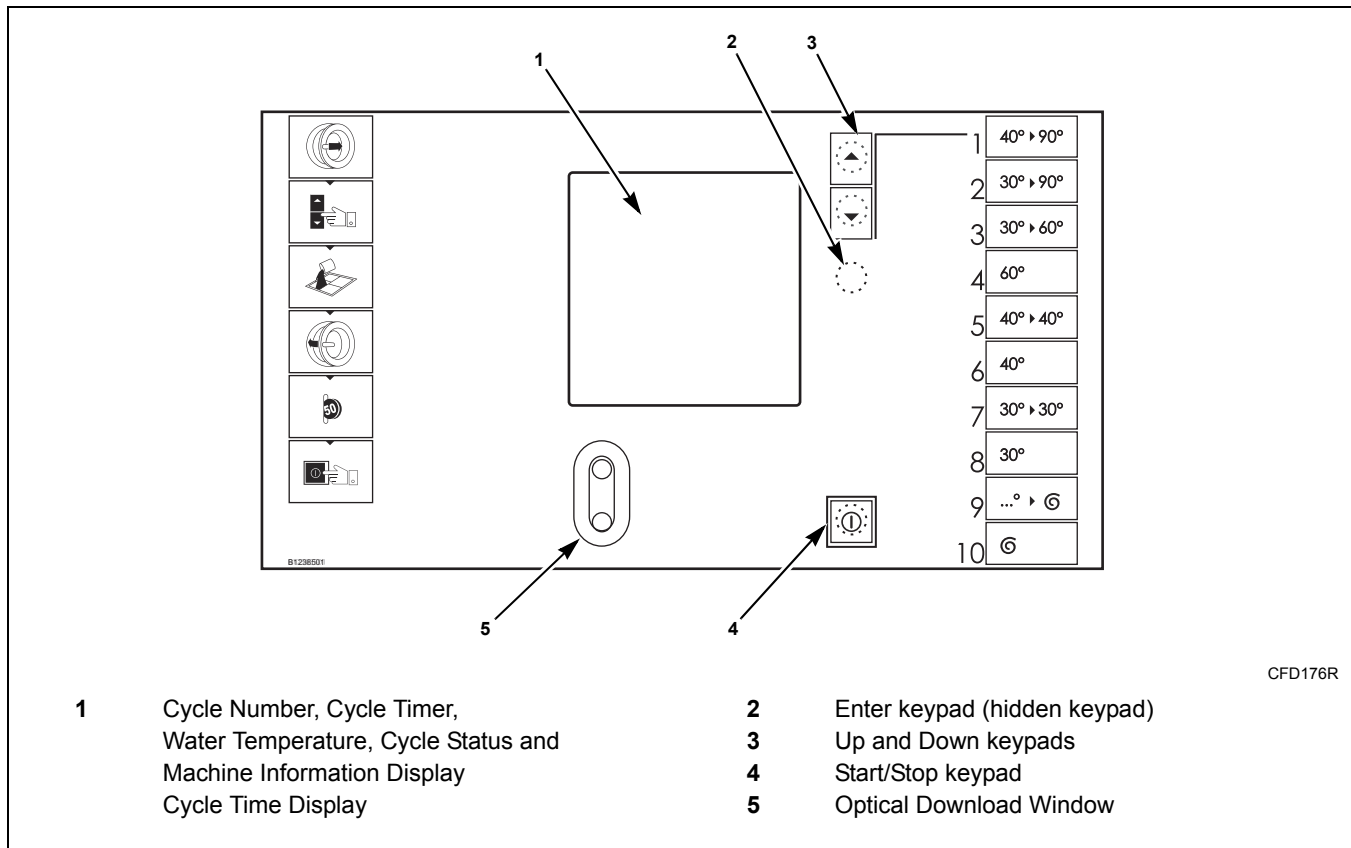
Display Identification
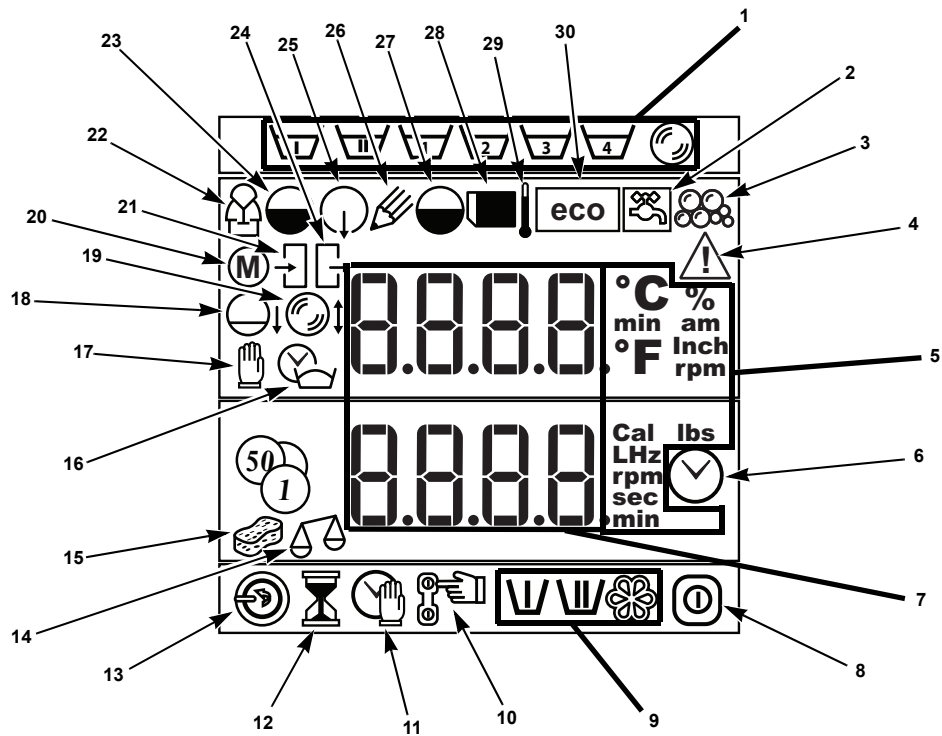
CFD65R

1	Cycle Segments	**16**	Soak
2	Water Inlet	**17**	Hold
3	Supplies	**18**	Reduced Wash Agitation
4	Error Message	**19**	Modified Spin Speed
5	Units of Measure	**20**	Motor
6	Time	**21**	Inputs
7	7-Segment Display	**22**	Test Program
8	Start/Stop	**23**	Wash
9	Supplies	**24**	Outputs
10	Operator Action Required	**25**	Drain
11	Delayed Start	**26**	Edit
12	Wait	**27**	Water Level
13	Close Door/Open Door	**28**	MMC Card
14	Load-Dependent Wash (Weight)	**29**	Water Temperature
15	Load-Dependent Wash (SMART WAVE)	**30**	ECO Wash

Figure 2

Special Features

Programming Control

The control allows the washer-extractor's operator to program the control with the use of the keypad.

For details on programming select cycle options, refer to *The Non-Active Menu* section.

Viewing Control Information

The control will store information in its memory that can be retrieved by pressing various combinations of keypads. The control will record 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 Valve Test
- Relay Test
- Door, Door Lock and Out-Of-Balance Switch Test
- Coin Inputs
- 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 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 ⓘ keypad with the door closed and locked, the cycle will begin.

Run Mode

Upon the start of a cycle, the control's display alternates between the cycle number and the water temperature. The display also shows the remaining cycle time, cycle status and machine information.

Stop Mode

The control enters this mode if the operator ends the cycle before it is completed by pressing the ⓘ 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 ▲ keypad.

2. While continuing to press the ▲ keypad, press and release the ▼ keypad.

3. Continue to hold the ▲ 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 ○ keypad. The display shows " ɪnƑo", which is the abbreviation for the Info Menu, the first option within the Non-Active Menu.
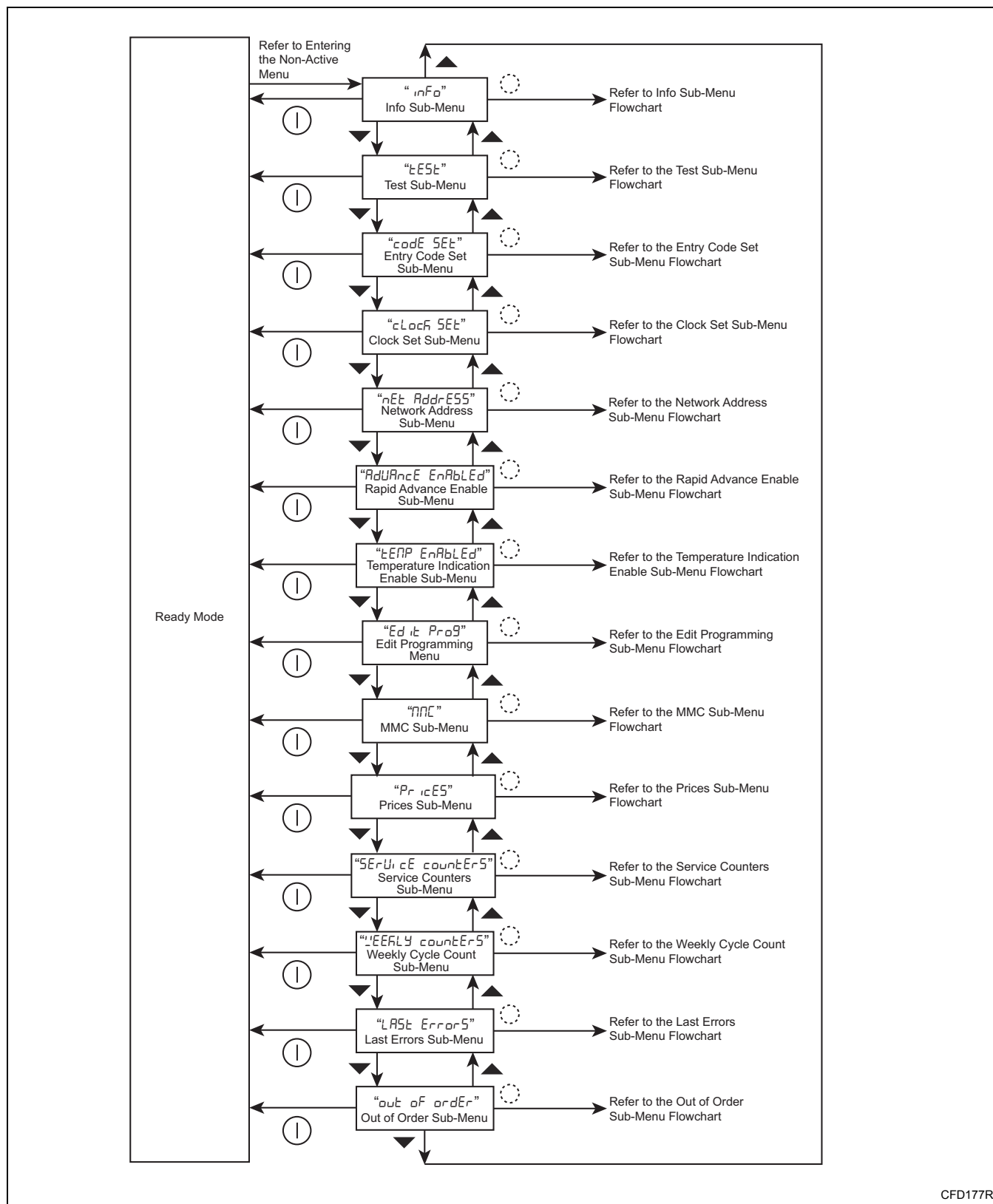
Non-Active Menu Navigation

1. Enter the Non-Active Menu (refer to the *Entering the Non-Active Menu* section).

2. Press the ▲ or ▼ keypads to scroll through the Non-Active Menu options (Refer to *Table 1*).

3. Press the ○ keypad to enter a Non-Active Menu option.

4. Press the ① 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.	"*coinS 1 XX*"	Total number of coins inserted into coin 1.
b.	"*coinS 2 XX*"	Total number of coins inserted into coin 2.
c.	"*cYcLES XX*"	Total number of cycles performed
d.	"*hourS XX*"	Total hours of operation
e.	"*SEriAL nr XXX*"	Machine's serial number
f.	"*dOI XX-XX-XXXX*"	Machine's installation date
g.	"*PArAm LiSt XXXX*"	Machine's parameter list
2	"*tESt*"	The Test Sub-Menu allows the operator to test some of the machine's components.
a.	"*LEUEL*"	Water level test
b.	"*inLEtS*"	Water inlet test
c.	"*Notor*"	Motor test
d.	"*hEAt*"	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	"*AdUAncE 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	"*Edit Prog*"	The Edit Programming Sub-Menu allows the operator to modify the machine's programmed cycles.
9	"*NNC*"	The MMC Sub-Menu allows the operator to manage data on the MMC card.
10	"*PricES*"	The Prices Sub-Menu allows the operator to modify each cycle's vend price.
11	"*SErUicE 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.
12	"*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.
13	"*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.
14	"*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

Refer to Entering the Non-Active Menu

"inFo"
Info Sub-Menu → Refer to Info Sub-Menu Flowchart

"tESt"
Test Sub-Menu → Refer to the Test Sub-Menu Flowchart

"codE SEt"
Entry Code Set Sub-Menu → Refer to the Entry Code Set Sub-Menu Flowchart

"cLoch SEt"
Clock Set Sub-Menu → Refer to the Clock Set Sub-Menu Flowchart

"nEt AddrESS"
Network Address Sub-Menu → Refer to the Network Address Sub-Menu Flowchart

"AdUAncE EnAbLEd"
Rapid Advance Enable Sub-Menu → Refer to the Rapid Advance Enable Sub-Menu Flowchart

"tEMP EnAbLEd"
Temperature Indication Enable Sub-Menu → Refer to the Temperature Indication Enable Sub-Menu Flowchart

"Edit Pro9"
Edit Programming Menu → Refer to the Edit Programming Sub-Menu Flowchart

"MMC"
MMC Sub-Menu → Refer to the MMC Sub-Menu Flowchart

"PricES"
Prices Sub-Menu → Refer to the Prices Sub-Menu Flowchart

"SErUicE countErS"
Service Counters Sub-Menu → Refer to the Service Counters Sub-Menu Flowchart

"WEEHLY countErS"
Weekly Cycle Count Sub-Menu → Refer to the Weekly Cycle Count Sub-Menu Flowchart

"LASt ErrorS"
Last Errors Sub-Menu → Refer to the Last Errors Sub-Menu Flowchart

"out oF ordEr"
Out of Order Sub-Menu → Refer to the Out of Order Sub-Menu Flowchart

Ready Mode

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1.   Information Sub-Menu "ınFo"

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 ▲ or ▼ keypads to scroll through the Non-Active Menu's sub-menus until "ınFo" appears in the display.

3. Press the ◌ keypad. "coın5 1" appears in the display.

4. Press the ▲ or ▼ keypads until the desired option appears in the display. Refer to *Table 2*.

Option Display	Description
"coın5 1"	Total number of coins inserted into coin 1
"coın5 2"	Total number of coins inserted into coin 2
"cYcLE5 XX"	Total number of cycles performed
"hour5 XX"	Total hours of operation
"5Erı AL nr XX"	Machine's serial number
"doı XX-XX-XXXX"	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).**
"PArAn Lı5t"	Machine's parameter list

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

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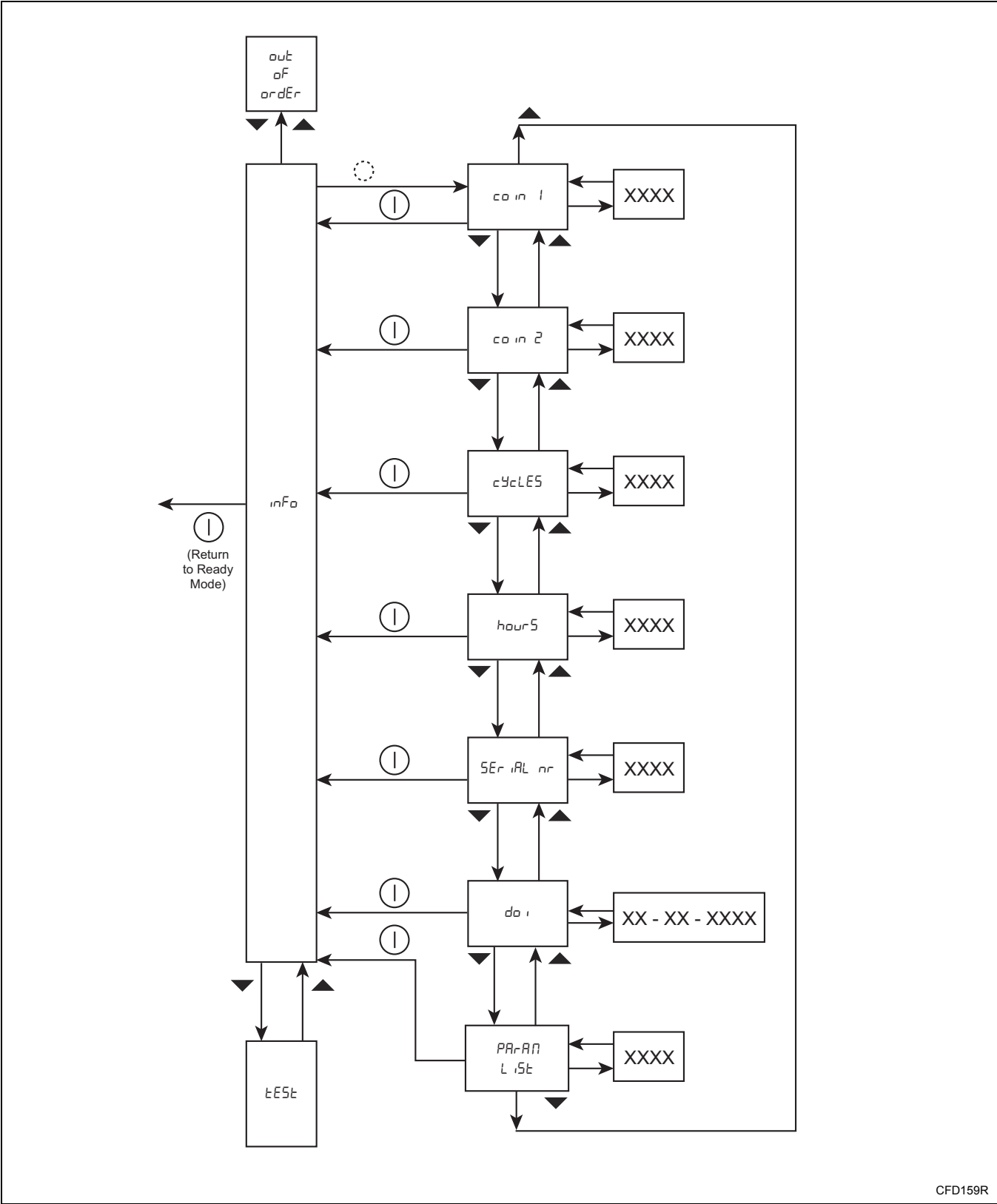
2. Test Sub-Menu "ᴛESᴛ" (1 of 4)

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 ▲ or ▼ keypads to scroll through the Non-Active Menu's sub-menus until "ᴛESᴛ" appears in the display.

3. Press the ◌ keypad. "LEUEL" appears in the display.

4. Press the ▲ or ▼ keypads to scroll through the Test Sub-Menu's options.

5. Press the ◌ 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 ◌ keypad. "XX.X", which is the measured water level, appears in the display and flashes.

ii. Press the ◌ 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 ◌ 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 ▼ keypad to turn off the water and the ▲ keypad to turn on the water as needed.

vi. Press the ◌ 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 ▲ or ▼ keypads to change the number shown in the display until it matches the number that was recorded earlier.
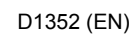
viii. Press the ◌ keypad. "XX.X", which is the measured water level, is shown in the display.

ix. Press the ① keypad. "LEUEL" appears in the display.

b. Water Inlet Test "ᵢnLEᴛS"

i. Press the ◌ keypad. "hoᴛ 1 oFF" appears in the display.

ii. Press the ▲ or ▼ keypads to scroll through the inlets until the desired inlet is shown in the display. Refer to *Table 3*.

Display	Description
"hoᴛ 1 oFF"	Hot water 1
"hoᴛ 2 oFF"	Hot water 2
"hoᴛ 3 oFF"	Hot water 3
"cLd 1 oFF"	Cold water 1
"cLd 2 oFF"	Cold water 2
"cLd 3 oFF"	Cold water 3
"drcᴛ"	Direct

Table 3

iii. Press the ◌ keypad to turn on the desired inlet. The display shows on next to the inlet number (e.g., "hoᴛ 1 on.").

iv. Press the ◌ keypad to turn off the desired inlet.

v. Press the START keypad. "ᵢnLEᴛS" appears in the display.

(continued)

Test Sub-Menu Flowchart (1 of 4)

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2. Test Sub-Menu "ŁE5Ł" (2 of 4)

c. Motor Test "ɳoŁor"

i. Press the ○ keypad. "Ɱ'A5h" appears in the display.

ii. Press the ▲ or ▼ 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
"Ɱ'A5h"	Motor wash speed
"5Pɪɳ"	Motor spin speed
"ŁuɳE"	Autotune the motor with the invertor drive

Table 4

iii. Press the ○ keypad to select the desired option.

- "Ɱ'A5h": The motor goes into wash speed and "r XX" or "L XX" appears on the display.

- "5Pɪɳ": 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.

- "ŁuɳE": The display shows "rE5EŁɪɳ9 ɪɳⱮErŁEr". The display then flashes "ŁuɳE" as the invertor drive is autotuned.

NOTE: The "ŁuɳE" option will automatically turn off once the autotune is complete.

iv. Press the ⓘ keypad to turn off the option.

v. Press the ⓘ keypad. "ɳoŁor" appears in the display.

d. Temperature Sensor Test and Calibration "hEAŁ"

i. Press the ○ keypad. The measured temperature "XX°C" appears in the display. The machine is filled with water to the safety level.

ii. Press the ▲ or ▼ 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
"XX°C oFF" or "XX°C oɳ"	Turn the heating off or on **NOTE: This option is only visible if the machine is configured for 1 heating type.**
"XX°C CAL"	Calibrate the temperature sensor

Table 5

iii. Press the ○ keypad to select the desired option.

- "XX°C oFF" or "XX°C oɳ": Turn the heating off or on. "XX°C oFF" is displayed when the heating is turned off and "XX°C oɳ" is displayed when the heating is turned on.

- "XX°C CAL":

a. The measured temperature "XX°C CAL" appears in the display.

b. Press the ○ keypad. The calibration percentage and temperature are displayed.

c. Press the ▲ and ▼ keypads to increase or decrease the calibration percentage needed.

NOTE: 100% is the factory setting calibration.

d. Press the ○ keypad. "5AⱮE ɳo" appears in the display.

e. To save the calibration percentage change, press the ▲ or ▼ keypad. "5AⱮE yE5" appears in the display.

f. Press the ○ keypad. "XX°C CAL" appears in the display.

iv. Press the ⓘ keypad. "hEAŁ" appears in the display.

(continued)

Test Sub-Menu Flowchart (2 of 4)

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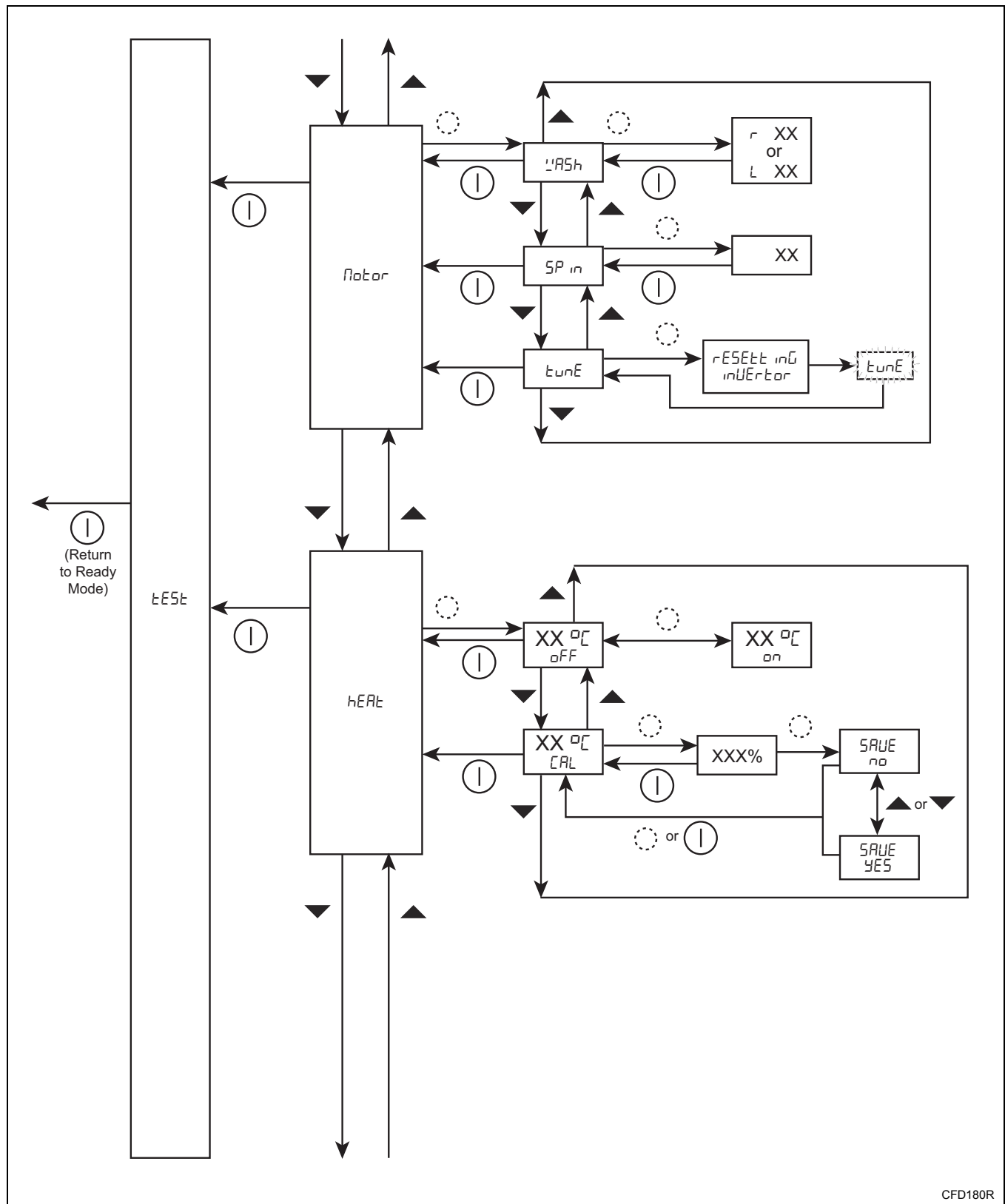
2. Test Sub-Menu "ᵗE5ᵗ" (3 of 4)

e. Drain Valve Test "drɐɪn"

i. Press the ⟳ keypad. "FɪLL X.X" appears in the display.

ii. Press the ▲ or ▼ 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
"FɪLL X.X"	Fill the machine with water
"drɐɪn 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 ⟳ keypad to turn on the desired option.

- "FɪLL X.X": Turn the machine's water inlet valves on and off. The water inlet icon will flash on the display when the water inlet valve is on.

- "drɐɪn X.X": Open and close the drain valve. The drain icon will flash on the display when the drain valve is open.

  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. The drain icon will flash on the display when the drain valve is open.

  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. The drain icon will flash on the display when the drain valve is open.

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

iv. Press the ⟳ keypad to turn off the desired option.

v. Press the ① keypad. "drɐɪn" appears in the display.

f. Relay Test "rELɐ45"

i. Press the ⟳ keypad. "rELɐ45 8 oFF" appears in the display.

ii. Press the ▲ or ▼ keypads to scroll through the relays until the desired relay is shown in the display.

iii. Press the ⟳ keypad to turn the desired relay on or off. The display shows that the relay has been turned on (e.g., "rELɐ45 8 on") or off (e.g., "rELɐ45 8 oFF").

iv. Press the ① keypad. "rELɐ45" appears in the display.

Test Sub-Menu Flowchart (3 of 4)


```
              ┌──────┐          ○
              │      │        ┌──────┐    Press to turn
       (I)    │      │───────▶│ FiLL │    water inlet valves
     ◀────────│      │◀───────│ X.X  │    on and off
              │      │   (I)  └──────┘
              │      │          ○
              │drAin │        ┌──────┐    Press to open
              │      │   (I)  │drAin │    and close
              │      │◀───────│ X.X  │    drain valve
              │      │        └──────┘
              └──────┘
```

```
(I)                                       ○
◀──────         ┌──────┐    ○        ┌─────────┐    ○    ┌─────────┐
(Return         │      │──────────▶  │rELAYS I │◀───────▶│rELAYS I │
to Ready  (I)   │      │◀──────────  │  oFF    │         │   on    │
Mode)   ◀───────│ tESt │   (I)       └─────────┘         └─────────┘
                │      │
                │rELAYS│             ┌─────────┐         ┌─────────┐
                │      │   (I)       │rELAYS 8 │◀───────▶│rELAYS 8 │
                │      │◀──────────  │  oFF    │         │   on    │
                └──────┘             └─────────┘         └─────────┘
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2. Test Sub-Menu "ŁESŁ" (4 of 4)

g. Inputs Test "ınPuŁ5"
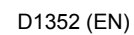
i. Press the ⬭ keypad. "cLŁr" appears in the display.

ii. Press the ▲ or ▼ keypads to scroll through the inputs until the desired inlet is shown in the display. Refer to *Table 7*.

Display	Description
"cLŁr"	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, "Ł" is displayed when an out-of-balance switch input signal is received and "r" is displayed when a rotation sensor input signal is received.**
"ın 1 oFF"	Input 1 **NOTE: The display changes to "ın 1 on" when an input signal is received.**
"ın 2 oFF"	Input 2 **NOTE: The display changes to "ın 2 on" when an input signal is received.**
"ın 3 oFF"	Input 3 **NOTE: The display changes to "ın 3 on" when an input signal is received.**
"ın 4 oFF"	Input 4 **NOTE: The display changes to "ın 4 on" when an input signal is received.**
"ın 5 oFF"	Input 5 **NOTE: The display changes to "ın 5 on" when an input signal is received.**

Table 7

iii. Press the ① keypad. "ınPuŁ5" appears in the display.

h. Coin Drop Test "coın5"

i. Press the 3 keypad.

ii. " 1" appears in the display when coin switch input 1 is activated. "2" appears in the display when coin switch input 2 is activated.

iii. Press the START keypad. "coın5" is displayed.

i. Display Test "dıSPLAY"

i. Press the ⬭ keypad. All of the display's segments appear in the display.

ii. Press the ① keypad. "dıSPLAY" 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)

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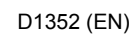
3. Entry Code Set Sub-Menu "codE SEt"

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 ▲ or ▼ keypads to scroll through the Non-Active Menu's sub-menus until "codE SEt" appears in the display.

3. Press the ⬡ keypad. The entry code appears in the display. The first character flashes on and off.

4. Press the ▲ or ▼ keypads to modify the entry code's first character as needed.

5. Press the ⬡ keypad. The second character flashes on and off.

6. Press the ▲ or ▼ keypads to modify the entry code's second character as needed.

7. Press the ⬡ keypad. The third character flashes on and off.

8. Press the ▲ or ▼ keypads to modify the entry code's third character as needed.

9. Press the ⬡ keypad. The fourth character flashes on and off.

10. Press the ▲ or ▼ keypads to modify the entry code's fourth character as needed.

11. Press the ⬡ keypad. "codE SEt" appears in the display.

How to Exit the Entry Code Set Sub-Menu

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

Entry Code Set
Sub-Menu Flowchart

```
                    ┌──────────┐
                    │          │
                    │   tESt   │
                    │          │
                    └──────────┘
```

Press ▲ and ▼ to modify the entry code's first character.

Press ▲ and ▼ to modify the entry code's second character.

Press ▲ and ▼ to modify the entry code's third character.

Press ▲ and ▼ to modify the entry code's fourth character.

codE SEt

(Return to Ready Mode)

cLocH SEt

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4. Clock Set Sub-Menu
"cLocɦ 5Et"

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 ▲ or ▼ keypads to scroll through the Non-Active Menu's sub-menus until "cLocɦ 5Et" appears in the display.

3. Press the ◌ keypad. "yEAr XXXX" appears in the display.
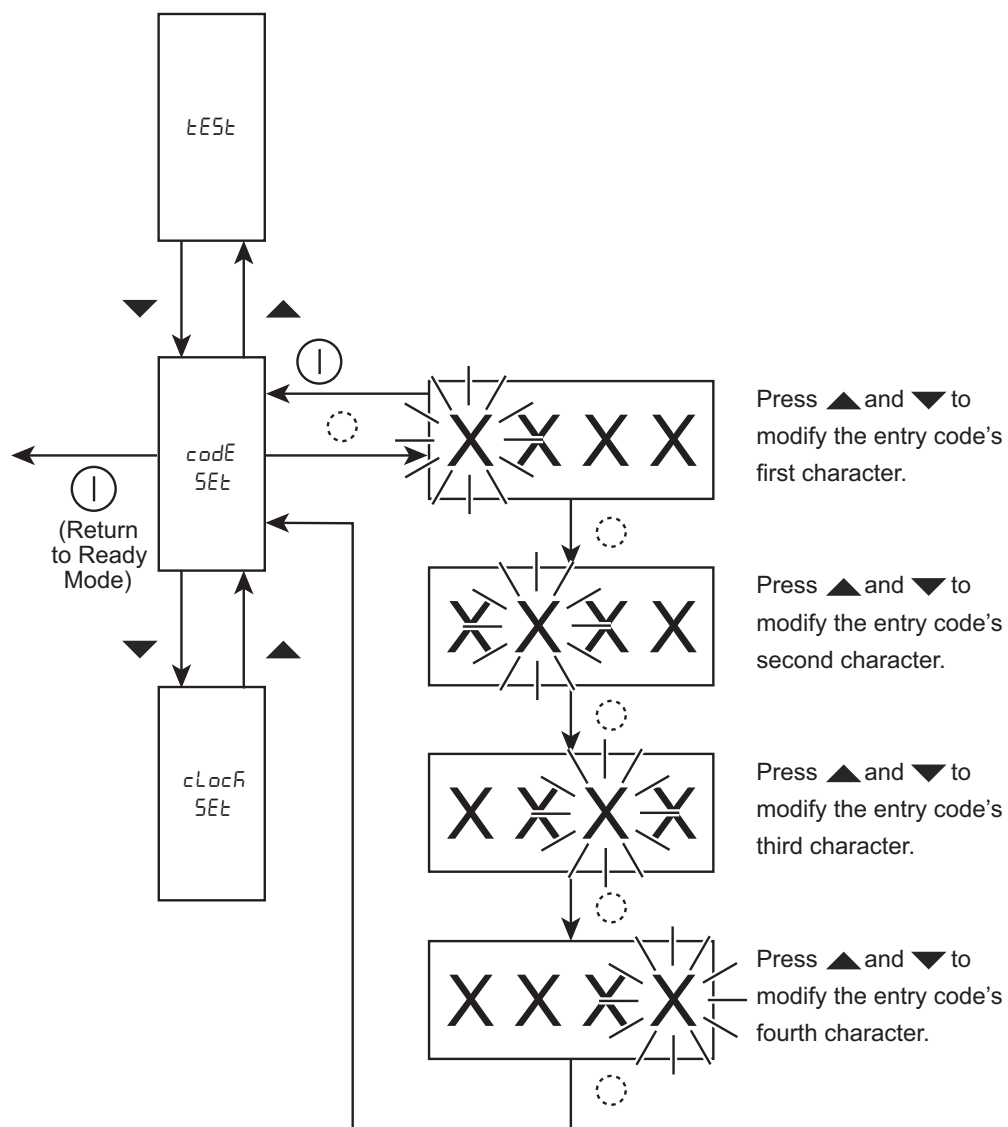
4. Press the ◌ keypad until the desired option appears in the display. Refer to *Table 8*.

Option Display	Description
"yEAr XXXX"	Set the machine's year
"∏onth XX"	Set the machine's month
"dAy XX"	Set the machine's day
"dAy oF � X"	Set the machine's day of the week
"hour XX:XX"	Set the machine's hour
"∏inutE5 XX:XX"	Set the machine's minutes

Table 8

5. Press the ▲ or ▼ keypads to edit the option as needed.

6. Press the ◌ keypad. "cLocɦ 5Et" appears in the display.

How to Exit the Clock Set Sub-Menu

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

Clock Set Sub-Menu Flowchart

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Press ▲ and ▼ to modify year.

Press ▲ and ▼ to modify month.

Press ▲ and ▼ to modify day of month.

Press ▲ and ▼ to modify day of week.

Press ▲ and ▼ to modify hour of day.

Press ▲ and ▼ to modify minute of hour.

(Return to Ready Mode)
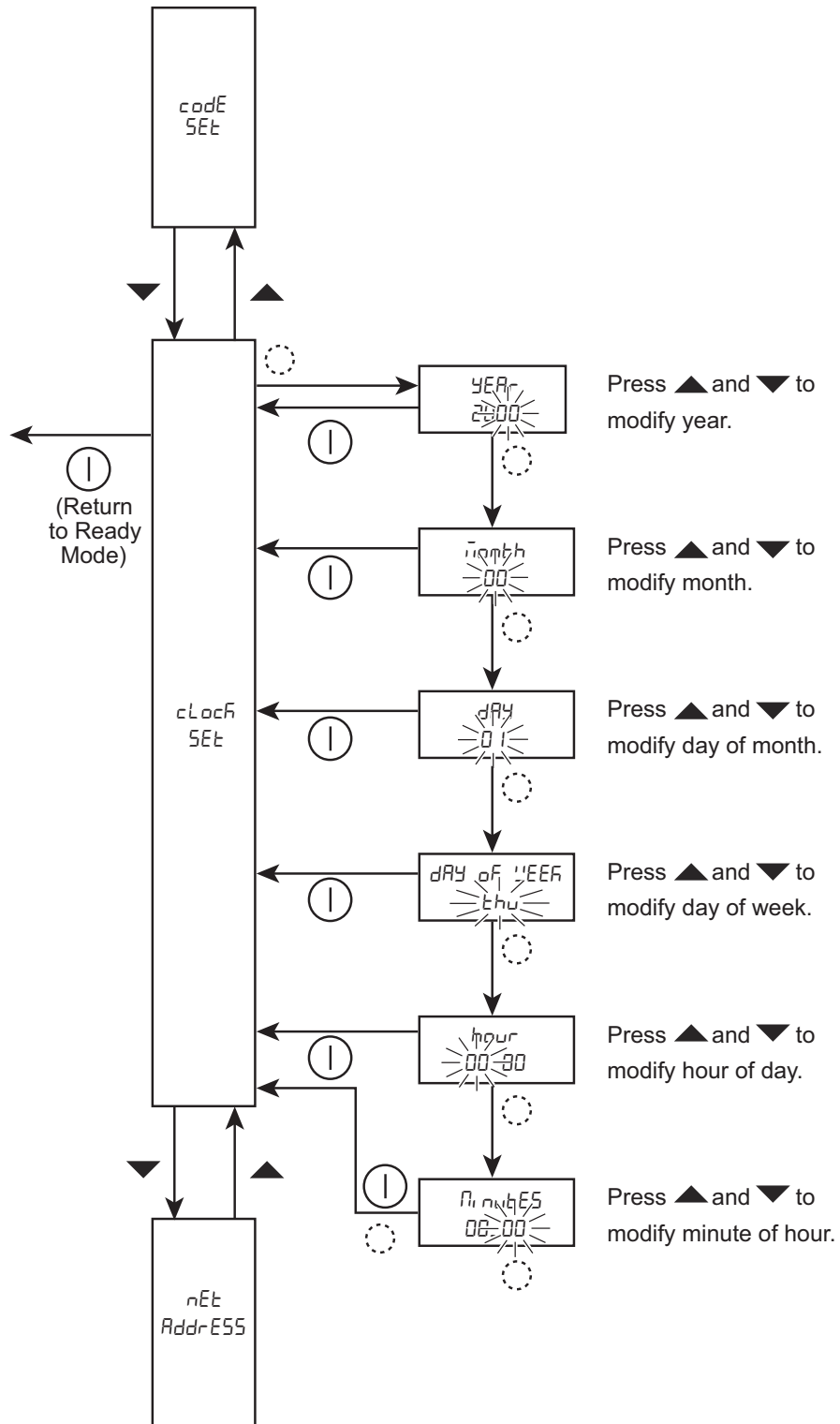
5. Network Address Sub-Menu "nEt AddrESS"

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 ▲ or ▼ keypads to scroll through the Non-Active Menu's sub-menus until "nEt AddrESS" appears in the display.

3. Press the ⟳ keypad. "XXX" appears in the display.

4. Enter the correct network address with the ▲ or ▼ keypads.

5. Enter or confirm with the ⟳ keypad.

How to Exit the Network Address Sub-Menu

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

Network Address Sub-Menu
Flowchart

```
      ┌─────────┐
      │         │
      │  cLocͪ  │
      │   SEt   │
      │         │
      └─────────┘
    ▼         ▲
      ┌─────────┐          ┌──────────────┐
      │         │          │              │    Press ▲ and ▼ to modify
      │   nEt   │  ◌  ◄───►│  X  X  X     │    the network address.
      │ AddrE55 │          │              │
      │         │          └──────────────┘
      └─────────┘
    ▼         ▲
      ┌─────────┐
      │         │
      │ AdUAncE │
      │ EnAbLEd │
      │         │
      └─────────┘
```

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6. Rapid Advance Enable Sub-Menu "*AdUAncE EnAbLEd*"

The Rapid Advance Enable Sub-Menu allows the operator to turn the rapid advance option on or off.

How to Access the Rapid Advance Enable Sub-Menu

1. Enter the Non-Active menu (refer to the ***Entering the Non-Active Menu*** section).

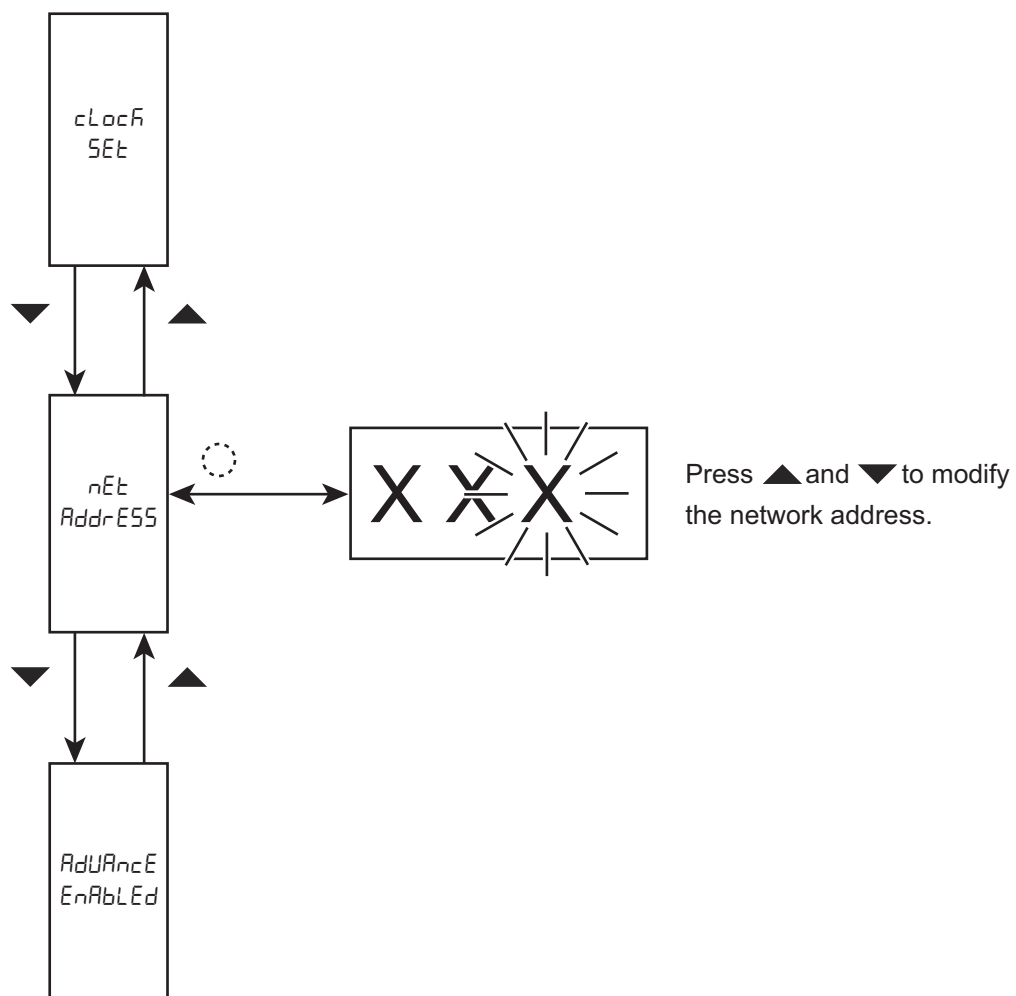2. Press the ▲ or ▼ keypads to scroll through the Non-Active Menu's sub-menus until "*AdUAncE EnAbLEd no*" or "*AdUAncE EnAbLEd YES*" appears in the display.

3. Press the ⬡ keypad to turn the rapid advance option on or off. "*AdUAncE EnAbLEd no*" appears in the display when the rapid advance option is off and "*AdUAncE EnAbLEd YES*" 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

```
                    ┌──────────┐
                    │          │
                    │          │
                    │   nEt    │
                    │  AddrESS │
                    │          │
                    │          │
                    └──────────┘
                      ▼        ▲
                    ┌──────────┐          ┌──────────┐
                    │          │          │          │
                    │ AdUAncEd │          │ AdUAncEd │
              ◄─────│ EnAbLEd  │◄────────►│ EnAbLEd  │
                    │   YES    │          │    no    │
              (I)   │          │          │          │
           (Return  └──────────┘          └──────────┘
           to Ready
           Mode)      ▼        ▲
                    ┌──────────┐
                    │          │
                    │   tEMP   │
                    │  EnAbLEd │
                    │          │
                    └──────────┘
```

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7. Temperature Indication Enable Sub-Menu "ᴸᴱ� EᴖᴀbᴸEᴅ"

The Temperature Indication Enable Sub-Menu allows the operator to turn the temperature indicator (which appears during a cycle) on or off.
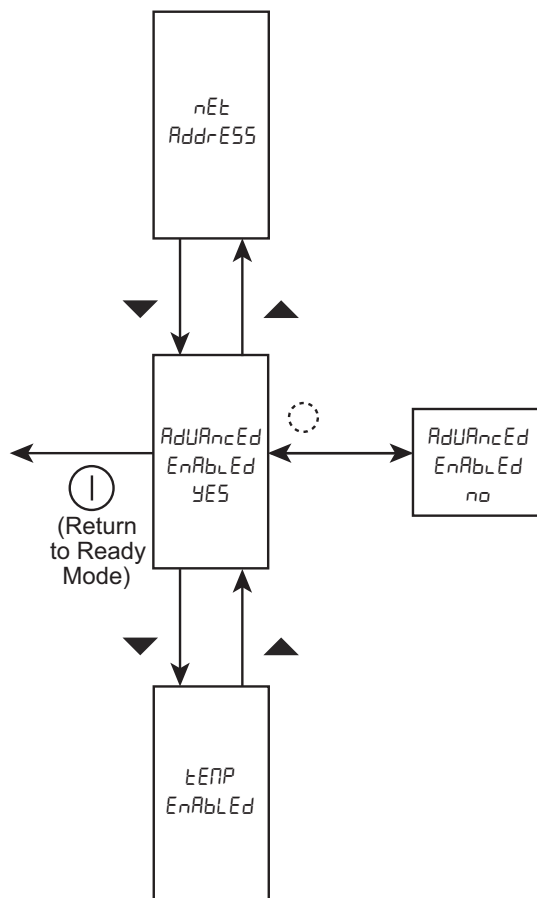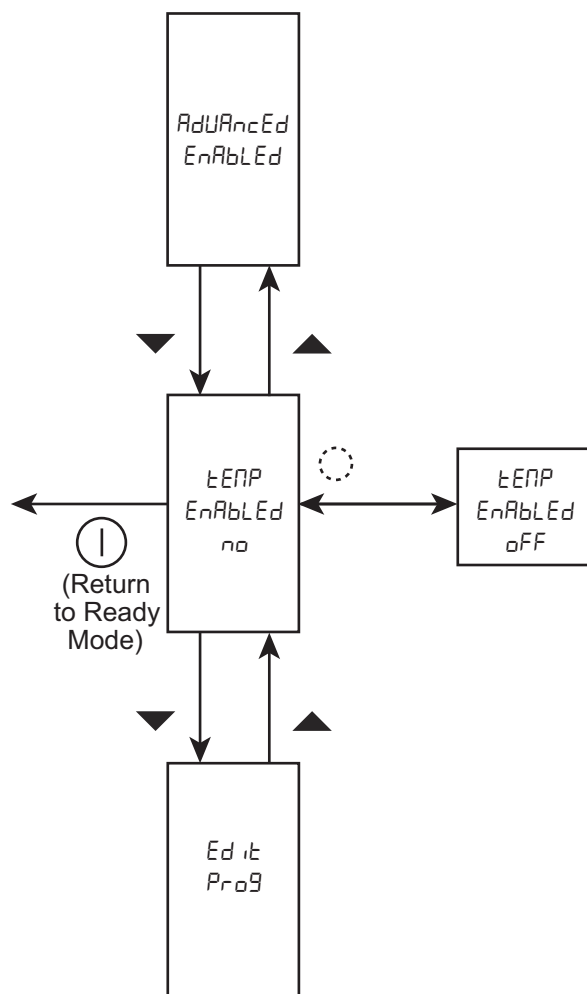
How to Access the Temperature Indication Enable Sub-Menu

1. Enter the Non-Active menu (refer to the *Entering the Non-Active Menu* section).

2. Press the ▲ or ▼ keypads to scroll through the Non-Active Menu's sub-menus until "ᴸᴱ� EᴖᴀbᴸEᴅ ᴖᴏ" or "ᴸᴱ� EᴖᴀbᴸEᴅ 4E5" appears in the display.

3. Press the ◌ keypad to turn the temperature indication option on or off. "ᴸᴱ� EᴖᴀbᴸEᴅ ᴖᴏ" appears in the display when the temperature indication option is off and "ᴸᴱ� EᴖᴀbᴸEᴅ 4E5" appears in the display when the temperature indication option is on.

How to Exit the Temperature Indication Enable Sub-Menu

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

Temperature Indication Enable
Sub-Menu Flowchart

```
                        ┌──────────────┐
                        │              │
                        │   AdUAncEd   │
                        │   EnAbLEd    │
                        │              │
                        └──────────────┘
                           │      ▲
                         ▼ │      │ ▲
                           ▼      │
                        ┌──────────────┐         ┌──────────────┐
                        │              │   ◌     │     tENP     │
              ◄─────────│     tENP     │◄───────►│   EnAbLEd    │
                        │   EnAbLEd    │         │     oFF      │
              ( | )     │     no       │         └──────────────┘
           (Return      │              │
           to Ready     └──────────────┘
            Mode)          │      ▲
                         ▼ │      │ ▲
                           ▼      │
                        ┌──────────────┐
                        │              │
                        │    Ed it     │
                        │    Pro9      │
                        │              │
                        │              │
                        └──────────────┘
```

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8. Edit Programming Sub-Menu "Ediᴛ Pro�" (1 of 2)

The Edit Programming Sub-Menu allows the operator to modify the machine's programmed cycles.

How to Access the Edit Programming Sub-Menu

1. Enter the Non-Active menu (refer to the *Entering the Non-Active Menu* section).

2. Press the ▲ or ▼ keypads to scroll through the Non-Active Menu's sub-menus until "Ediᴛ ProᏮ" appears in the display.

3. Press the ◌ keypad. "ProᏮ 1" appears in the display.

4. Press the ▲ or ▼ keypads to scroll through the available cycles until the desired cycle (e.g., "ProᏮ 1") appears in the display.

5. Press the ◌ keypad. "FASE" appears in the display.

6. Press the ▲ or ▼ keypads to scroll through the cycle options until the desired cycle option appears in the display. Refer to the *Using the Edit Programming Sub-Menu's Options* section for details on each option.

7. Press the ① keypad. The cycle number (e.g., "ProᏮ 1") appears in the display.

8. Press the ① keypad. "SAUE no" appears in the display.

9. To save the cycle programming changes...

   a. Press the ▲ or ▼ keypad. "SAUE YES" appears in the display.

   b. Press the ① keypad. The cycle programming changes are saved and "SAUE YES" appears in the display.
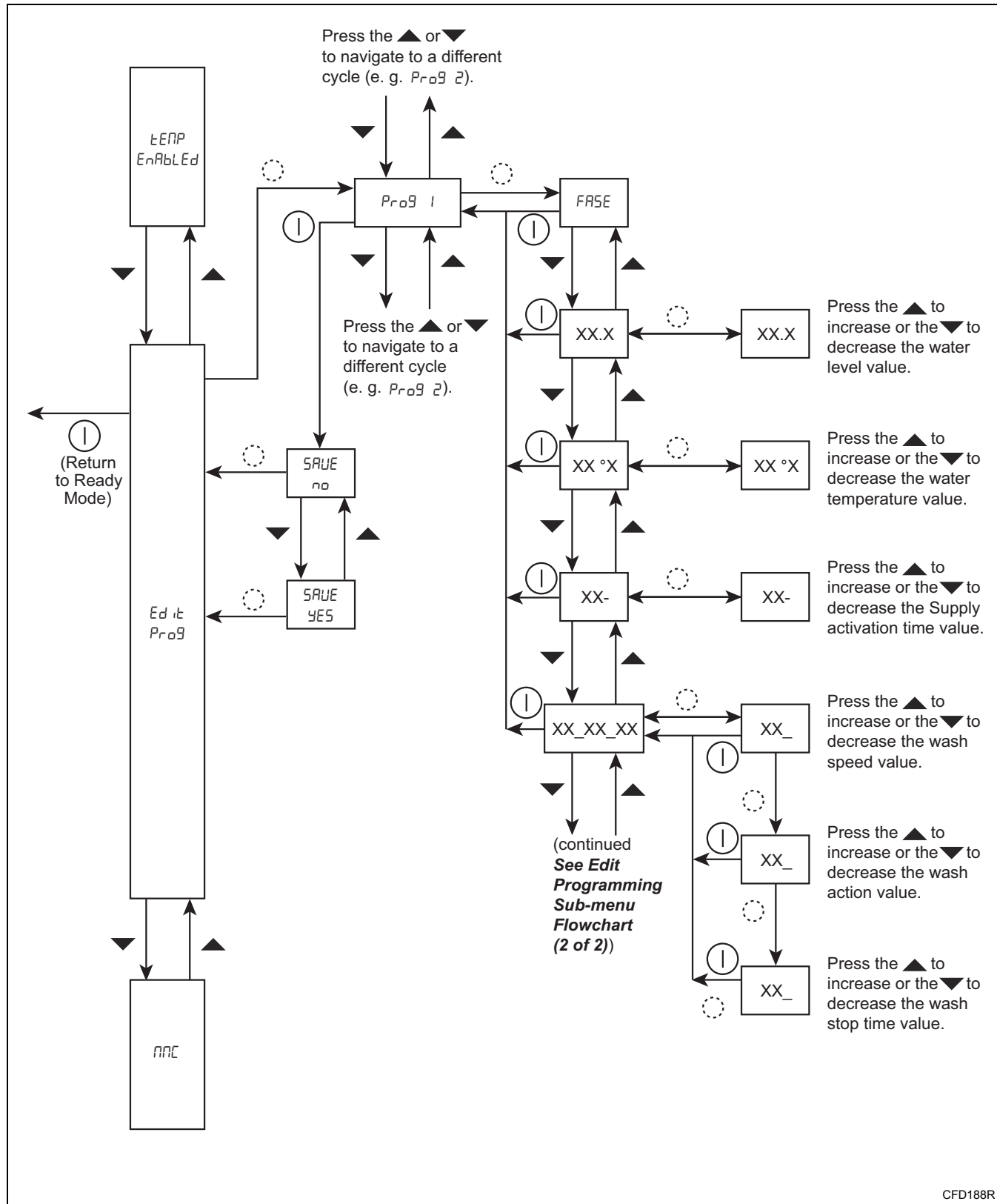
Using the Edit Programming Sub-Menu's Options

   a. Water Volume – The water level (in inches or centimeters) for the cycle's step.

   i. The current water volume (e.g., XX.X) is shown in the display. Press the ◌ keypad to edit the value.

   ii. Press the ▲ or ▼ keypads to edit the value as needed.

   iii. Press the ◌ keypad.

   b. Water Temperature – The water temperature (in °C or °F) for the cycle's step.

   i. The current water temperature (e.g., XX °X) is shown in the display. Press the ◌ keypad to edit the value.

   ii. Press the ▲ or ▼ keypads to edit the value as needed.

   iii. Press the ◌ keypad.

   c. Supply Injection Time – The supply activation time (in seconds) for the cycle's step.

   i. The current supply activation time (e.g., XX-) is shown in the display. Press the ◌ keypad to edit the value.

   ii. Press the ▲ or ▼ keypads to edit the value as needed.

   iii. Press the ◌ keypad.

   d. Wash Agitation – The wash speed (in RPM), wash action time (in seconds) and wash stop time (in seconds) for the cycle's step.

   i. The current was agitation (e.g., XX-XX-XX) is shown in the display.

   ii. Press the ◌ keypad. The wash speed in RPM (e.g., XX-) is displayed.

   iii. Press the ▲ or ▼ keypads to edit the value as needed.

   iv. Press the ◌ keypad. The wash action time in seconds (e.g., XX-) is displayed.

   v. Press the ▲ or ▼ keypads to edit the value as needed.

   vi. Press the ◌ keypad. The wash stop time in seconds (e.g., XX-) is displayed.

   vii. Press the ▲ or ▼ keypads to edit the value as needed.

   viii. Press the ◌ keypad. The wash agitation (e.g., XX-XX-XX) is displayed.

(continued)

Edit Programming Sub-Menu
Flowchart (1 of 2)

Press the ▲ or ▼
to navigate to a different
cycle (e. g. *Pro9 2*).

ŁEΠP
EnRbLEd

Pro9 1

FRSE

Press the ▲ or ▼
to navigate to a
different cycle
(e. g. *Pro9 2*).

XX.X

XX.X

Press the ▲ to
increase or the ▼ to
decrease the water
level value.

(Return
to Ready
Mode)

SRUE
no

XX °X

XX °X

Press the ▲ to
increase or the ▼ to
decrease the water
temperature value.

Ed ıŁ
Pro9

SRUE
YES

XX-

XX-

Press the ▲ to
increase or the ▼ to
decrease the Supply
activation time value.

XX_XX_XX

XX_

Press the ▲ to
increase or the ▼ to
decrease the wash
speed value.

(continued
***See Edit
Programming
Sub-menu
Flowchart
(2 of 2)***)

XX_

Press the ▲ to
increase or the ▼ to
decrease the wash
action value.

ΠΠC

XX_

Press the ▲ to
increase or the ▼ to
decrease the wash
stop time value.

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8. Edit Programming Sub-Menu "Edɪt Proɡ" (2 of 2)

e. Water Temperature Time Stop – The water temperature (in °C or °F) that must be reached before the cycle can continue.

i. The current water temperature time stop (e.g., XX °X) is shown in the display. Press the ◌ keypad to edit the value.

ii. Press the ▲ or ▼ keypads to edit the value as needed.

iii. Press the ◌ keypad.

f. Water Level Time Stop – The water level (in inches or centimeters) that must be reached before the cycle can continue.

i. The current water level (e.g., XX.X) is shown in the display. Press the ◌ keypad to edit the value.

ii. Press the ▲ or ▼ keypads to edit the value as needed.

iii. Press the ◌ keypad.

g. Time – The time (in minutes and seconds) for the cycle's steps up to this point in the cycle.

i. The current time (e.g., XX:XX) is shown in the display. Press the ◌ keypad to edit the value.

ii. Press the ▲ or ▼ keypads to edit the value as needed.

iii. Press the ◌ keypad.

h. Spin

i. The spin speed and time (e.g., XXX X.XX) are shown in the display. Press the ◌ keypad to edit the value. "dɪSt" is shown in the display.

ii. The distribute function, which opens the drain valve and distributes the load, can either be turned on or off.

1. To turn the distribute function on, press the ▲ or ▼ keypad until "dɪSt on" is shown in the display.

   NOTE: If the distribute function is turned on, the water will drain from the machine with a distribution speed of 2G. The spin speed and function cannot be edited.

   a. Press the ◌ keypad. "HtrA", which represents the extra

distribution step, is shown in the display.

b. Press the ▲ or ▼ keypad to turn "HtrA" on or off.

c. Press the ◌ keypad.

   i. **If "HtrA" is off,** the spin speed and time (e.g., XXX X.XX) is shown in the display.

   ii. **If "HtrA" is on,** the control displays the drain valve number.

      1. Press the ▲ or ▼ keypad to adjust the drain valve number.

      2. Press the ◌ keypad. The spin speed and time (e.g., XXX X.XX) is shown in the display.

2. To turn the distribute function off, press the ▲ or ▼ keypad until "dɪSt oFF" is shown in the display.

   NOTE: If the distribute function is turned off, the spin speed and time can be edited.

   a. Press the ◌ keypad. "ᴜooL" is shown in the display.

   b. Press the ▲ or ▼ keypad to turn the "ᴜooL" function on or off.

   **NOTE: When the "ᴜooL" function is turned on, when there is a spin retry because of an unbalanced load, the motor goes into distribute mode, followed by low spin and then by high spin. When the "ᴜooL" function is off, when there is a spin retry because of an unbalanced load, the motor goes into gentle prewash, followed by distribute mode, low spin and then high spin.**

   c. Press the ◌ keypad. "HtrA", which represents an extra distribution and spin step, is shown in the display.

   d. Press the ▲ or ▼ keypad to turn "HtrA" on or off.

e. Press the ⬡ keypad. The control displays the spin speed, in RPMs.

f. Press the ▲ or ▼ keypad to adjust the spin speed.

g. Press the ⬡ keypad. The spin time is shown in the display.

h. Press the ▲ or ▼ keypad to adjust the spin time.

i. Press the ⬡ keypad. "*rEtr*", which represents the number of retries, is shown in the display.

j. Press the ▲ or ▼ keypad to adjust the number of retries.

NOTE: The maximum number of retries is 15.

k. Press the ⬡ keypad. The drain valve number is shown in the display.

l. Press the ▲ or ▼ keypad to adjust the drain valve number.

m. Press the ⬡ keypad. The spin speed and time (e.g., XXX X.XX) is shown in the display.

   i. End of Program – "*Prog End*", which represents the end of the cycle's steps, is shown in the display.

How to Exit the Edit Programming Sub-Menu

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

Edit Programming Sub-Menu
Flowchart (2 of 2)

Press the ▲ or ▼ to navigate to a different cycle (e. g. *Prog 2*).

tEMP EnAbLEd

Prog 1

See the "Edit Programming Sub Menu Flowchart (1 of 2)

Press the ▲ or ▼ to navigate to a different cycle (e. g. *Prog 2*).

(Return to Ready Mode)

Edit Prog

SAVE no

SAVE YES

NNC

XX °X — XX °X
Press the ▲ to increase or the ▼ to decrease the water temperature time stop value.

XX.X- — XX.X-
Press the ▲ to increase or the ▼ to decrease the water level time stop value.

XX.XX — XX.XX
Press the ▲ to increase or the ▼ to decrease the time value.

XXX X.XX — *diSt oFF* — *''ool oFF* — *HtrA oFF* — X.XX — X.XX — *rEtr X* — X

Prog End

diSt on

''ool on

HtrA on

HtrA oFF

HtrA on

Press the ▲ to increase or the ▼ to decrease the spin speed and time values, the number of retries and the drain valve number.

Press the ▲ to increase or the ▼ to change the drain valve number.

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9. MMC Sub-Menu "ΠΠC" (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 ▲ or ▼ keypads to scroll through the Non-Active Menu's sub-menus until "ΠΠC" appears in the display.

3. Press the ⟳ keypad. "UiEU FiLES" appears in the display.

4. Press the ▲ or ▼ keypads to scroll through the MMC Sub-Menu's options.

5. Press the ⟳ 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.
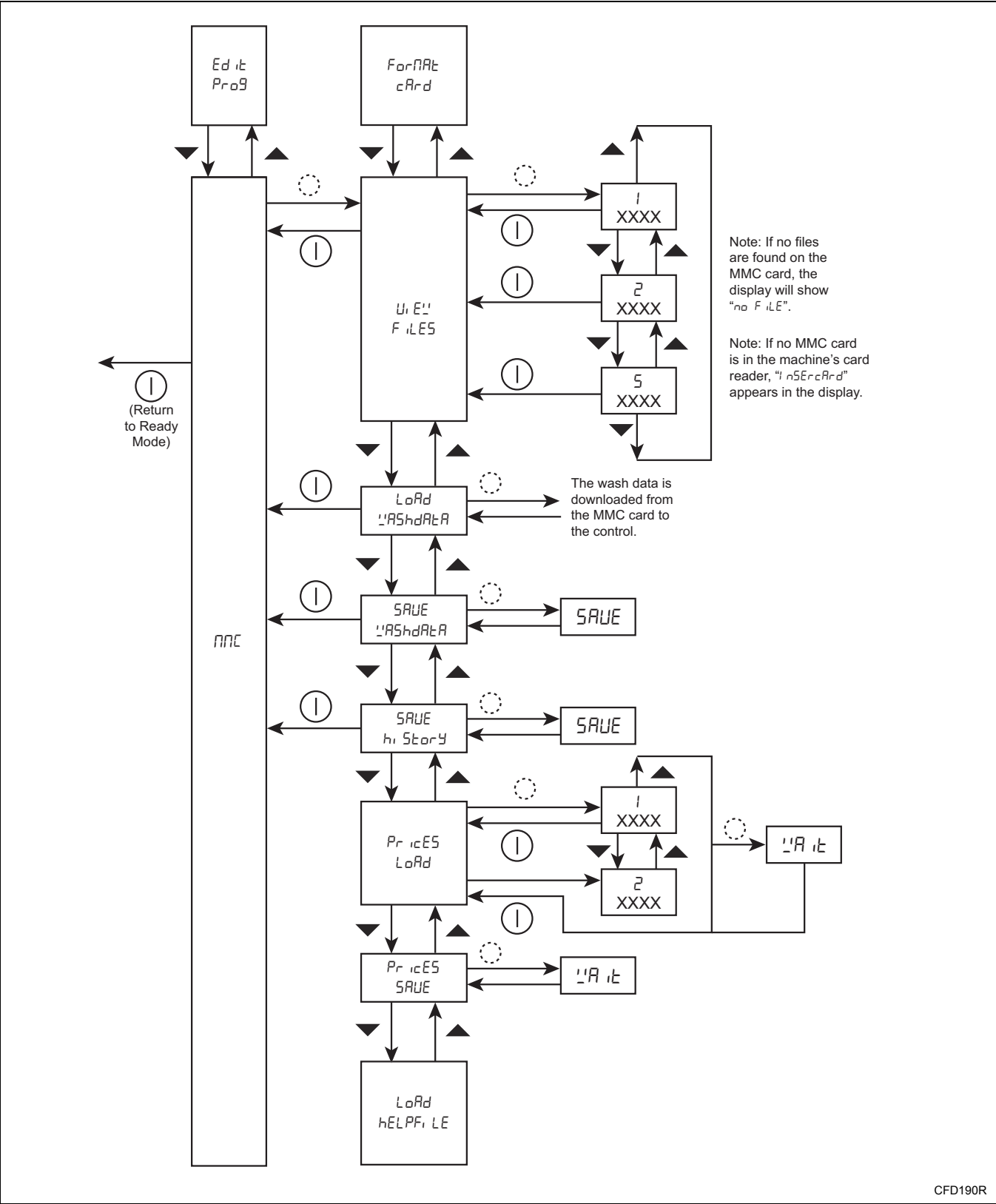
Using the MMC Sub-Menu's Options

a. View MMC Card's Files "UiEU FiLES"

i. Press the ⟳ keypad. The first wash program file (" l XXXX") appears in the display.

> **NOTE: If no wash program files are found on the MMC card, "no FiLES" appears in the display. If no MMC card is in the machine's card reader "inSE cArd" appears in the display.**

ii. Press the ▲ or ▼ keypads to scroll through the wash program files.

iii. Press the ① keypad. "UiEU FiLES" appears in the display.

b. Load Wash Data "LoAd UAShdAtA"

i. Press the ⟳ keypad. The wash data file (" l XXXX") 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 "SAUE UASh dAtA"

i. Press the ⟳ keypad. "SAUE" appears in the display and the machine's wash data is saved to the MMC card. Once the save is complete, "SAUE UASh dAtA" appears in the display.

d. Save History "SAUE hiStorY"

i. Press the ⟳ keypad. "UAit" appears in the display and the machine's history is saved to the MMC card. Once the save is complete, "SAUE hiStorY" appears in the display.

e. Load prices "PricES LoAd"

i. Press the ⟳ keypad. The prices appear in the display.

ii. Scroll through the available files by pressing the ▲ or ▼ keypads.

iii. To load the file with the chosen price press the ⟳ keypad. The file has been loaded.

iv. Press the ① keypad. "PricES LoAd" appears in the display.

f. Save Prices "PricES SAUE"

i. Press the ⟳ keypad to save the current price. "UAit" appears in the display, the price has been saved onto the MMC card.

ii. Press the ① keypad. "PricES SAUE" appears in the display.

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MMC Sub-Menu Flowchart (1 of 3)

Ed it
Pro9

ForПAt
cArd

Ui EU
F iLES

1
XXXX

2
XXXX

5
XXXX

Note: If no files
are found on the
MMC card, the
display will show
"no F iLE".

Note: If no MMC card
is in the machine's card
reader, "i n5ErcArd"
appears in the display.

(Return
to Ready
Mode)

ПÑC

LoAd
ЦAShdAtA

The wash data is
downloaded from
the MMC card to
the control.

SAUE
ЦAShdAtA

SAUE

SAUE
hi Story

SAUE

Pr icES
LoAd

1
XXXX

2
XXXX

ЦA it

Pr icES
SAUE

ЦA it

LoAd
hELPFi LE

CFD190R

9. MMC Sub-Menu "∏∏∁"
(2 of 3)

g. Load Help File "ᒪₒₐd ʰᴇᴸᴾꜰᵢᴸᴇ"

i. Press the ⟳ keypad. The first help file ("ᵢ ʰᴇᴸᴾ") appears in the display.

> **NOTE: If no help files are found on the MMC card, "ₙₒ ꜰᵢᴸᴇ" appears in the display. If no MMC card is in the machine's card reader, "ᵢₙ5ᴇₜ ᴄᴬʳd" appears in the display.**

ii. Press the ▲ or ▼ keypads to scroll through the help files.

iii. When the desired help file appears in the display, press the ⟳ keypad. "ᵁᴬᵢₜ" 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. "ʰᴇᴸᴾꜰᵢᴸᴇᴸₒᴬd" appears in the display.

h. Save Help File "5ᴬᵁᴇ ʰᴇᴸᴾꜰᵢᴸᴇ"

i. Press the ⟳ keypad. "ᵁᴬᵢₜ" appears in the display and the machine's help file is saved to the MMC card. Once the save is complete, "5ᴬᵁᴇ ʰᴇᴸᴾꜰᵢᴸᴇ" appears in the display.

 D1352 (EN)

MMC Sub-Menu Flowchart (2 of 3)

Note: If no files are found on the MMC card, the display will show "no FiLE".

Note: If no MMC card is in the machine's card reader, "InSErcArd" appears in the display.
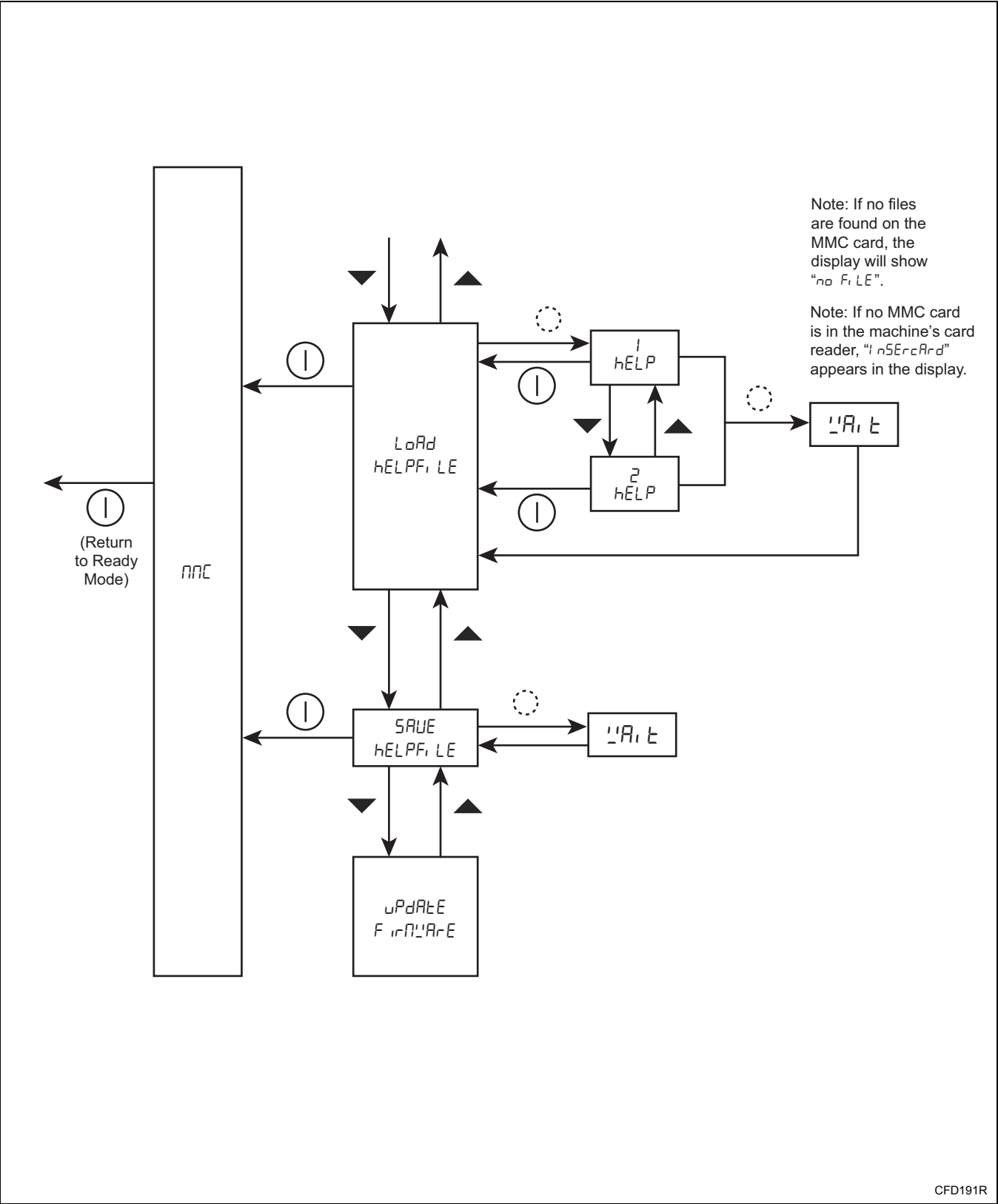
9. MMC Sub-Menu "*ΠΠΓ*" (3 of 3)

i. Update Firmware "*UPd F₁rΠᵁΑrE*"

   i. Press the ◯ keypad. "*5urE no*" appears in the display.

> **NOTE: If no firmware file is found on the MMC card, "*no F₁rΠᵁArE Found*" appears in the display.**

   ii. Press the ▲ or ▼ keypad. "*5urE YE5*" appears in the display.

   iii. Press the ◯ keypad. "*ᵁΑ₁Ł*" 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.**

j. Format Card "*ForΠΑŁ cΑrd*"

   i. Press the ◯ keypad. "*5urE no*" appears in the display.

   ii. Press the ▲ or ▼ keypad. "*5urE YE5* appears in the display.

   iii. Press the ◯ 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.

MMC Sub-Menu Flowchart (3 of 3)

Note: If no firmware is found on the MMC card, the display will show "no FirMWArE Found".

CFD192R
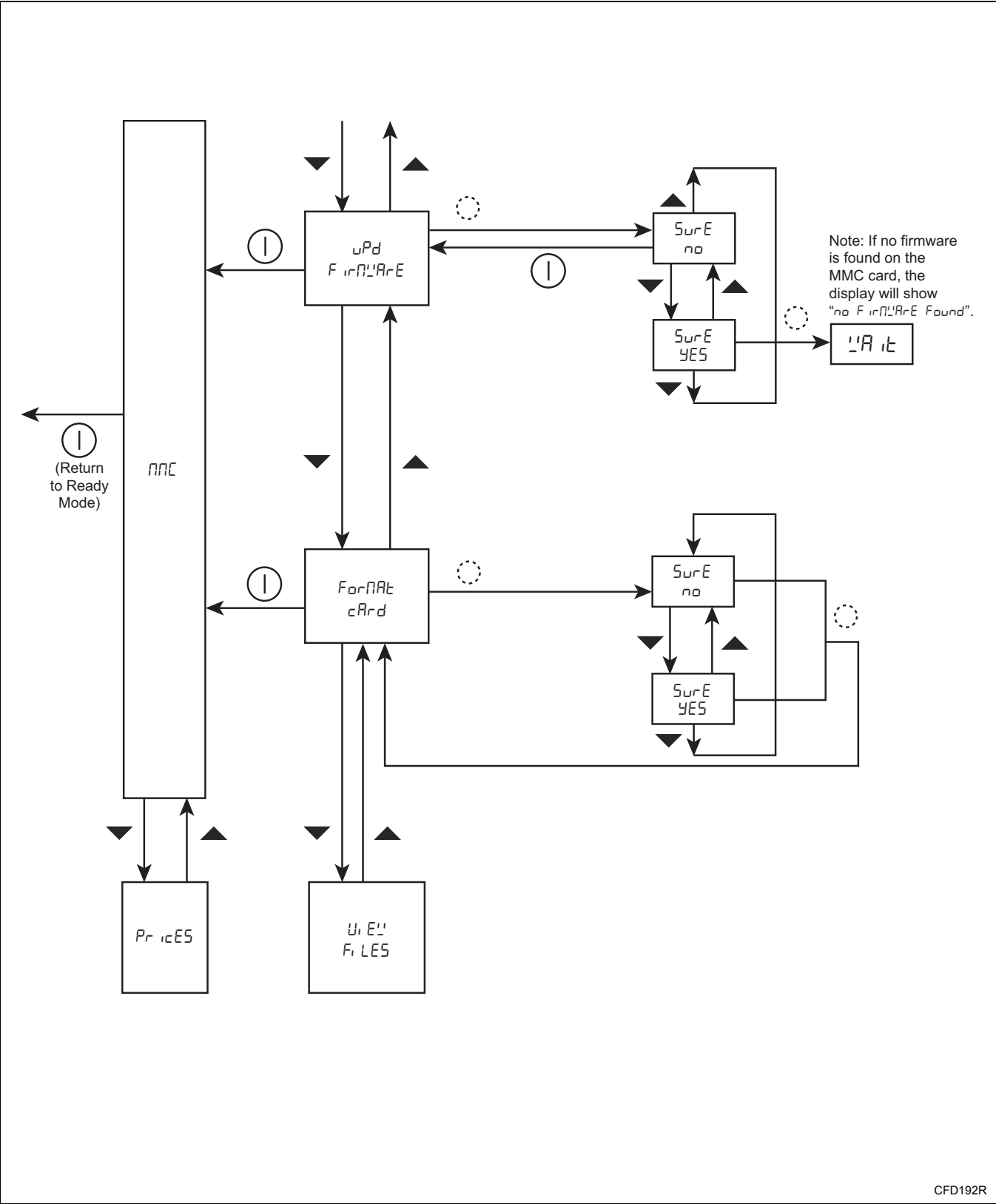
10. Prices Sub-Menu "Prιɛ⊑ES"

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 ▲ or ▼ keypads to scroll through the Non-Active Menu's sub-menus until "Prιɛ⊑ES" appears in the display.

3. Press the ⟳ keypad. "Pr 1 X.XX" appears in the display.

4. Press the ▲ or ▼ keypads until the desired cycle's vend price appears in the display.

5. Press the ⟳ keypad. The vend prices flashes on and off, meaning it can be edited.

6. Press the ▲ or ▼ keypads as needed to edit the vend price.

7. Press the ⟳ keypad. The vend prices stops flashing.

8. Press the ① keypad. "5AUE no" appears in the display.

9. Press the ▲ or ▼ keypad. "5AUE YES" appears in the display.

10. Press the ⟳ keypad. "ᄂᄂᄇᵢᵗ" appears in the display. After the vend price is saved, "Prιɛ⊑ES" appears in the display.

How to Exit the Prices Sub-Menu

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

Prices Sub-Menu Flowchart

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11. Service Counters Sub-Menu "SErUicE 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.
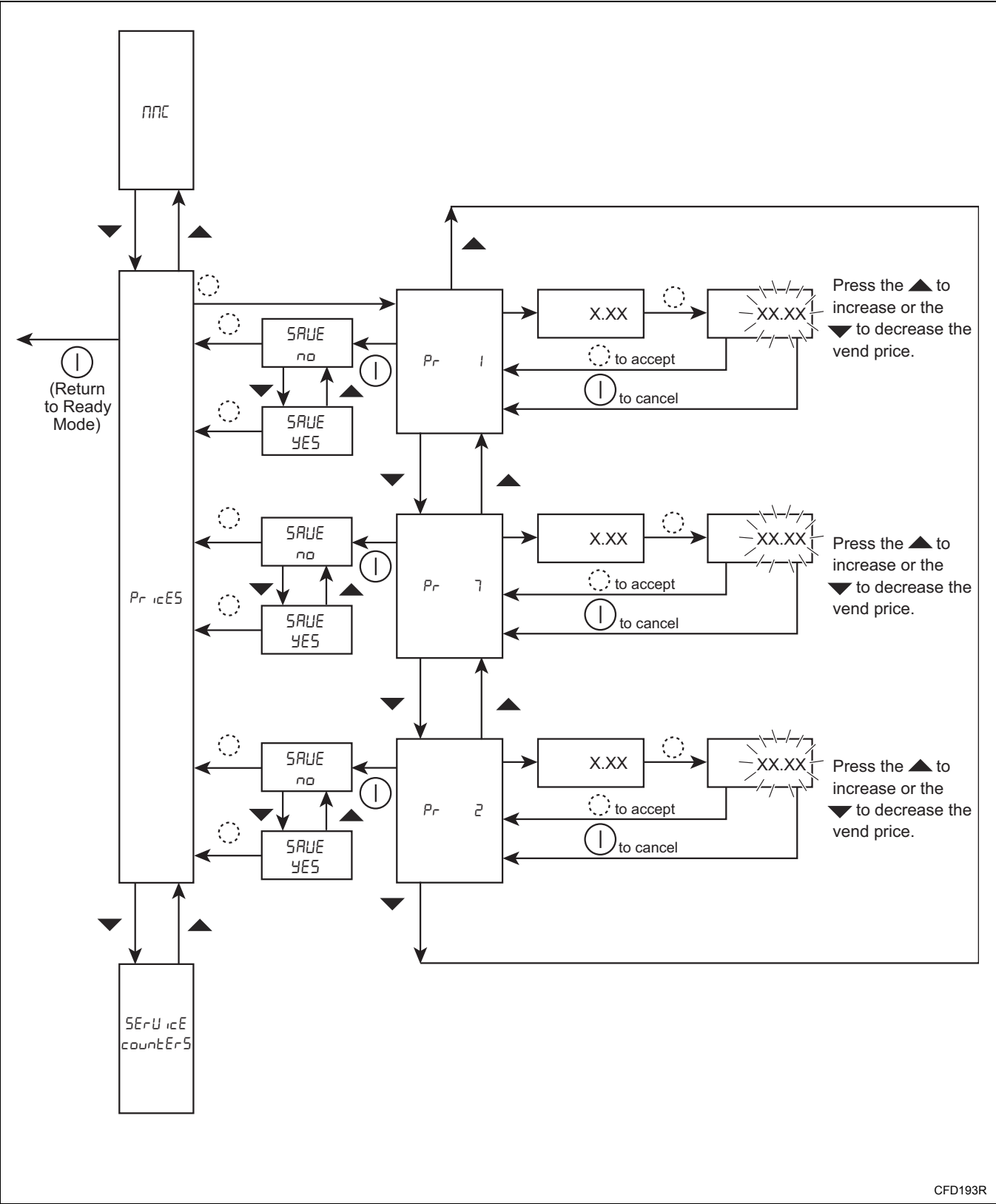
How to Access the Service Counters Sub-Menu

1. Enter the Non-Active menu (refer to the *Entering the Non-Active Menu* section).

2. Press the ▲ or ▼ keypads to scroll through the Non-Active Menu's sub-menus until "SErUicE countErS" appears in the display.

3. Press the ⬡ keypad. "hourS oFF" or "hourS X.X" appears in the display.

4. Press the ▲ or ▼ keypads until the desired option appears in the display. Refer to *Table 9*.

Option Display	Description
"hourS oFF" or "hourA X.X"	Display service maintenance reminders on the machine's control after the machine has been operated for a specified number of 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.

Table 9

5. Press the ⬡ keypad.

   - **If "hourS oFF" or "cYcLES oFF" was displayed,** "hourS or cYcLES" appears in the display, followed by the number of hours or cycles ("X.X"). Press the ▲ or ▼ keypads as needed to edit the number of hours or cycles.

   - **If "hourS X.X" or "cYcLES X.X" was displayed,** "hourS oFF" or "cYcLES 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.

 D1352 (EN)

Service Counters Sub-Menu
Flowchart

Press the ▲ to increase or the ▼ to decrease the hours.

Press the ▲ to increase or the ▼ to decrease the cycle number.

(Return to Ready Mode)

CFD194R
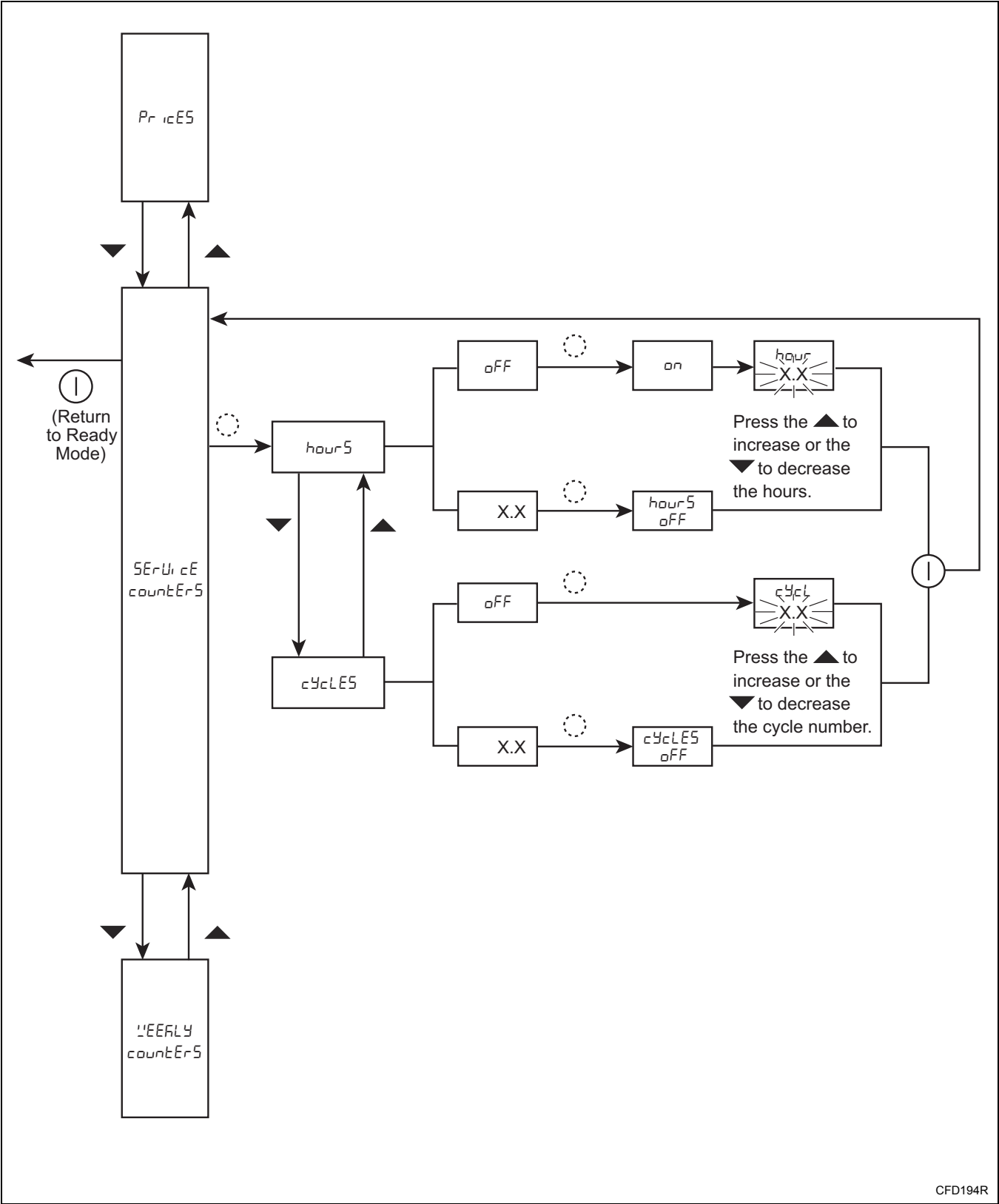
12. Weekly Cycle Count Sub-Menu "WEEKLY counterS"

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.

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 ▲ or ▼ keypads to scroll through the Non-Active Menu's sub-menus until "WEEKLY counterS" appears in the display.

3. Press the ⟳ 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 ▲ or ▼ 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 ▲ or ▼ keypad. "ErASE YES" appears in the display.

   b. Press the ⟳ keypad. The weekly cycle counts are erased and "WEEKLY counterS" 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

CFD195R

13. Last Errors Sub-Menu
"LA5t 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.
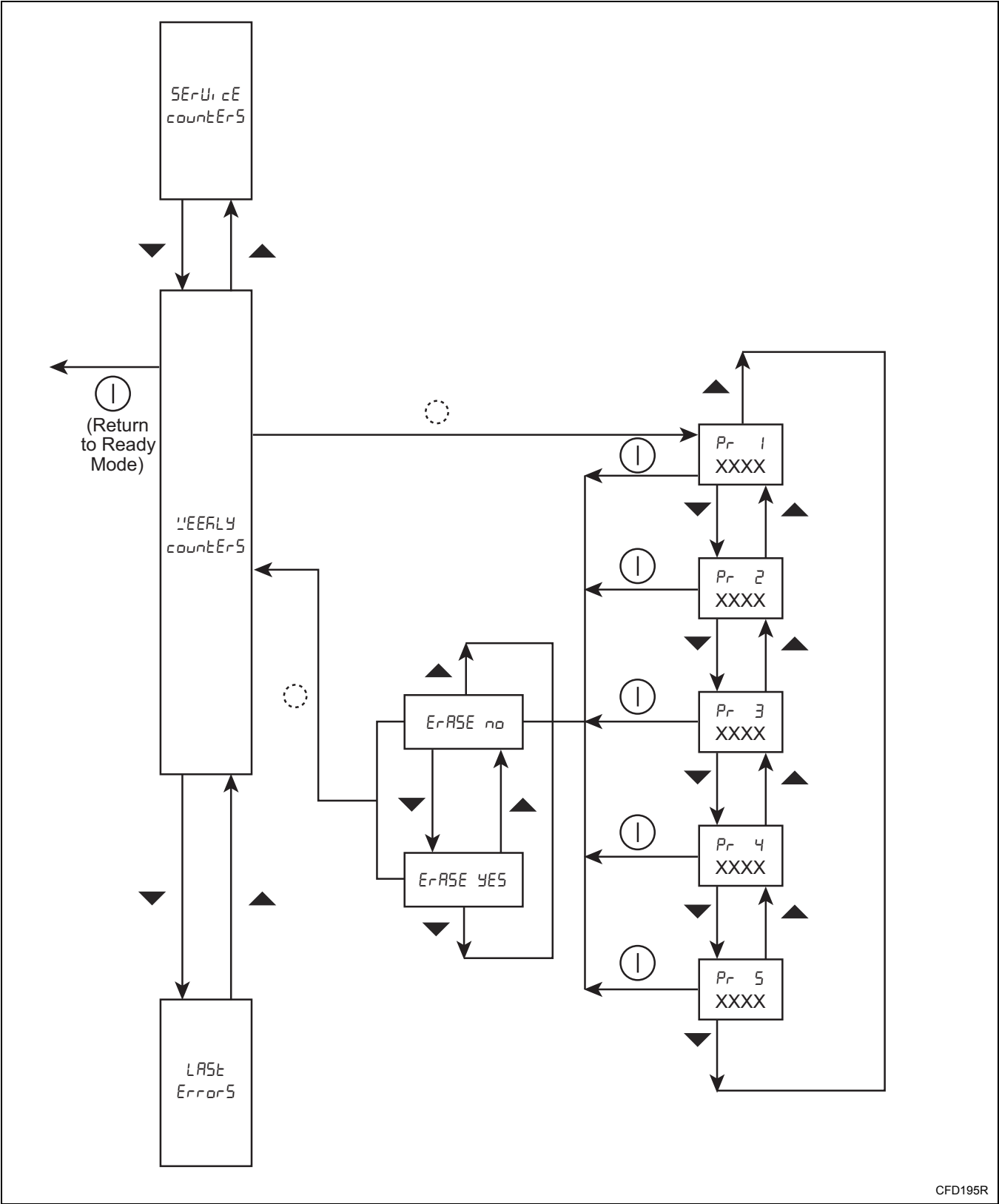
How to Access the Last Errors Sub-Menu

1. Enter the Non-Active menu (refer to the *Entering the Non-Active Menu* section).

2. Press the ▲ or ▼ keypads to scroll through the Non-Active Menu's sub-menus until "LA5t Error5" appears in the display.

3. Press the ⬡ keypad. The number of recorded errors that have taken place during the last cycle that was run on the machine appears in the display (X Error5).

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 ⬡ keypad. The last recorded error appears in the display. Refer to the *Error Messages* section for error definitions.

5. Press the ▲ or ▼ 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.

 D1352 (EN)

Last Errors Sub-Menu Flowchart

Note: If no errors have taken place during the last cycle, the display will show "no Error".

YEARLY counterS

LAST ErrorS

(Return to Ready Mode)

X ErrorS

XXX XXXXX

out oF ordEr

CFD196R
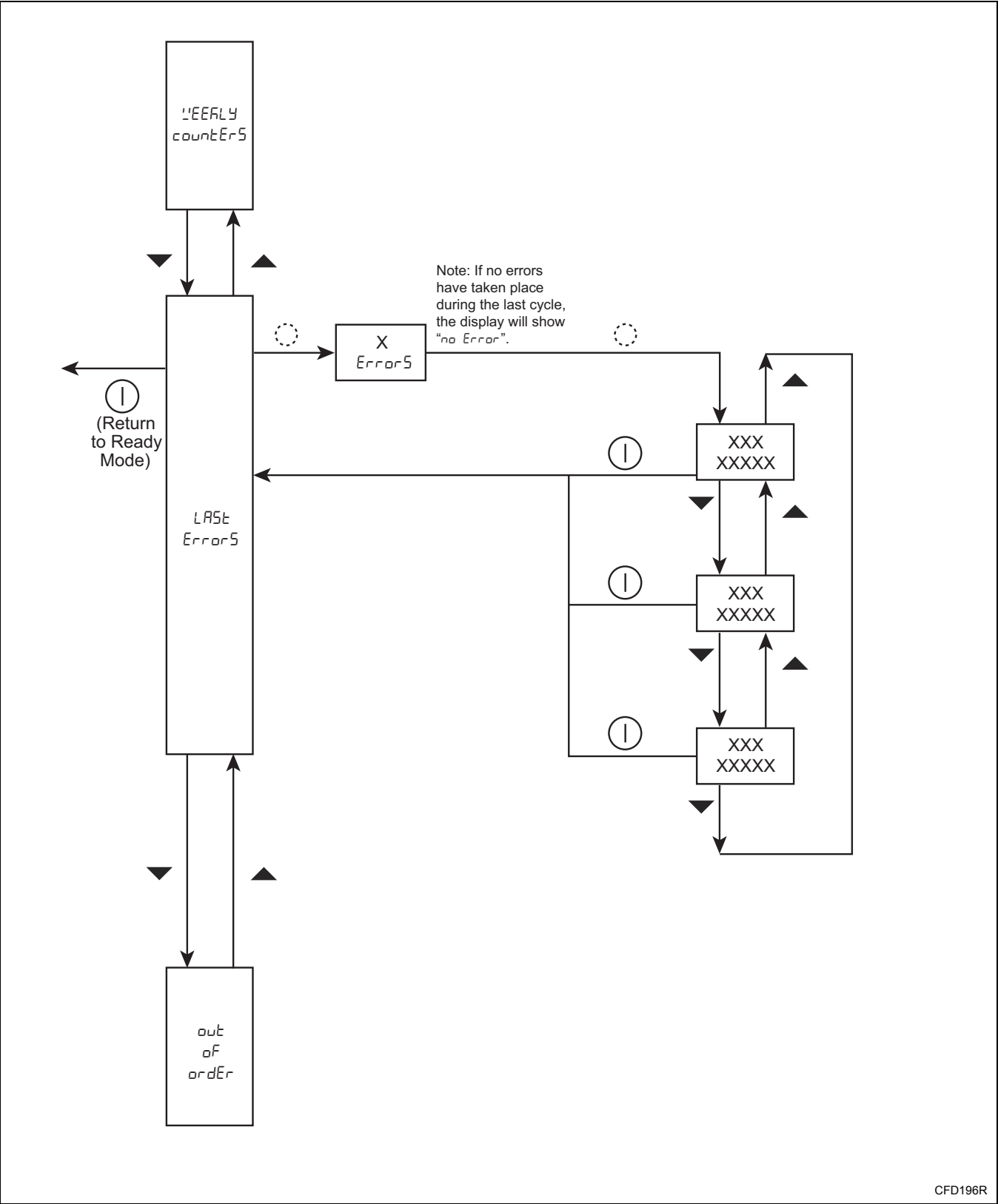
14. Out of Order Sub-Menu
   ### "out of order"

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 ▲ or ▼ 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 ⟳ 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.

 D1352 (EN)

Out of Order Sub-Menu Flowchart
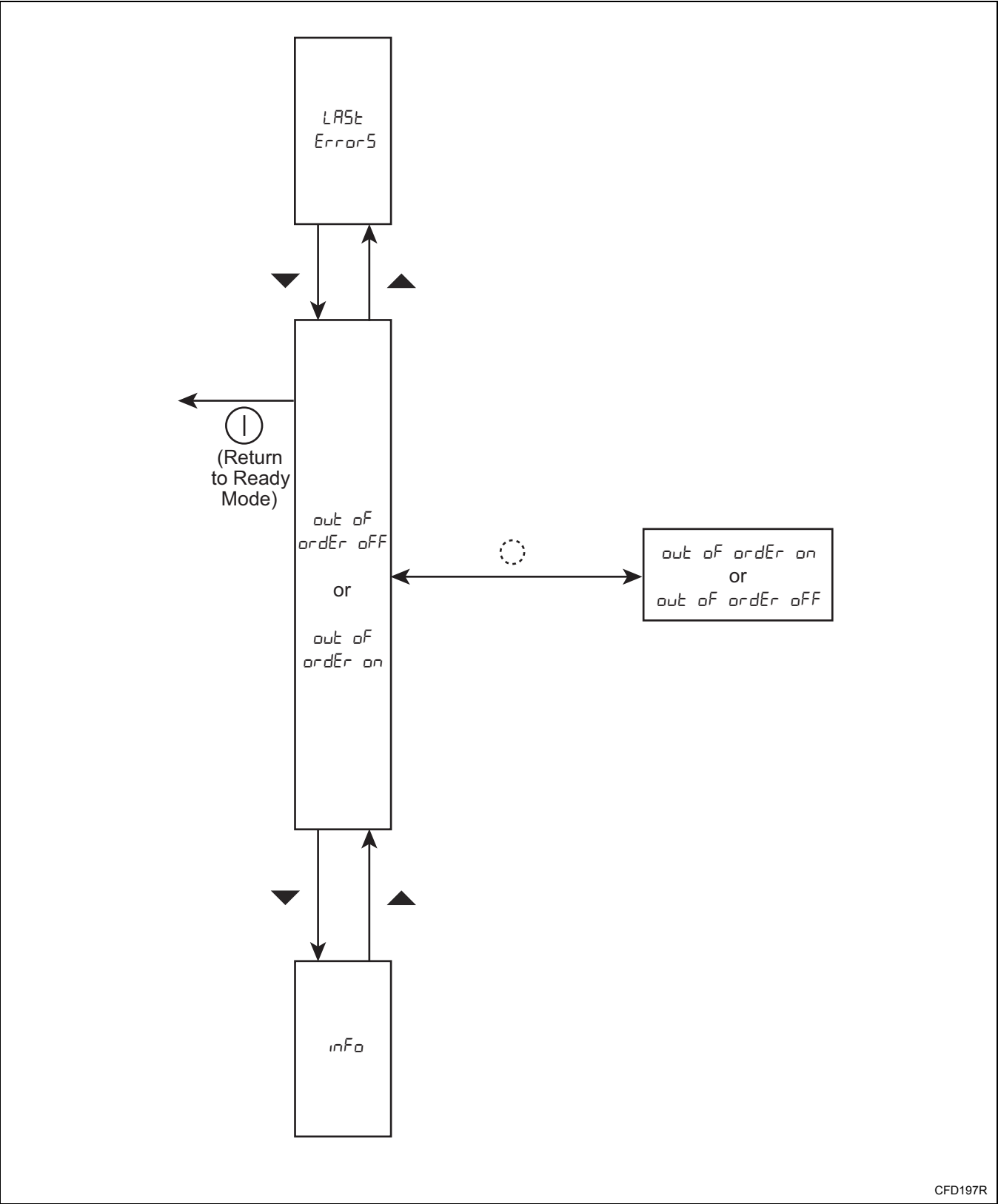
CFD197R

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. • 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 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	Wash data 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 updated.
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.

Error Messages

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.

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 interrupted 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 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/DATE SET	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 ⬡ 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 ⬡ 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.