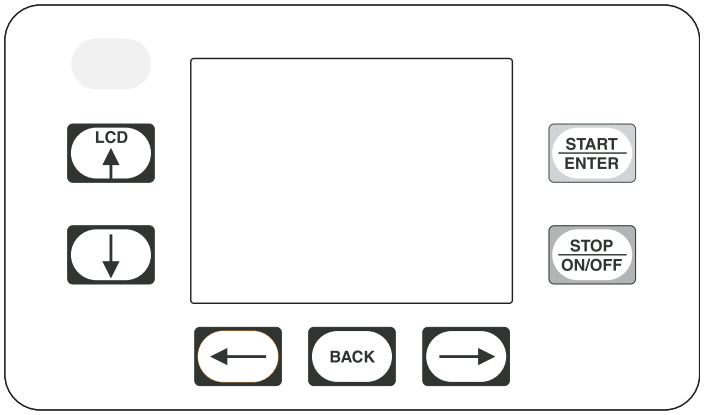
Tumble Dryer

UniLinc Control

Refer to Page 4 for Model Identification

Programming



TMB1276C

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

Alliance Laundry Systems

www.comlaundry.com

Part No. 70444801R3
July 2011

Table of Contents

Introduction

Model Identification

Information in this manual is applicable to these models:

	Gas			Steam/Thermal Oil		Electric	
25 Pound	UA025L UA025N	UT025L UT025N	UU025L UU025N	UT025S	UU025S	UT025E	UU025E
30 Pound	UA030L UA030N	UT030L UT030N	UU030L UU030N	UT030S	UU030S	UT030E	UU030E
35 Pound	UA035L UA035N	UT035L UT035N	UU035L UU035N	UT035S	UU035S	UT035E	UU035E
50 Pound	UA050L UA050N	UT050L UT050N	UU050L UU050N	UT050S UT050T	UU050S UU050T	UT050E	UU050E
55 Pound	UA055L UA055N	UT055L UT055N	UU055L UU055N	Not Applicable		UT055E	UU055E
75 Pound	UA075L UA075N UT075L	UT075N UTF75L UTF75N	UU075L UU075N	UT075S UT075T	UU075S UU075T	UB075E UT075E	UU075E
120 Pound	UA120L UA120N	UT120L UT120N	UU120L UU120N	UT120S UT120T	UU120S UU120T	Not Applicable	
170 Pound	UA170L UA170N	UT170L UT170N	UU170L UU170N	UT170S UT170T	UU170S UU170T	Not Applicable	

Includes models with the following control suffixes:

UO – UniLinc OPL RU – reversing UniLinc OPL

Nameplate Location

The nameplate is located on the back of the machine and is programmed in the UniLinc Control. To access Machine ID Menu through the control:

1. Press and hold STOP ON/OFF, then BACK, then LCD ▲ keypads at the same time.
2. Press the → keypad until Diagnostic is highlighted.
3. Press the START ENTER keypad.
4. Press the → keypad until Machine ID is highlighted.
5. Press the START ENTER keypad.

Always provide the machine's serial number and model number when ordering parts or when seeking technical assistance. Refer to *Figure 1*.

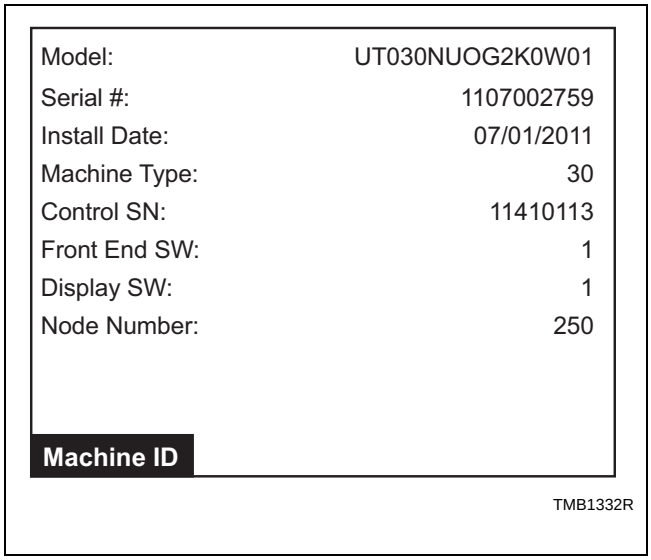


Figure 1

Preliminary Information

About the Control

The UniLinc control on the tumbler is an advanced, graphical, programmable computer that lets the owner control most machine features by interacting with the control.

UniLinc allows the owner to program custom cycles, run diagnostic cycles, and retrieve audit and error information.

Tumblers shipped from the factory have default cycles and other settings built in. The owner can change the default cycle or any cycle.

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

Power Failure Recovery

If a cycle is in progress when the power fails, and if the power outage lasts three or more seconds, the cycle is lost and cannot be resumed when power recovers. If the power outage lasts less than three seconds, the control will resume the cycle when the power recovers.

Communications

The control has the ability to communicate with a PDA and a laptop with an IrDA device running the UniLinc software. Devices such as PDAs and laptops that are IrDA capable (able to transmit information to machine) that have been tested and approved for use with the UniLinc software can be used as a tool for managing the machine.

The control will also accept communication with a network which allows the control to be linked to a personal computer. This network link allows an owner to program, collect data and run diagnostics on any machine. For detailed information on network communications, refer to the network instructions.

Audit Information

The control collects and stores audit information, which can be accessed with a PDA, PC or network. Refer to the following list for some of the available audit information. Refer to ***UniLinc PC and PDA Application User Instructions***.

- Total Number of Individual Cycle Counters
- Last 25 Machine Cycles
- Service History
- End of Cycle to Loading Door Open Time
- End of Cycle to Start of Next Cycle Time
- Total Number of Machine Cycles
- Total Number of Operating Minutes
- Power Failure Audit Data

The PDA, PC or network can receive audit and program data from the control, and send programming data and diagnostic commands to the control. Refer to ***UniLinc PC and PDA Application User Instructions*** for additional information.

Some of the above listed audit data is available manually. Refer to ***Laundry Management*** section.

IR Communications Menu

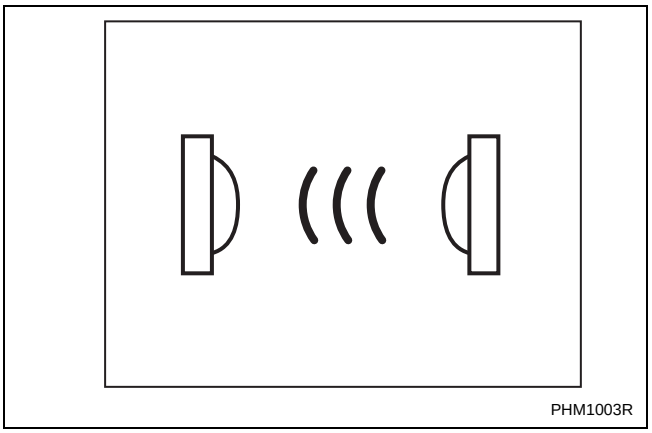


Figure 2

The IR Communications Menu displays while the control is communicating with a PDA. The control will jump back to the previous page when the communication is complete.

IR Communications Error Menu

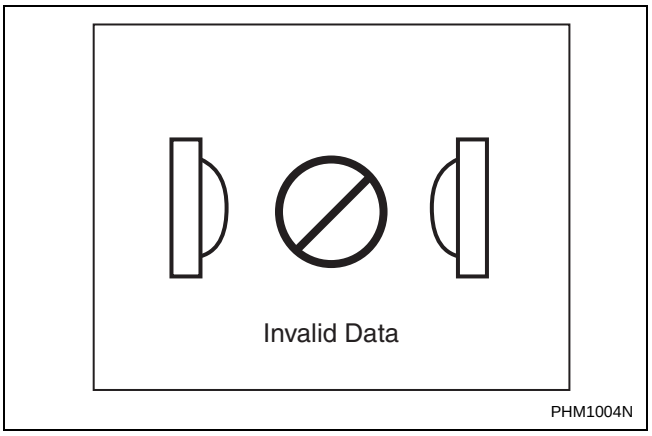


Figure 3

The IR Communications Error Menu displays after the control had an error communicating with a PDA. The control will return to previous page after 3 seconds.

Restore to Factory Defaults

When the user selects Restore All Cycles And Global Settings To Factory-Defaults, the control resets all of the default values. The control also resets Machine Cycles #1 through #41. The control will also reset the following to factory-defaults:

Default Global Settings

Language = English

Ignition Retries = 3

Temperature Units = Fahrenheit (°F)

High (H) Temperature = 190 (°F)

Medium (M) Temperature = 160 (°F)

Low (L) Temperature = 140 (°F)

Very Low (VL) Temperature = 120 (°F)

Cool Down Temperature = 100 (°F)

Cool Down Time = 2 (minutes)

Rapid Advance = Disabled

Multi-Segment Cycles = Disabled

LCD Backlight ON/OFF = On

Banner # 1 = Blank

Banner # 2 = Blank

Daylight Saving = Enabled

Key Pad Audio = Enabled

End of Cycle Audio = Low (5 seconds)

End of Cycle External Signal = Enabled (5 seconds)

Clean Lint Screen Reminder = Off

Display Limit Errors = Disabled

Manual Diagnostics = Enabled (accessable via PC and PDA only)

*Manual Programming = Enabled (accessable via PC and PDA only)

**Reverse Cylinder Rotate Time = 120 (seconds)

**Reverse Cylinder Stop Time = 6 (seconds)

**Advanced Reversing = OFF

***Advanced Options for Moisture Dry = Disabled

***Display Moisture Sensor Error = Disabled

*If manual programming is disabled, programming changes to UniLinc can only be made with an external communication device. Refer to ***UniLinc PC and PDA Application User Instructions.***

**Only available on units equipped with reversing feature.

***Only available on units equipped with moisture sensing feature.

Refer to Factory Defaults, Menu section for information on Restoring Factory Defaults.

Entering Program Mode

1. Press and hold STOP ON/OFF, then BACK, then LCD ▲ to enter the System Menu. Select Program to enter programming options.

UniLinc Identification

Operational Keypad

The control includes seven keypads. These functions are available to the operator and are intended to control and manage operation of the tumbler. Refer to *Figure 4* and *Table 1*.

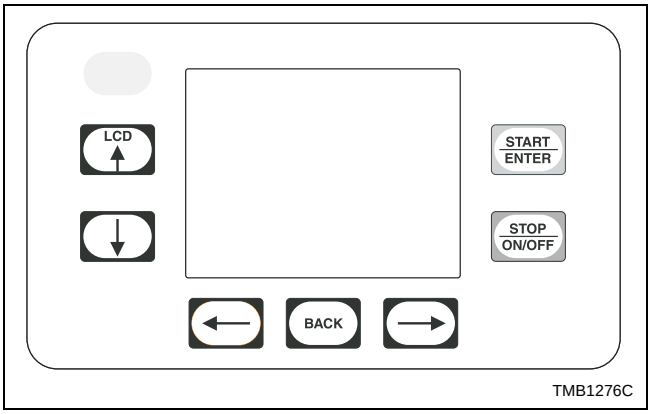


Figure 4

Keypad	Description
LCD/UP ARROW	Press to move the cursor on display and to edit programming values. Also, press while in Cycle Menu or Run Menu to change to the Contrast Adjust/Backlight Menu. Also, press with BACK and STOP ON/OFF to enter System Menu.
DOWN ARROW	Press to move the cursor on display and edit programming values.
LEFT ARROW	Press to move the cursor on display.
BACK	Press to move back to the previous display menu. Also, press with STOP ON/OFF and LCD to enter System Menu.
RIGHT ARROW	Press to move the cursor on display. Press while running a cycle to get to Run Diagnostic Menu.
STOP/ON/OFF	Press to stop and abort a machine cycle during Run Mode. Also press with BACK and LCD to enter System Menu. When in Cycle Programming Menu, press to turn segments and cycles on and off.
START/ENTER	Press to start or rapid advance a machine cycle during Run Mode. Also, press to save edited programming values when used in programming menus.

Table 1

Operation Modes

General Modes of Operation

In each mode of operation, the user may press keypads or communicate with the control to change the displayed menu.

Power-up Mode

The control enters this mode at power-up. After the control completes operation in the Power-up Mode it will enter Idle Mode. The display is blank during Power-up Mode.

Idle Mode

The control is ready for operation in Idle Mode. Control can display different menus depending on user input (keypad press, opening or closing the loading door, or PDA communication). If there is no user input for one minute, control will turn off the LCD backlight. The control will light when there is user input. If there is no user input for 10 minutes, the display will go blank.

If the control is in Idle Mode, Cycle Menu is displayed, loading and lint door closed, and the START ENTER keypad is pressed, control will enter Run Mode.

Run Mode

The Control enters Run Mode during a cycle. The Display shows machine cycle time remaining, the current cycle type, segment, temperature, and graphical indicators. Loading and lint doors are closed during Run Mode. Press STOP ON/OFF keypad to stop cycle and enter Pause Mode. Press → keypad to enter Run Diagnostic Menu. Control enters Pause Mode if loading or lint door opens. Press START ENTER to Rapid Advance.

Rapid Advance Mode

If the Rapid Advance Option is enabled, the user can advance a running machine cycle by pressing the START ENTER keypad. In a Time Dry cycle, pressing the START ENTER keypad will decrease the remaining time by one minute. Pressing and holding the START ENTER keypad will decrease the remaining time by four minutes per second until the end of the cycle.

In the Auto-Dry and Moisture Dry cycles, pressing the START ENTER keypad will advance the cycle to the next enabled segment. Note that Auto-Dry cycles only have one programmable segment.

In the Cool Down segment, pressing the START ENTER keypad will decrease the remaining time by one minute.

When the cycle is completed, the audit counter, Total Rapid Advance Cycles is incremented rather than the Total Machine Cycles audit counter. In addition this cycle is recorded in the audit list “Last 25 Machine Cycles Completed”. If the Rapid Advance Option is disabled preventing a manual Rapid Advance, the user may still execute a Rapid Advance using the PDA or PC. Refer to ***UniLinc PC and PDA Application User Instructions*** for additional information on using a PDA or PC to Rapid Advance a cycle.

Pause Mode

If STOP ON/OFF keypad is pressed or the loading or lint door is opened while in Run Mode, control enters Pause Mode.

If the door is opened then closed, the control will prompt the user to press START ENTER to resume the cycle. If STOP ON/OFF is pressed while already in Pause Mode, the control will enter End of Cycle Mode.

Error Mode

This mode will be entered to display all fatal machine errors.

Communication Mode

This mode is entered whenever the control is communicating with a PDA or a network. Refer to ***UniLinc PC and PDA Application User Instructions.***

Cool Down Mode

The control enters the Cool Down Mode after the heat segment of the cycle is completed or fatal error occurs. The control turns the heater off and for steam heated units turns the damper motor on. The cool down segment will end once the cool down temperature has been reached or the programmed cool down time expires, which ever happens first.

End of Cycle Mode

The control enters End of Cycle Mode after the cool down segment is finished. The display will show a graphic prompting the user to open the loading door. If the door has not been opened or a keypad has not been pressed after two minutes, the machine will enter Extended Tumble Mode. This mode is exited when the door is opened or a BACK or STOP ON/OFF keypad is pressed. The control will then return to Idle Mode.

Extended Tumble Mode

The Extended Tumble Mode has two portions. The Anti-Wrinkle Tumble is entered two minutes after the cycle has ended if the door is not opened. The cylinder will tumble for 30 seconds every two minutes for up to one hour.

If the door hasn't been opened and no keys have been pressed one hour after the Anti-Wrinkle Tumble has ended, the control increments the Anti-Wrinkle Time Exceeded audit counter and enters Delayed Tumble. The cylinder will tumble for two minutes every 60 minutes for up to 18 hours.

Reversing Mode (reversing models only)

Models equipped with the reversing feature will rotate in the forward direction, pause, rotate in the reverse direction and then pause for programmable times and segments of the cycle. Factory default reversing rotate time is 120 seconds and reversing stop time is 6 seconds for all cycles with reversing enabled.

Entering Diagnostic Mode From Idle Mode

When entered from the Idle Mode, the control will be running a test selected by the user via keypad presses or communication with a device. The diagnostic tests available from the Idle Mode are the Test Cycle and Inputs Outputs Menus.

Machine Cycle Definition and Operation

There are 41 machine cycles that can be selected and run. Machine cycles can be modified or made “unavailable” by manually editing them in Modify Cycle Menu or by using the PDA or network to download a modified machine cycle into the control. Machine cycles cannot be deleted, but can be made “unavailable” so that they are not visible from the Cycle Menu. New machine cycles cannot be created, but existing machine cycles that have been edited to be “unavailable” may be re-edited to be available again.

Machine Cycle Operation

When a cycle is run, the control runs the cycle segment by segment in a sequence. First the control examines the Cycle Type chosen to determine if it is a Time Dry, Auto-Dry or Moisture Dry (if equipped) cycle type. Then the first segment is examined to see if it is programmed to “On” or “Off”. If the segment is programmed to “Off”, control skips to the next segment.

At the start of some machine cycles, the control displays a Total Remaining Cycle time. This time is taken from the machine cycles as they are programmed. The Total Remaining Cycle Time begins to count down as soon as the cycle is started.

Time Dry Cycle

In this type of cycle, the control will regulate the temperature and time duration as programmed for the cycle chosen.

Auto-Dry Cycle

If this type of cycle is selected, the control determines the cycle time based on the temperature and dryness level programmed for the cycle chosen.

Moisture Dry Cycle (if equipped)

In this type of cycle, the control checks the programmed material type, programmed target moisture content, programmed temperature and the data received from the moisture sensing system to achieve the desire results.

Rotation Sensor Equipped Machines

On machines equipped with a rotation sensor, the control monitors the rotation sensor to verify the cylinder is rotating. The control calculates the cylinder’s RPM. If the RPM drops to zero while the cylinder is supposed to be rotating, the control will advance to the Cool Down segment of the cycle and an error message will be displayed.

Cycle Menu

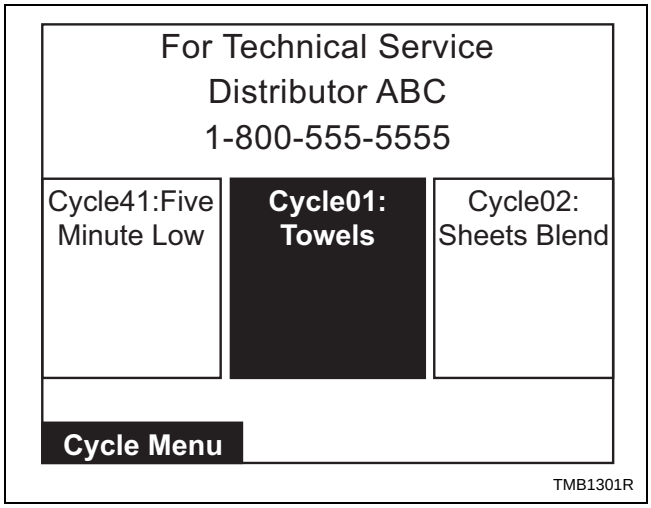


Figure 5

The Cycle Menu is the first menu displayed by the control after power-up. The Cycle Menu allows the user to select one of the 41 machine cycles. Machine cycles that are turned off will not be displayed on the Cycle Menu. As a default, the last run cycle will be displayed in the center, highlighted position. The factory default cycle will be Cycle01.

To Start a Cycle

1. Press the ← or → keypad to change cycles.
2. Press the → keypad to move the cycle in the right most menu box to the center, highlighted position.
3. Press the ← keypad to move the cycle in the left most menu box to the center, highlighted position.
4. Moving the ← and → keypads allows the selected cycle to scroll through the center, highlighted position.
5. Press START ENTER to start selected cycle.

NOTE: Press and hold ← or → keypad to make highlighted area move rapidly.

NOTE: If door is not closed when the START ENTER keypad is pressed, display will jump to the Close Door Menu.

Every night at midnight the control will enter Service Menu if the machine is in idle mode on the Cycle Menu.

When a keypad is pressed or the door is opened or an IR communication takes place, the control will turn the LCD contrast on and the backlight back on (if programmed).

Control will also enter specific service sub-menu for that day.

Bi-Annual Menu displays on the last day of June and December.

Quarterly Menu displays on the first day of the month for January, April, July and October.

Monthly Menu displays on all other first days of the month.

Daily Menu displays on all other days.

Press any keypad to clear the menu and return to the Cycle Menu.

Optional settings are performed by either pressing a keypad or by a combination of keypad presses:

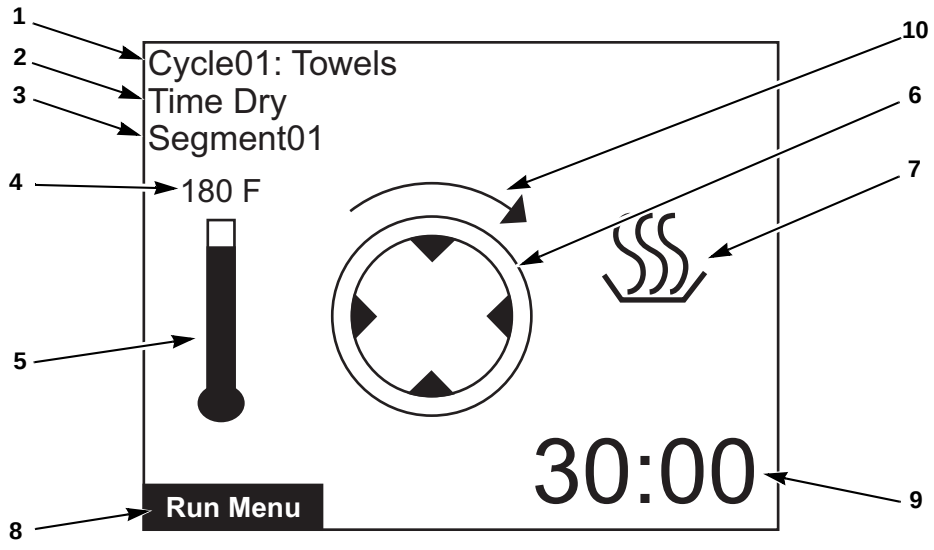
- Press the LCD ↑ keypad to jump control to the Contrast Adjust/Backlight Menu.
- Press the BACK keypad to enter the Service Menu.
- Press and hold STOP ON/OFF , then BACK , then LCD ↑ to enter the System Menu.

A Banner is displayed above the Cycle Selections in the Cycle Menu. If Banner 1 and Banner 2 are programmed, Banner 1 displays for ten (10) seconds and Banner 2 displays for ten (10) seconds. If only one Banner is programmed it will be the only one shown. Refer to Banner Menu Section.

During communication with the PDA or network, all menus enter IR Communications Menu.

Run Menu

Run Menu provides cycle and segment information while the machine is operating. Refer to *Figure 6*.



1	Cycle Number and Name	**7**	Heat / No Heat Indicator
2	Cycle Type (and Material Type for Moisture Sensing Models)	**8**	Menu Indicator
3	Segment (Number or Cool Down)	**9**	Cycle Time Remaining (or Cycle Progress Indicator for Auto-Dry Cycle Type and Moisture Sensing Models)
4	Programmed Temperature	**10**	Reversing Enabled / Disabled
5	Graphical Temperature Indicator (Actual)		
6	Basket Animation		

Figure 6

The Run Menu cannot be navigated by manipulating the arrow keypads. Press START ENTER keypad to rapid advance the cycle.

The Run menus include the Run Menu, the Run Diagnostic Menu, and the various sub-screens of the Run Diagnostic Menu. Press the → keypad to jump to the Run Diagnostic Menu.

Press the STOP ON/OFF keypad to stop the cycle in any of the Run menus.

When the STOP ON/OFF keypad is pressed, the display will jump to the Cycle Stopped Menu. Refer to ***Operation Modes*** section for more detail.

Contrast/Backlight Menu

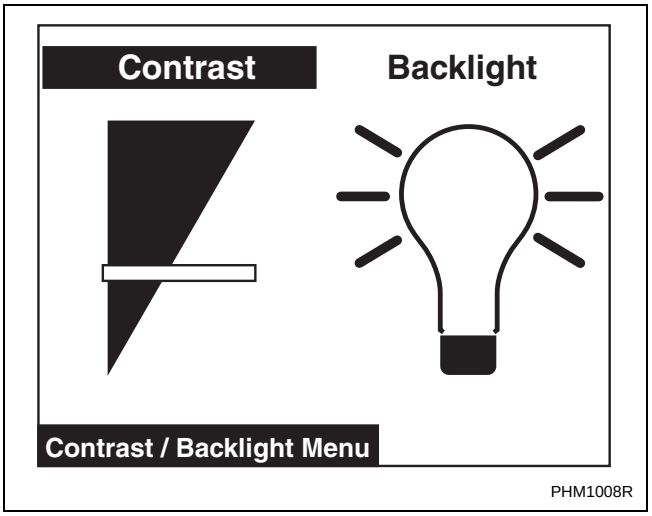


Figure 7

Press the LCD keypad from Cycle Menu or Run Menu to enter the Contrast Adjust/Backlight Menu. The Contrast Adjust/Backlight Menu allows the user to adjust contrast and turn the backlight on or off.

Press the ← or → keypad to highlight “Contrast” or “Backlight” menu items.

Once the menu item has been selected, press the LCD ↑ or ↓ keypad to change contrast. The backlight is either on or off and will have a factory default of on.

Press the BACK keypad to enter the previous page.

If the Contrast Adjust/Backlight Menu is selected from the Run Menu and the STOP ON/OFF keypad is pressed, the cycle is stopped.

Close Door Menu

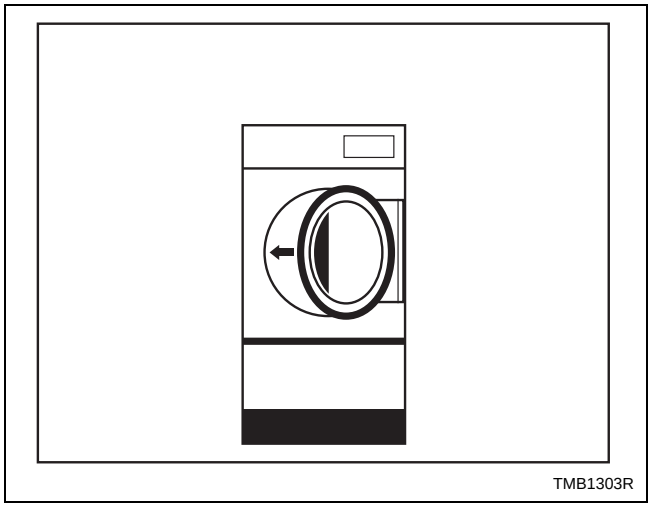


Figure 8

The Close Door Menu displays when loading door or lint door on the machine is open and needs to be closed.

Close door or press the BACK keypad to return to Cycle Menu.

Run Diagnostic Menu

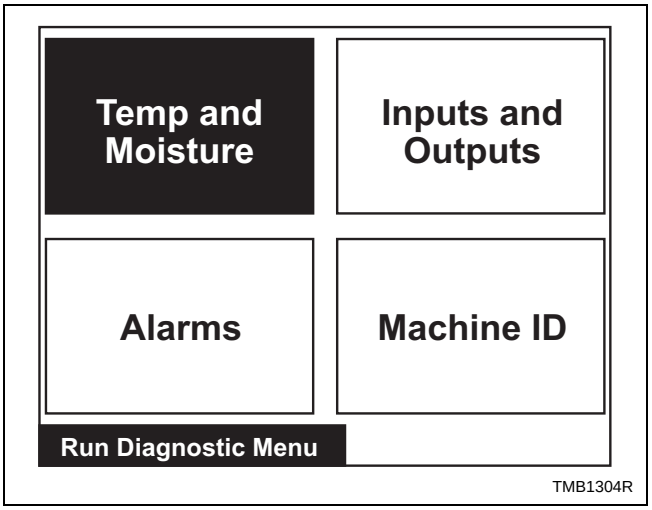


Figure 9

The Run Mode Diagnostic Menu allows user to access diagnostic information of the cycle currently running. The menu contains temperature and moisture, inputs and outputs, alarms, and machine ID.

While machine is running, press the → keypad to enter Run Diagnostic Menu.

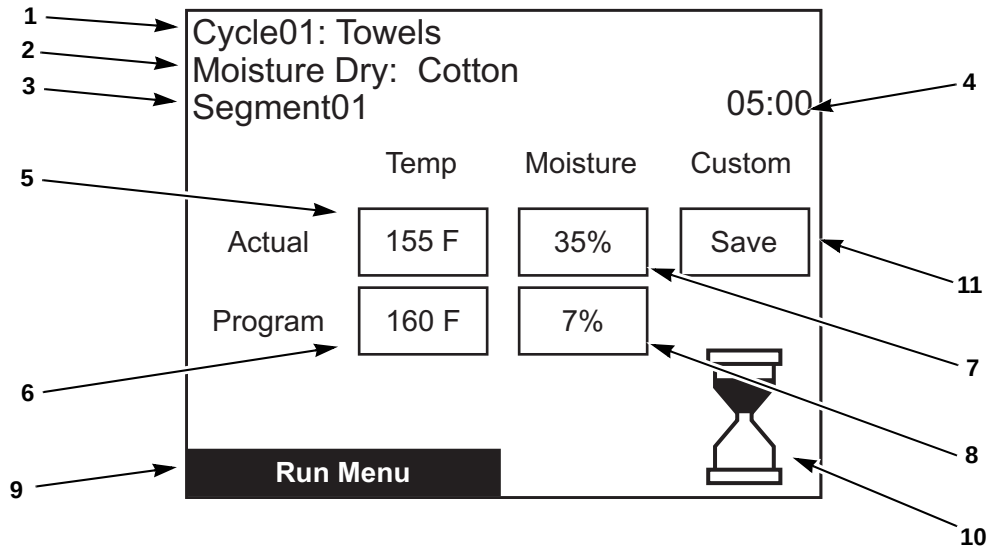
Press the ←, →, LCD ↑ or ↓ keypad to navigate the menu. Refer to Diagnostics section for more description of these menus.

Press the START ENTER keypad to choose selection.

The STOP ON/OFF keypad will stop the cycle.

If the BACK keypad is pressed, display enters Run Menu. If nothing is selected for 15 seconds, the display will return to Run Menu.

Temp and Moisture Menu



1	Cycle Number and Name	**8**	Programmed Moisture Content (Moisture Sensing Models only)
2	Cycle Type and Material Type (Moisture Sensing Models only)	**9**	Menu Indicator
3	Segment (Number or Cool Down)	**10**	Cycle Progress Indicator / Cycle Time Remaining
4	Segment Time Elapsed	**11**	Save Current Moisture as Target (Moisture Sensing Models only) or Save Elapsed Time as Total Cycle Time (Time Dry Cycles)
5	Actual Temperature		
6	Programmed Temperature		
7	Actual Moisture Content (Moisture Sensing Models only)		

Figure 10

A sub-menu of the Run Diagnostic Menu, the Temp and Moisture Menu is used to display detailed operating data and, if enabled, allow the user to change the programmed temperature, time or moisture of a currently running cycle. The top portion of the display contains the same information listed in the Run Menu detailing Cycle, Number and Name, Cycle Type, Material Type and Segment.

Press BACK keypad to enter Run Mode Diagnostic Menu. Press STOP ON/OFF keypad to pause/stop the cycle, the control will enter Cycle Stopped Menu. Press the START ENTER keypad to advance the cycle one segment.

Press ← or → keypads to highlight programmed temperature, moisture/dryness, time or custom save. Press the LCD ↑ or ↓ keypads to edit the selected value of temperature, moisture, dryness or time. All changes take effect immediately, but don't change the saved cycle.

On Moisture Sensing models, pressing START ENTER while Custom Save is highlighted will set the current actual moisture as the new programmed moisture for the running cycle. The current cycle will then advance to the Cool Down segment and the control will return to Run Menu.

While running a Time Dry cycle, pressing START ENTER while Custom Save is highlighted will set the total elapsed cycle time as the new programmed total cycle time. The current cycle will then advance to the Cool Down segment and the control will return to Run Menu.

Cycle Stopped Menu

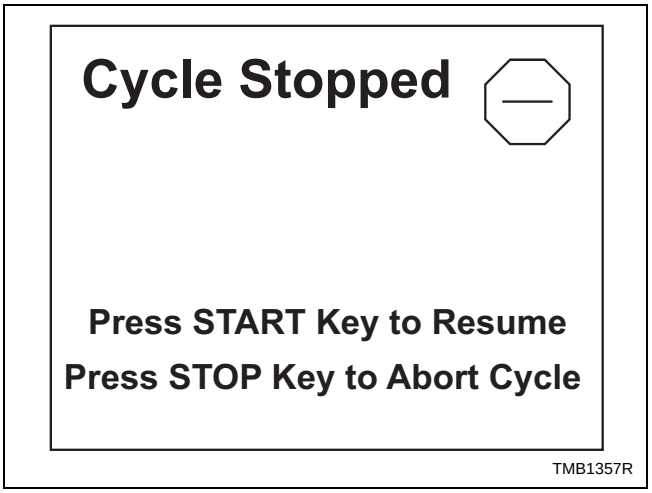


Figure 11

The Cycle Stopped Menu will be displayed in Pause Mode. Press START/ENTER to resume the cycle or STOP/ON/OFF to abort the cycle and go to the Open Door Menu.

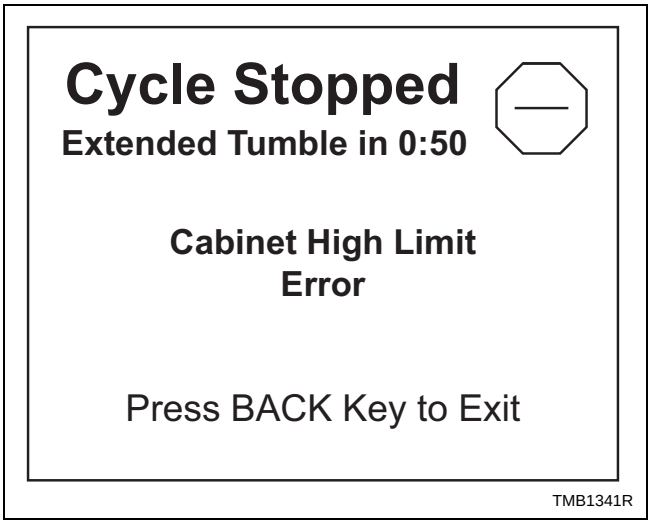


Figure 12

The Cycle Stopped Menu will display an error, if one occurs, at the end of a cycle or when STOP/ON/OFF is pressed. The time remaining until Extended Tumble will be displayed. Press BACK to exit to go to Open Door Menu or open the door to go to the Cycle Menu.

Error Menu

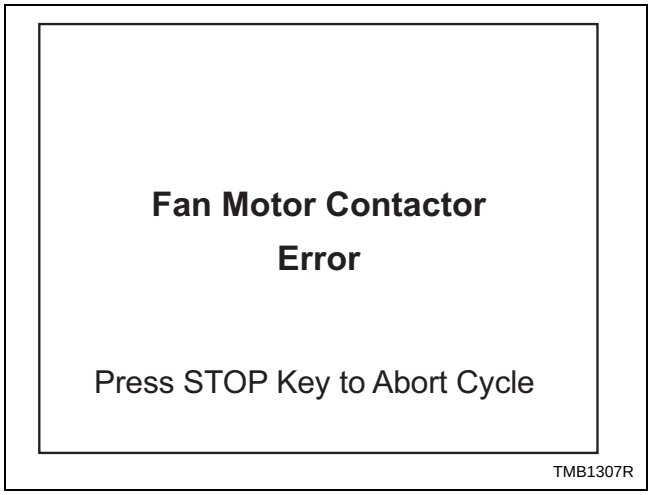


Figure 13

The Error Menu will be displayed as a result of an error during a cycle, the Test Cycle or while on the Cycle Menu.

If a fatal error occurs during a cycle, the Error Menu display will alternate with the Run Menu every three seconds until STOP/ON/OFF is pressed or the Cool Down is complete.

Open Door Menu

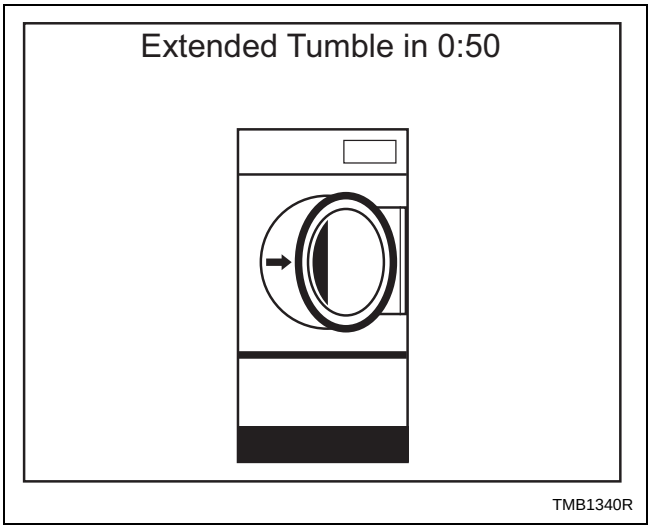


Figure 14

The Open Door Menu is displayed from the Run Menu prior to a completed cycle. The time until Extended Tumble is shown at the top of the display.

Open the door or press the BACK or STOP ON/OFF keypad to return to the Cycle Menu.

Clean Lint Screen Menu

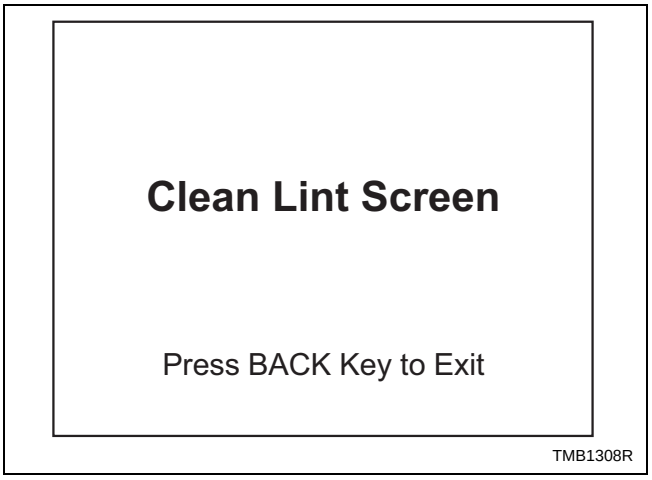


Figure 15

The Clean Lint Screen Menu is displayed from the Open Door Menu only after globally programmed number of cycles have been completed. Press BACK to return to the Cycle Menu

Load Sensed Menu

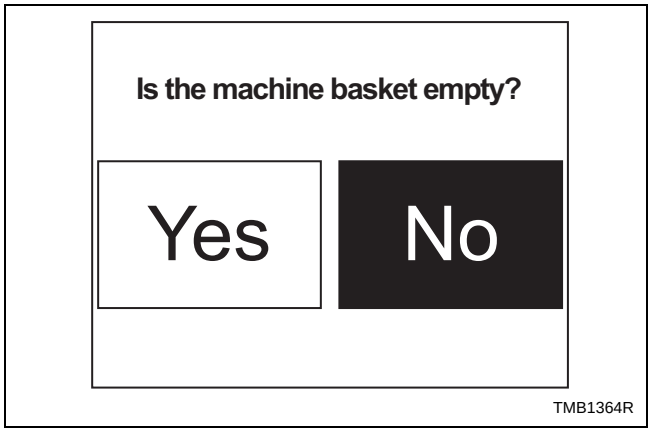


Figure 16

The Load Sensed Menu will show from the Cycle Menu only after eleven minutes of Idle Mode, without user interaction, having consistently sensed a load for that entire period. The menu prompts to the operator to indicate whether the machine basket is empty. No is highlighted by default. If the user presses the START ENTER keypad while No is selected, the control will return to the Cycle Menu. If the user selects Yes, the control will display the Service Moisture Sensor Menu.

Service Moisture Sensor Menu

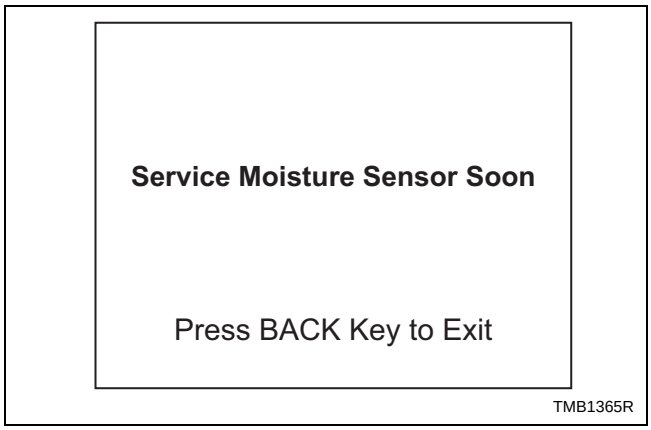


Figure 17

The Service Moisture Sensor Menu will show from the Load Sensed Menu indicating to the operator that the Moisture Sensor System may need service soon. The menu also instructs the user that the BACK keypad may be pressed to return to the Cycle Menu.

Menu Navigation

The UniLinc

The front-end control allows the user to control machine operation and programming by pressing keypads to select options on the display menus and by navigating between display menus.

The user can navigate the control in the following

Menu to Menu Navigation

The LCD , ↓ , → and ← keypads are used to select the desired menu. Once the menu is selected, the START ENTER keypad is used to enter that menu. The BACK keypad allows the user to return to the previous menu.

ways.

Screen to Screen Menu Navigation

In Screen to Screen Navigation, the ← or → keypad are used to go from one menu page to the next (i.e., moving from Alarms [1 of 3] Menu to Alarms [2 of 3] or Alarms [3 of 3] menus), if a menu cannot fit entirely on the same page. The Laundry Management Menu uses this navigation method. Cycle programming also uses this method.

Menu Navigation with Parameters

Another type of menu is a menu with modifiable parameters. The → and ← keypads are used to navigate through the screens. The LCD and ↓ keypads are used to change the valve of the highlighted item.

An example is the Temperature Menu under Global Setup. The menu items are positioned vertically, but the ← and → keypads are used to navigate through the different items while the LCD and ↓ keypads are used to adjust the values.

Cycle Name and Banner Editing

This Edit Mode is used when a cycle name must be modified or a banner created. The highlighted box is moved over the editable item and the START ENTER keypad is pressed. The mode can be verified by seeing the first character in the item with a blinking underscore underneath. The character can then be changed by using the LCD and ↓ keypads. To enter a space or delete a character, press the STOP ON/OFF keypad.

The Cycle Name can contain the capital letters “A” through “Z”, small letters “a” through “z”, the numbers “0” through “9”, and special characters. The user can go forward to the next character in the item by using the → keypad. Press the ← keypad to go backward a character. If the first character in the item is selected and the ← keypad is pressed, the cursor will go to the last character of the item. Thus, the cursor will move only within the item when the horizontal keypads are pressed.

Press the START ENTER or BACK keypad to exit the Edit Mode.

Display Screen Maps

Refer to the following charts for maps of all of the display menus.

System Menu Map Tree

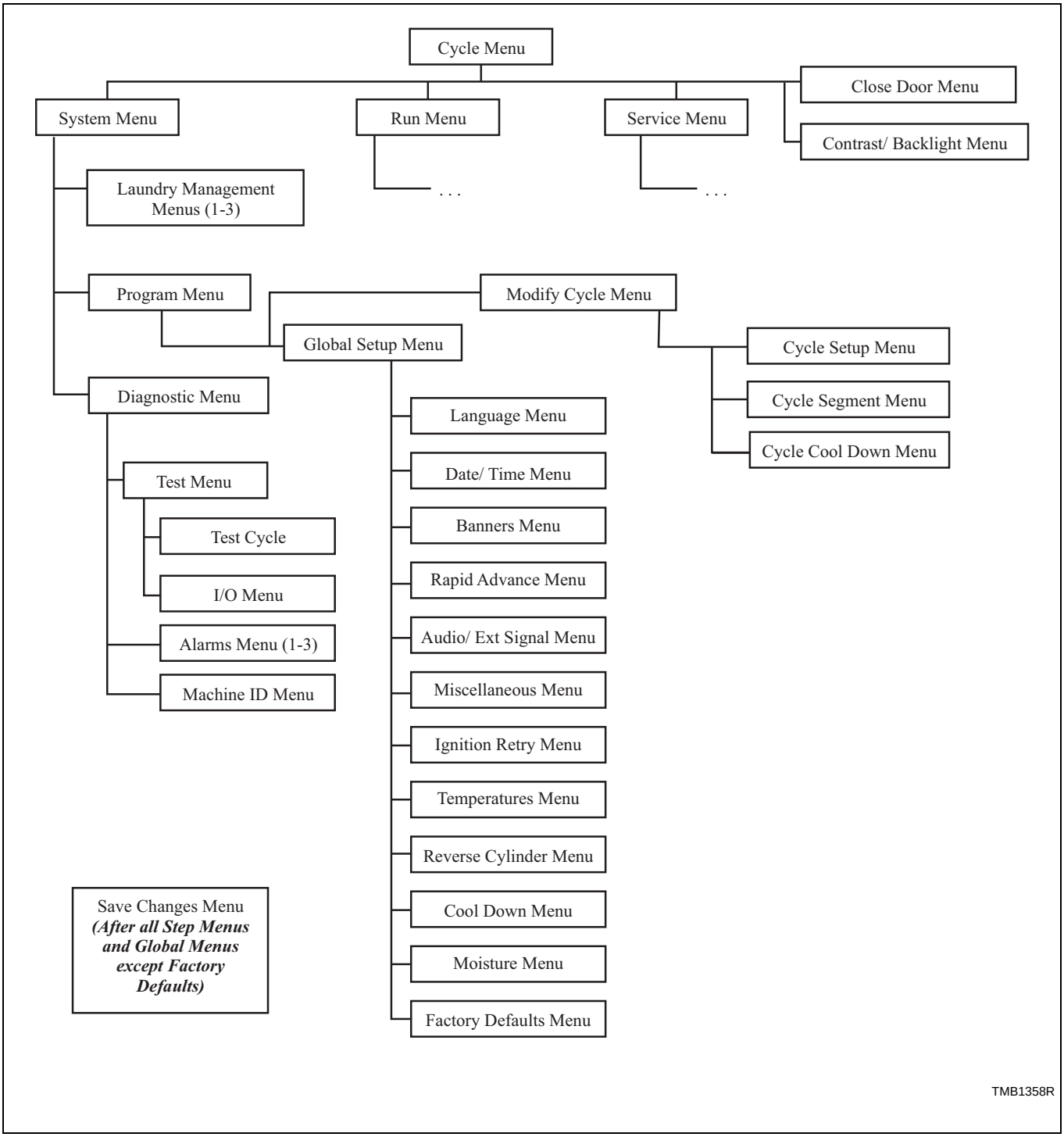


Figure 18

Run Menu Map Tree

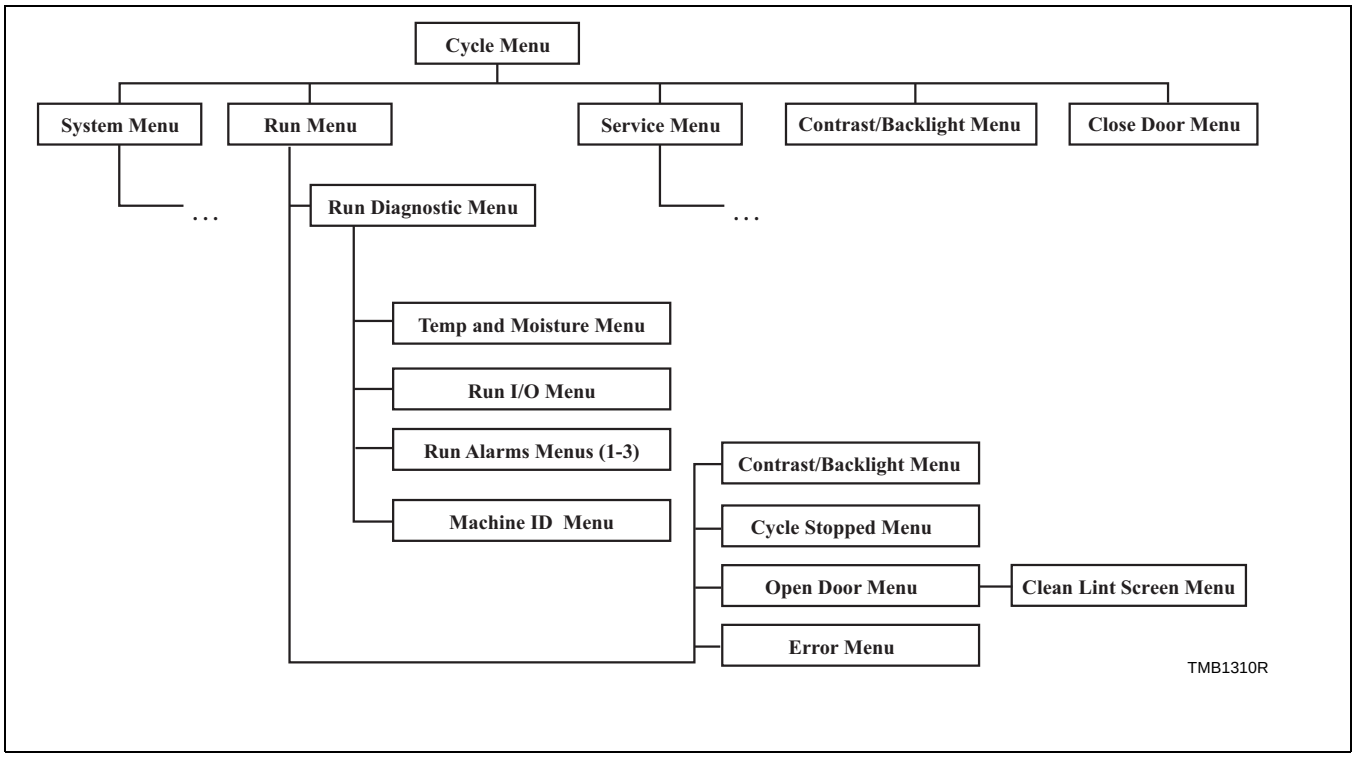


Figure 19

Service Menu Map Tree

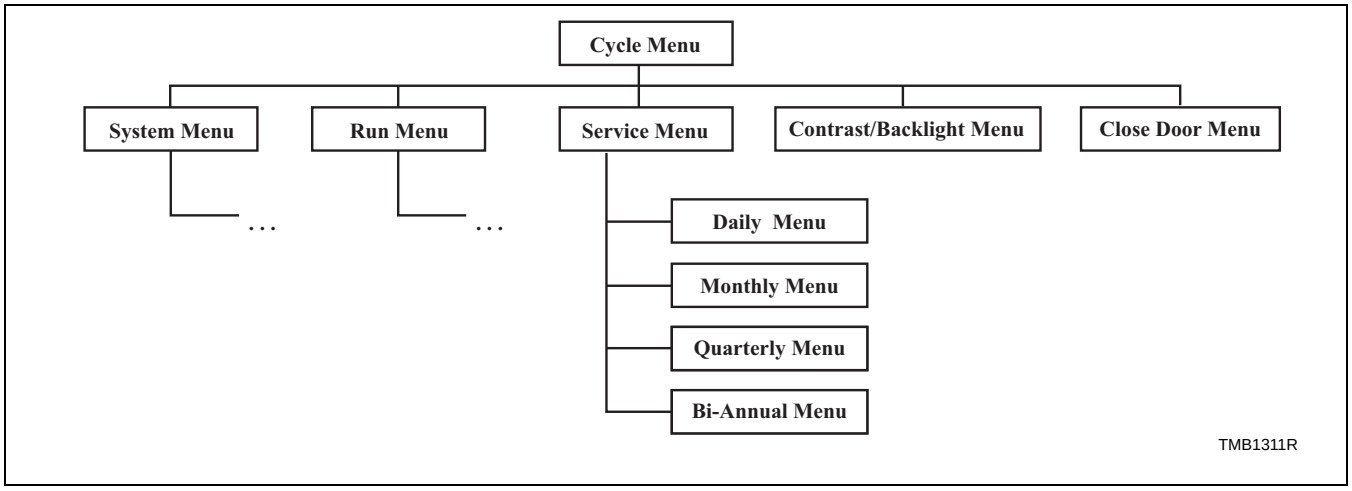


Figure 20

Programming UniLinc

System Menu

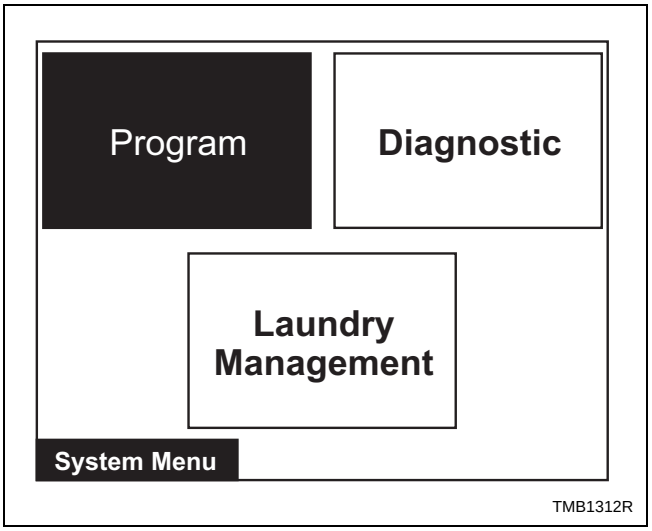


Figure 21

The System Menu allows the user to access: cycle programming, diagnostics and laundry management.

While on the Cycle Menu press and hold STOP ON/OFF, then BACK , then LCD ▲ to enter the System Menu.

The System Menu is a submenu of the Cycle Menu. The navigation of the System Menu is different from the Cycle Menu. In the Cycle Menu, the highlighted text box was stationary. In the System Menu, the ARROW keypads control the location of the highlighted text box. Text will remain at the same location but the highlighted box will move when the ←, →, LCD ▲, and ↓ keypads are pressed.

Press the START ENTER keypad to enter selected menu.

Press the BACK keypad to return to the Cycle Menu screen.

Save Changes Menu

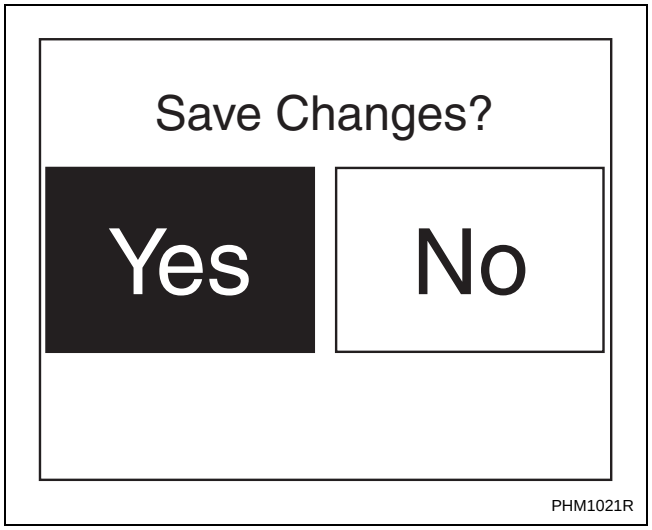


Figure 22

The Save Changes Menu is used to confirm programming changes when modifying a cycle or the values of the Global Settings. The Save Changes Menu will default to Yes. Using the ← or → keypad will move the cursor between Yes or No. Press the START ENTER keypad to make a selection. Once the START ENTER keypad is pressed, the display will either return to the Modify Cycle Menu or the Global Setup Menu depending in which submenu the display was in.

Program Menu

Program Menu

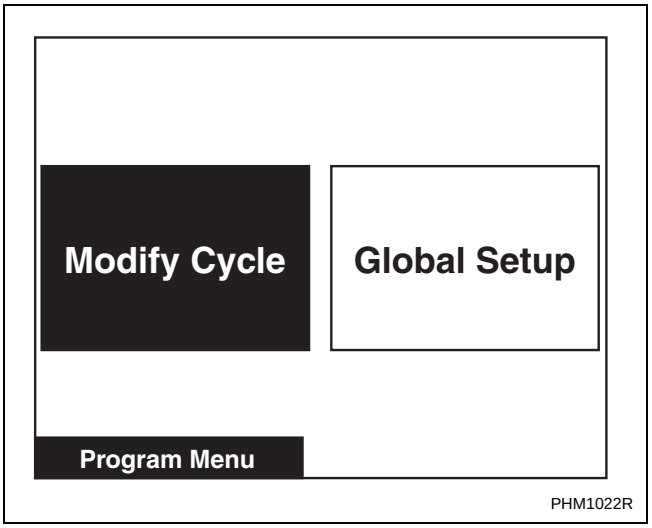


Figure 23

In System Menu, select Program and press START/ENTER.

To program cycles, select Modify Cycle and press START/ENTER.

To change properties that will affect the machine globally, select Global Setup (i.e., language displayed, Cool Down Temperature) and press START/ENTER.

Press the BACK keypad to return to System Menu.

Modify Cycle

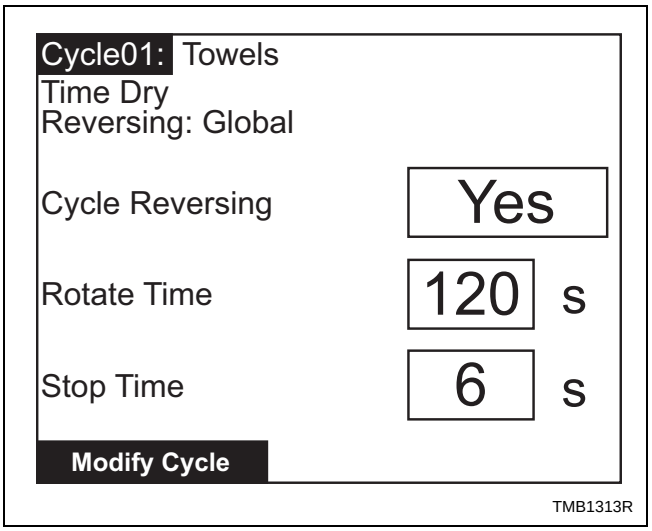


Figure 24

The Modify Cycle Menu is used to program the cycles.

The Cycle Number will be highlighted when the Modify Cycle is first displayed.

Press the LCD or ↓ keypad to change cycle selections.

The cycle can be turned on and off by pressing the STOP/ON/OFF keypad. If the cycle is turned off, the Cycle Name will display "Off" and the user will not be able to make any changes to the cycle.

Press the → keypad to make the highlighted box move to the cycle name to the right of the cycle number.

Press the ← keypad from Cycle Number to make the display jump to the Modify Cycle Cool Down Menu.

NOTE: All cycle numbers have to be scrolled through even though they may be shut off. *Figure 25* illustrates the flow of the cursor during the programming of a cycle.

To edit a cycle name, select the cycle name and press the START/ENTER keypad.

The first character of the Cycle Name will have a blinking underscore underneath to display it is ready for editing. Use the LCD and ↓ keypads to select the different characters. After the desired character has been selected, press the → keypad to save the character and move to the next character. The user may press the ← keypad to go back a character. Pressing the ← keypad when located on the first character will take the user to the last character, which may be a blank space. Continue pressing the ← keypad to move to desired character. The blinking underscore is under the last character and the → keypad is pressed, the blinking underscore will move to the first character.

Press the START/ENTER keypad to exit edit mode.

NOTE: Refer to *Table 2* for a chart of available letters, numbers and symbols.

Cycle Type can be modified by pressing the LCD or ↓ keypad while Cycle Type is highlighted.

Press the → keypad to move to Material Type (if available). Press the LCD or ↓ keypad to change the value.

Press the → keypad to modify the reversing values if available. Press LCD or ↓ keypad to change the value.

Press the → keypad to move highlighted box to the first Segment Number. While the Segment Number is highlighted, the Segment Number can be turned on or off by using the STOP ON/OFF keypad. If turned off, all sub programming steps will become inaccessible. Segment 01 can't be turned off.

In general, press the → or ← keypad to navigate the various Segments and LCD or ↓ to change their parameters.

After the Segment Menu, press the → keypad to move to the Cool Down Segment Menu.

If the current Cycle Type is Moisture Dry and the global programming Advanced Options for Moisture Dry is enabled, pressing → from the last segment menu will send control to the Advanced Options Menu. Another → keypad press will then go to the Cool Down Segment Menu.

At any time, press the BACK keypad to jump to the Save Changes Menu.

Available Characters

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Q	R	S	T	U	V	W	X	Y	Z	a	b	c	d	e	f
g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v
w	x	y	z	0	1	2	3	4	5	6	7	8	9	!	"
#	$	%	&	'	(	)	*	+	,	-	.	/	:	;	<
=	>	?	@	[	\	]	^	_	`	{	|	}	~	€	‚
ƒ	„	…	†	‡	ˆ	‰	Š	‹	Œ	Ž	‘	’	“	”	•
–	—	˜	™	š	›	œ	ž	Ÿ		¡	¢	£	¤	¥	¦
§	¨	©	ª	«	¬	-	®	¯	°	±	²	³	´	µ	¶
·	¸	¹	º	»	¼	½	¾	¿	À	Á	Â	Ã	Ä	Å	Æ
Ç	È	É	Ê	Ë	Ì	Í	Î	Ï	Ð	Ñ	Ò	Ó	Ô	Õ	Ö
×	Ø	Ù	Ú	Û	Ü	Ý	Þ	ß	à	á	â	ã	ä	å	æ
ç	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô	õ	ö
÷	ø	ù	ú	û	ü	ý	þ	ÿ							

Table 2

Cycle, Segment and Step Programming Flow Diagram

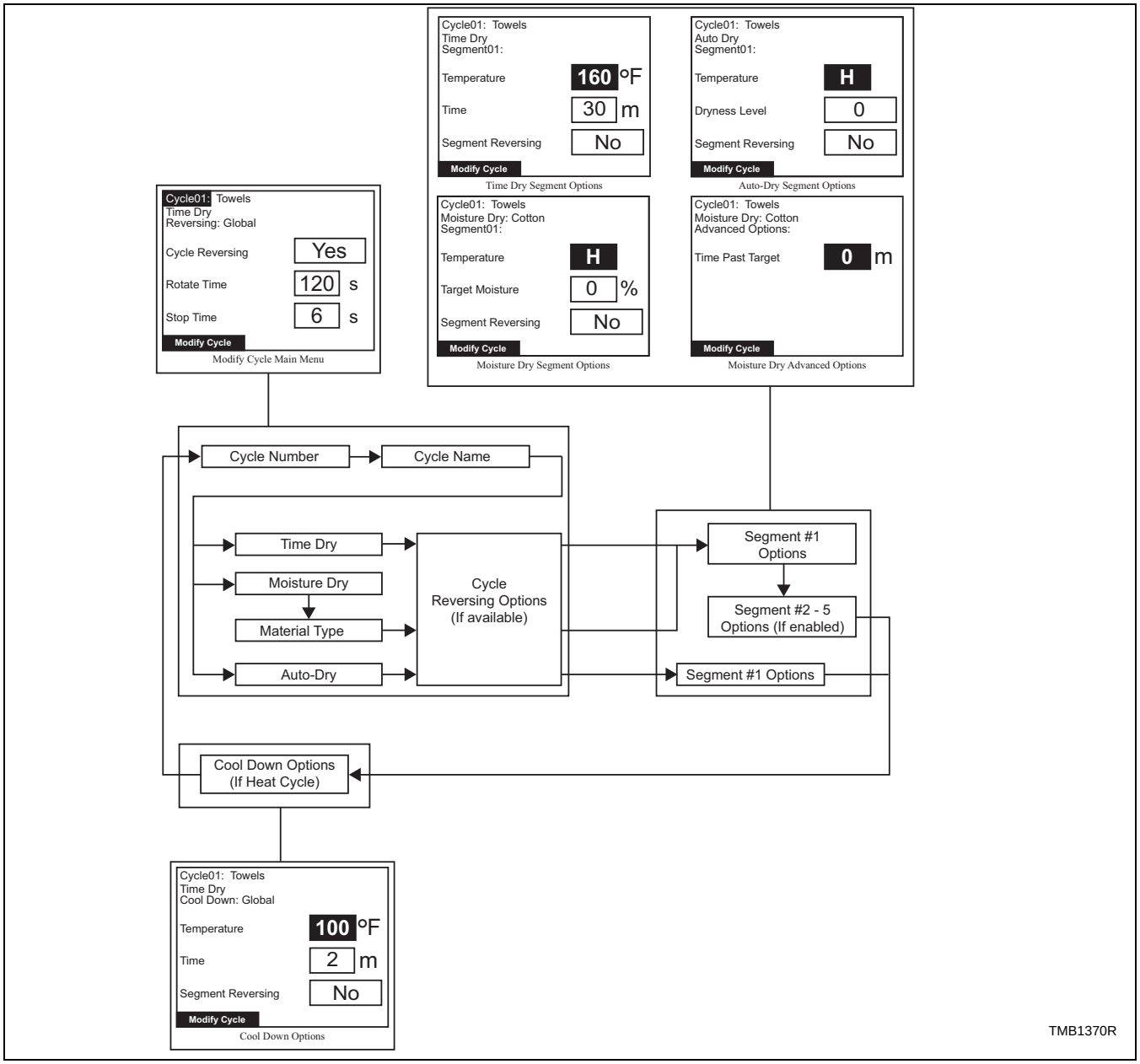


Figure 25

Modify Cycle Segment Menu Navigation

Modify Cycle Segment Menus are a subgroup of the Modify Cycle Menu and the navigation is very similar to the navigation of the Modify Cycle Menu. When a segment menu is first displayed, the segment name will be highlighted. While the segment name is highlighted, it can be toggled on or off by pressing the STOP ON/OFF keypad. If the segment is toggled from OFF to ON, then the last programmed parameters will be displayed.

NOTE: The reversing features will not be available if the unit is not equipped with that option.

Press the → keypad to move to the next segment.

Press the LCD ↑ or ↓ keypad to change the value.

Global Setup

Global Setup Menu

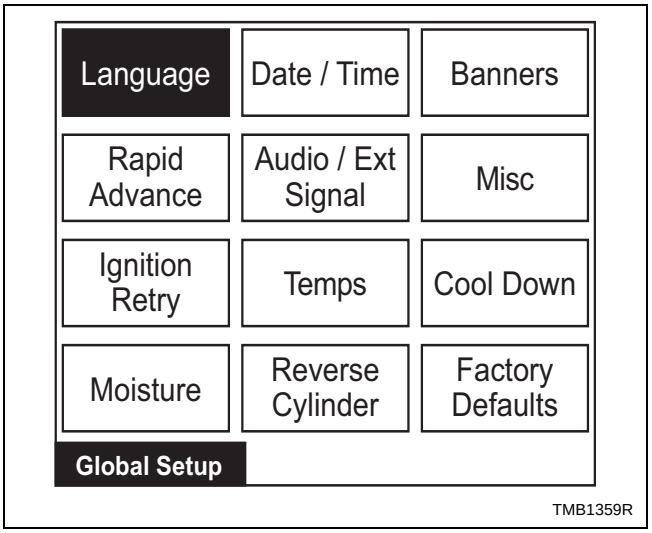


Figure 26

The Global Setup Menu allows the user to make changes to global properties of the machine. Use the ←, →, LCD ↑, and ↓ keypads to navigate the menu. Select a menu item by pressing the START ENTER keypad. Press the BACK keypad to enter the Program Menu.

Language Menu

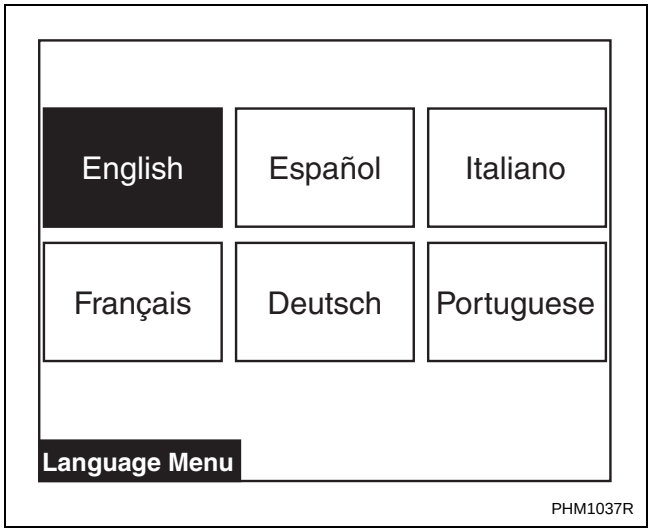


Figure 27

The Language Menu is used to select the language displayed. The user can choose English, Spanish, Italian, French, German or Portuguese.

Press the ←, →, LCD ↑ or ↓ keypad to move the highlighted box through the different selections. English is the default language.

NOTE: Menus related to cycle operation are the only menus that will display in the chosen language if English is not selected. All System Menu sub-menus will remain in English.

Press START ENTER to select a language. The Save Changes Menu will display.

Press ← or → to move highlighted box to “Yes” or “No”.

Press the START ENTER keypad to return to Global Setup Menu. If no changes were made, press the BACK keypad to return to Global Setup Menu.

Date/Time Menu

Figure 28

The Date/Time Menu is used to set the date, day of the week, time, and daylight saving option.

Press ← and → keypads to move the highlighted box through the different items in the menu. Once the item is highlighted, the value can be changed by using the LCD ↑ and ↓ keypads. The Save Changes Menu will display. Use ← or → to move highlighted box to "Yes" or "No".

Press the START ENTER keypad to return to Global Setup Menu. If no changes were made, press the START ENTER or BACK keypad to return to Global Setup Menu.

The control's Clock will automatically adjust for leap-year. The control may be programmed for automatic daylight saving adjustment. If the Daylight Saving option is disabled, no adjustment takes place. If it is enabled, on the second Sunday in March, the time will spring forward from 2:00 AM to 3:00:00 AM. On the first Sunday in November, the time falls back from 2:00:00 AM to 1:00:00 AM.

Daylight Saving can be enabled or disabled by moving highlighted box to Daylight Saving and pressing LCD ↑ or ↓ to Yes or No. The Save Changes Menu will display. Use ← or → to move highlighted box to "Yes" or "No". Press START ENTER keypad to return to Global Setup Menu. If no changes were made, press START ENTER or BACK keypad to return to Global Setup Menu. The factory-default value for daylights saving is enabled.

Banners Menu

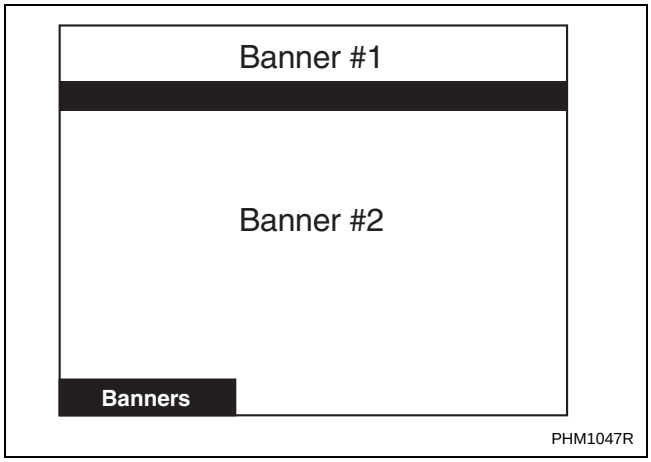


Figure 29

The Banners Menu is used to create or modify the banners that are displayed while the machine is on the Cycle Menu. The banners are displayed at the top of the screen.

The banners are created or modified using the Edit Mode. Refer to Program Menu, Modify Cycle section. Use the LCD ↑ or ↓ keypad to highlight the different lines and press the START ENTER keypad to save the edit. Pressing the BACK keypad will jump to the Save Changes Menu. Use ← or → to move highlighted box to "Yes" or "No". Press the START ENTER keypad to return to Global Setup Menu. If no changes were made, press the START ENTER or BACK keypad to return to Global Setup Menu.

Rapid Advance Menu

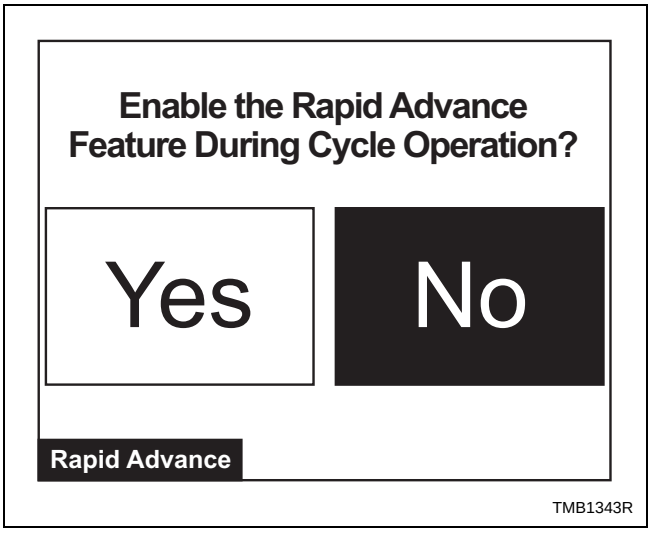


Figure 30

The Rapid Advance Menu has the option of whether the user will be able to rapid advance through segments while the machine is operating. Press the LCD, ↓, ← or → keypad to change the selection. All the keypads have the same effect and will toggle the selection between on or off. Press the START ENTER or BACK keypad to jump to the Save Changes Menu. Use ← or → to move highlighted box to "Yes" or "No". Press START ENTER keypad to return to Global Setup Menu. If no changes were made, press the START ENTER or BACK keypad to return to Global Setup Menu.

Audio Menu

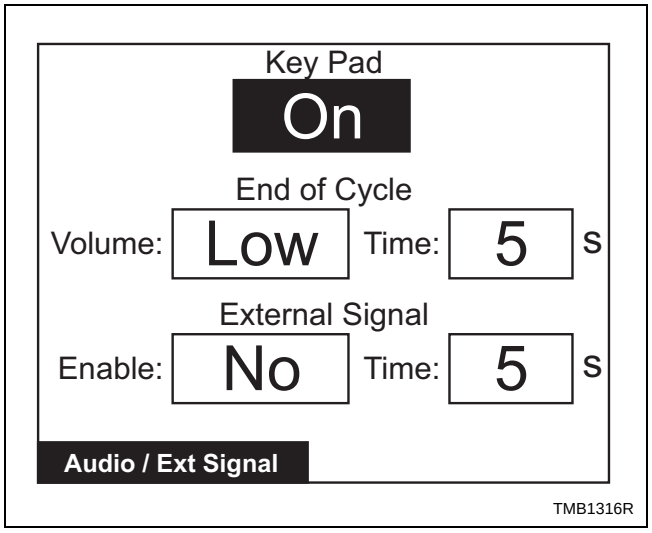


Figure 31

The Audio/External Signal Menu sets the audio options of the keypad audio feedback, the beeper volume and the External Signal.

Press the ← and → keypads to move the highlighted box through the different items in the Audio Menu.

Once the item is highlighted, press the LCD and ↓ keypads to change the value. Press the START ENTER or BACK keypad to return to the Save Changes Menu if changes were made.

Press the ← or → keypad to move highlighted box to "Yes" or "No". Press START ENTER keypad to return to Global Setup Menu. If no changes were made, press START ENTER or BACK keypad to return to Global Setup Menu.

Miscellaneous Menu

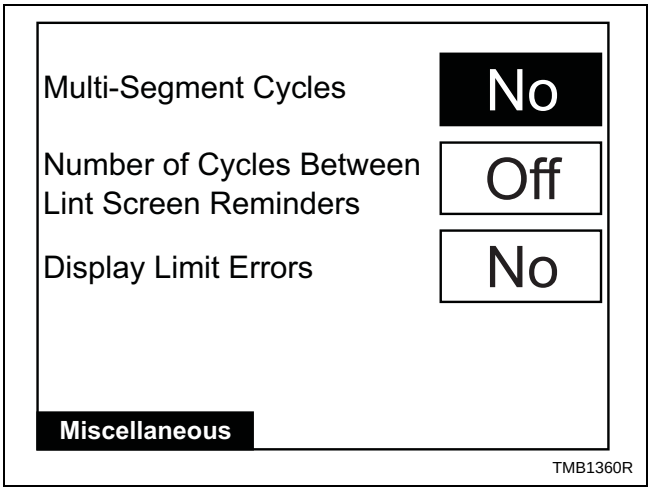


Figure 32

The Miscellaneous Menu allows the user to set whether or not multi-segment cycles may be programmed, the number of cycles between lint screen reminders and display limit errors. Disabling Display Limit Errors will prevent any limit error from being displayed on the Cycle Stopped Menu. Press the ← and → keypads to move the highlighted box through the different items in the Miscellaneous Menu. Press the LCD ↑ or ↓ keypad to change selections.

Press the START ENTER or BACK keypad to jump to the Save Changes Menu. Use ← or → to move highlighted box to “Yes” or “No”.

Press the START ENTER keypad to return to Global Setup Menu. If no changes were made, press START ENTER or BACK keypad to return to Global Setup menu.

Ignition Retry Menu

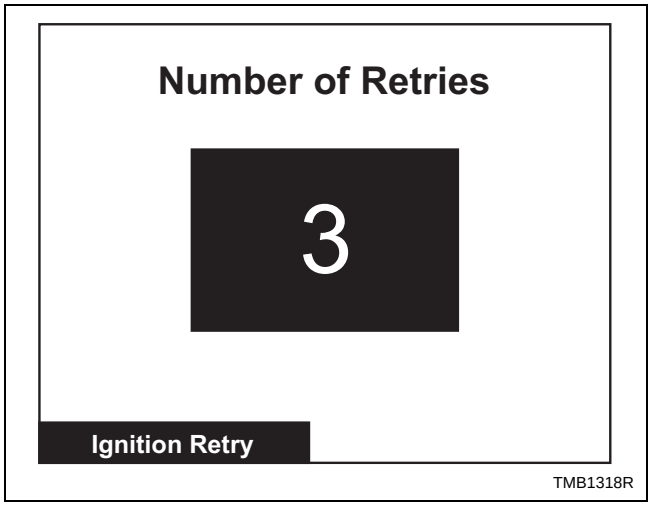


Figure 33

The Ignition Retry Menu sets the option of how many retries the machine will attempt before a heater error occurs. The user will be able to select a value from one (1) to five (5).

Press the LCD ↑ or ↓ keypad to change number of balance retries.

Press the START ENTER or BACK keypad to jump to the Save Changes Menu. Press the ← or → keypad to move highlighted box to “Yes” or “No”.

Press the START ENTER keypad to return to Global Setup menu. If no changes were made, press START ENTER or BACK keypad to return to Global Setup Menu.

Temperature Menu

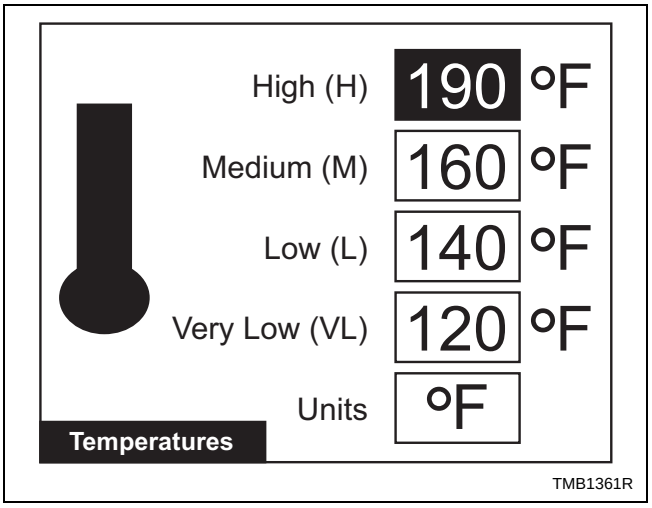


Figure 34

The Temperatures Menu allows the user to set global temperatures for High, Medium, Low, Very Low and what unit of measure to display them in. These temperature ranges are restricted to those allowed by Auto-Dry configurations for a given machine capacity.

Press ← and → keypads to move the highlighted box through the different items in the menu. Once the item is highlighted, press the LCD ↑ and ↓ keypads to change the values.

Press the START ENTER or BACK keypad to jump to the Save Changes Menu.

Use ← or → to move highlighted box to “Yes” or “No”.

Press the START ENTER keypad to return to Global Setup Menu. If no changes were made, press the START ENTER or BACK keypad to return to Global Setup Menu.

Reverse Cylinder Menu (if equipped)

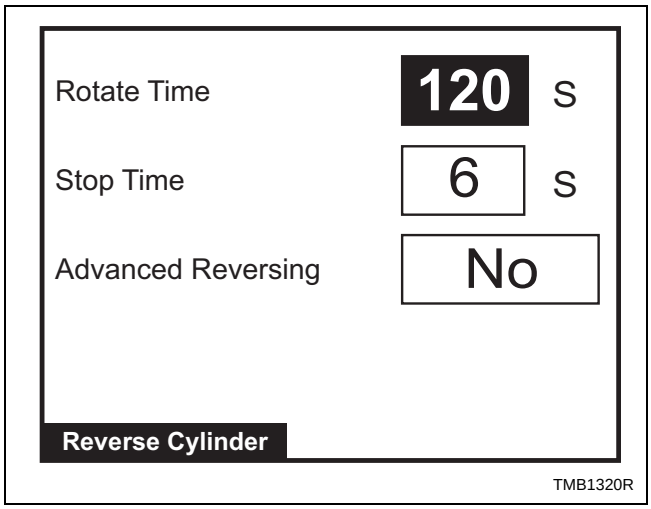


Figure 35

The Reverse Cylinder Menu allows the user to set the rotate and stop time for Reverse Cylinder action and cycle specific rotate time, stop time and Advanced Reversing. Rotate and Stop Times valid for a heat cycle are those available through global Reverse Cylinder parameters. If Advance Reversing is enabled, the user will be able to view and edit cycle specific reversing parameters within Cycle Programming. Refer to *Figure 24*.

The ← and → keypads are used to move the highlighted box through the different items in the Reverse Cylinder Menu. Once the item is highlighted, the value can be changed by using the LCD ↑ and ↓ keypads. Pressing the START ENTER or BACK keypad will jump to the Save Changes Menu. Use ← or → to move highlighted box to “Yes” or “No”. Press the START ENTER keypad to return to Global Setup menu. If no changes were made, press the START ENTER or BACK keypad to return to Global Setup Menu.

Cool Down Menu

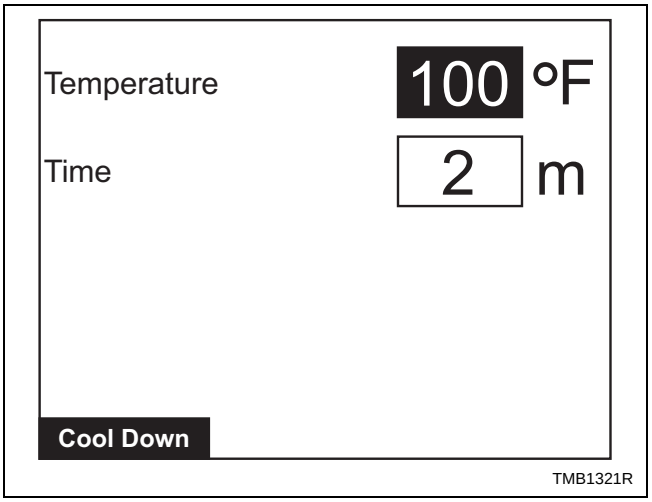


Figure 36

The Cool Down Menu gives the user the option to setting the Cool Down Target Temperature and Time.

The ← or → keypads are used to move the highlighted box between the two items in the Cool Down Menu. Once the item is highlighted, the value can be changed using the LCD ↑ and ↓ keypads.

Pressing the START ENTER or BACK keypad will jump to the Save Changes Menu. Press ← or → to move highlighted box to "Yes" or "No". Press the START ENTER keypad to return to Global Setup Menu. If no changes were made, press the START ENTER or BACK keypad to return to Global Setup Menu.

Moisture Menu (if equipped)

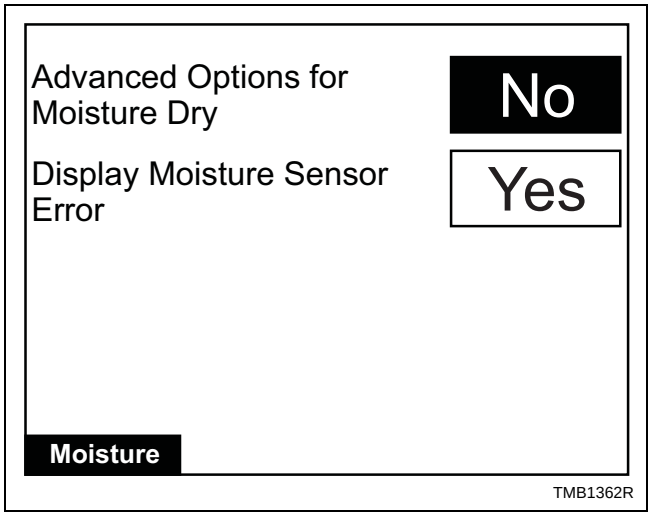


Figure 37

The Moisture Menu allows the user to enable or disable Advanced Options for Moisture Dry (only available on units equipped with moisture sensing feature) and Display Moisture Sensor Error. Enabling Advanced Options for Moisture Dry allows users to program Time Past Target which is the added number of minutes of heat time past the cycle target moisture level while in Cycle Programming.

With Display Moisture Sensor Error option enabled, the control will allow the Moisture Sensor Error to be displayed in the event that one occurs. Press the ← and → keypads to move the highlighted box. Press the LCD ↑ or ↓ keypad to change selections.

Press the START ENTER or BACK keypad to jump to the Save Changes Menu. Use ← or → to move highlighted box to "Yes" or "No".

Press the START ENTER keypad to return to Global Setup Menu. If no changes were made, press START ENTER or BACK keypad to return to Global Setup Menu.

Factory Defaults Menu

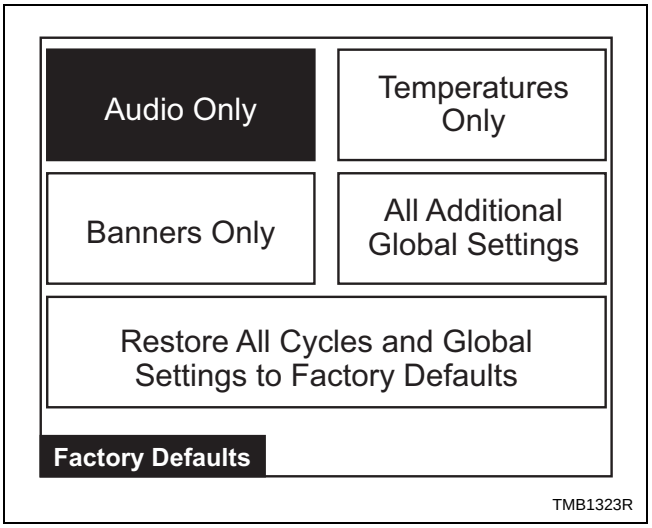


Figure 38

The Factory Defaults Menu is used to set parameters in the software back to the factory default. Several parameters can be set individually back to the factory settings and all Cycles and Global settings can be restored. The individual parameters that can be set back to the factory settings are the Audio settings, Temperature settings, Banners, and additional Global settings.

Press the directional keys to navigate through the screen. Press the START ENTER keypad to make a selection. A confirmation screen appears asking if you are sure you want to restore the settings. Use ← or → to move highlighted box to “Yes” or “No”. “No” is selected by default. Press the START ENTER keypad to return to Global Setup Menu. If no changes were made, press the START ENTER or BACK keypad to return to Global Setup Menu.

The All Additional Global Settings Menu is used to restore the global settings to the factory defaults.

The Reset All Factory Defaults Confirmation Menu is used to confirm that the global programming parameters and Cycle #1-41 are to be set back to factory defaults. If “Yes” is selected the display will jump to the Factory Defaults Second Confirmation Menu.

Figure 39

The Factory Defaults Second Confirmation Menu is to ensure that the factory defaults do not get accidentally reset. Press the BACK keypad to abort and the display will then show the Factory Defaults Menu.

Once the START ENTER keypad is pressed in any Confirmation Screen, the Save Changes Menu displays to confirm the programming changes. Use ← or → to move highlighted box to “Yes” or “No”. Press the START ENTER keypad to return to Global Setup Menu.

Diagnostics

Diagnostic Menu

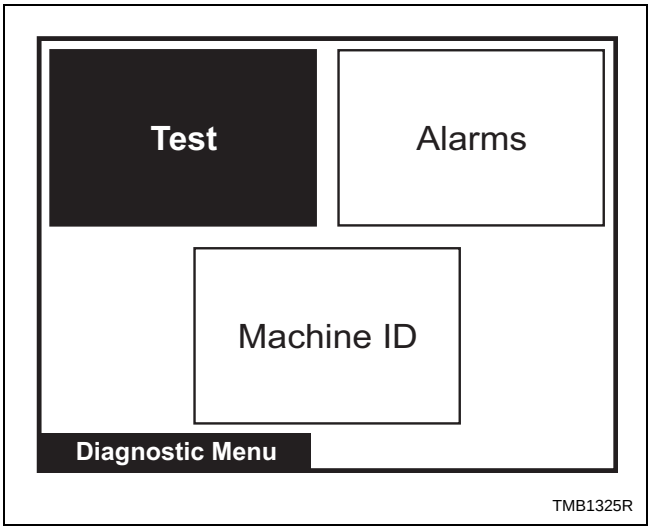


Figure 40

The Diagnostic Menu contains Test, Alarm and Machine ID Menus. The menus contain specific diagnostic information and manufacturing data for the machine. The ←, →, LCD ↑ and ↓ keypads position the highlighted box. Press the START ENTER keypad to select the menu choice.

Press the BACK keypad while in the Diagnostic Menu to return to System Menu.

Test Menu

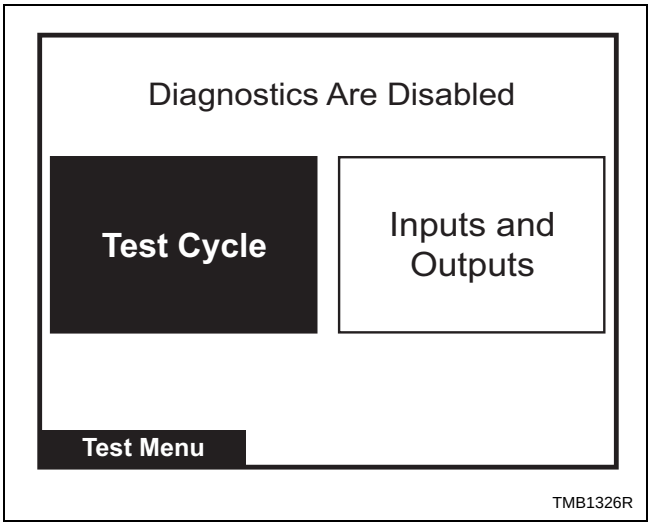


Figure 41

The Test Menu provides features for manufacturing and customer service testing. The highlighted box is moved horizontally and vertically using the ←, →, LCD ↑ and ↓ keypads. Press the START ENTER keypad to select the menu choice.

Press the BACK keypad to return to Diagnostic Menu.

The screen will display “Diagnostics Are Disabled” if the manual diagnostics have been programmed off. Diagnostic test commands via PDA and network will still function.

Test Cycle Menu

The Test Cycle Menu is used to run several test steps as well as a ten-minute cycle. Step 01 keypad test requires the user to press each keypad. Step 02 Door Status shows whether the loading and lint doors are open or closed. Press any key to advance. Step 03 Screen Test shows four screens that test the LCD screen. Press any key to advance through each of the four test steps.

The Test Cycle Menu for Test Steps 4-13 is shown in *Figure 42*.

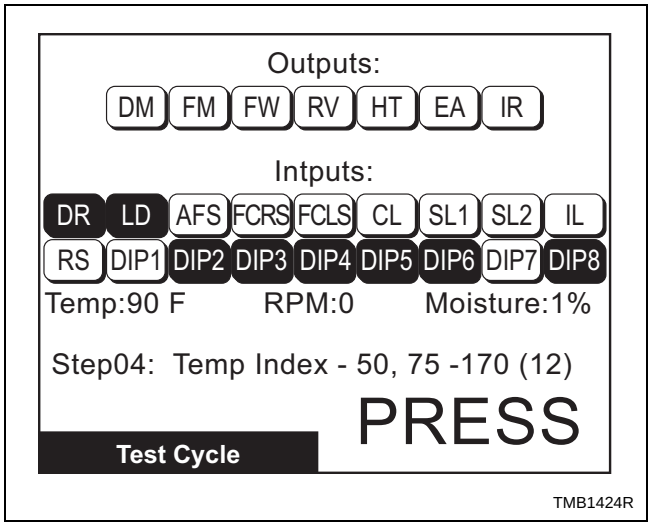


Figure 42

It is similar to the Inputs/Outputs Menu except that the test step is shown at the bottom of the display and a key press prompt message is shown in the lower right corner. Press START ENTER to advance through the steps. Refer to *Table 3* for more details of each step. Press STOP ON/OFF to terminate the test.

Test Cycle Chart

STEP	Test Cycle Step	Display Description	STEP ADVANCE	COMMENTS
1	Keypad Test Step	“Press Each Key To Advance”	Advance after all keypads are pressed.	
2	Loading and Lint Door Test Step	“Door Status”	Press any keypad.	
3	Display Test Step	“Press Any Key To Advance Through Screen Test”	Press any keypad.	
	Display Test Step #1	Screen is blank	Press any keypad.	
	Display Test Step #2	Horizontal Bars	Press any keypad.	
	Display Test Step #3	Horizontal Bars (inverted)	Press any keypad.	
	Display Test Step #4	Screen is black	Press any keypad.	
4	Machine Temperature Index Display Test	Temperature index harness value	Press START ENTER keypad.	
5	Machine Capacity	Capacity size of machine	Press START ENTER keypad.	DIP switch status will be shown.
6	Heat Source	Type of heat machine is configured for	Press START ENTER keypad.	DIP switch status will be shown.
7	Reversing Motor Present	Will show if machine is equipped for reversing	Press START ENTER keypad.	DIP switch status will be shown.
8	Rotation Sensor Present	Will show if machine is equipped for rotation sensor	Press START ENTER keypad.	DIP switch status will be shown.
9	Moisture Sensor Present	Will show if machine is equipped for moisture sensor	Press START ENTER keypad.	DIP switch status will be shown.
10	Moisture Sensor Test #1	Runs test for short in moisture sensor circuit	Press any keypad.	Press BACK to restart test. This step will be skipped if machine is not equipped for moisture sensor.
11	Moisture Sensor Test #2	Runs test for resistance to expected moisture level	Press any keypad.	Press BACK to restart test. This step will be skipped if machine is not equipped for moisture sensor.
12	Ten Minute Cycle	Runs a ten-minute normal cycle	Press START ENTER keypad.	Any errors encountered are displayed.
13	Audio Signal Test	Audio signal sounds for five seconds	Automatically	

Table 3

Inputs Outputs Menu

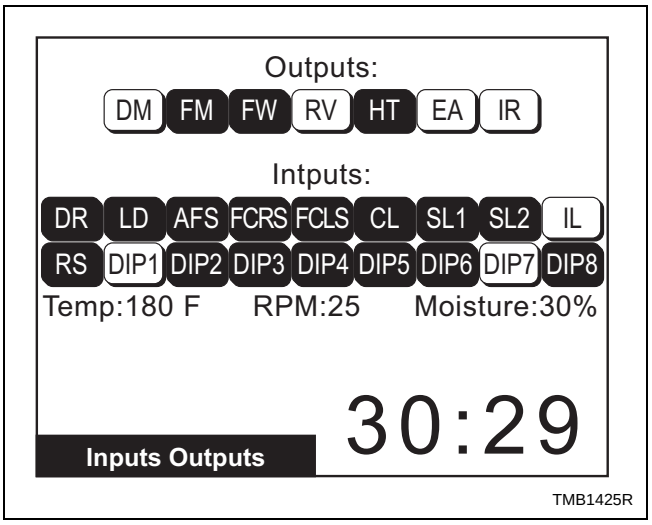


Figure 43

When the Inputs Outputs Menu is accessed through the Diagnostic Menu, the user can manually turn on outputs. The user can scroll through the outputs using any of the arrow keys, the cursor is indicated by flashing the active output on the screen. The user must "setup" the outputs to be turned on. The STOP ON/OFF keypad is used to select individual outputs to be turned on or off. After the START ENTER keypad is pressed the control will turn the selected outputs on and display the text "RUNNING". The outputs cannot be selected until the STOP ON/OFF keypad is pressed. The text "RUNNING" is no longer displayed. The screen will still show the selected outputs on the screen and the user can again select outputs to be turned on or off. If the BACK or STOP ON/OFF keypad is pressed at any time during this test, the control will turn off all outputs if the test is running or return to the previous screen if the test is not running.

If the Inputs Outputs Menu is accessed through the Run Diagnostic Menu (pressing the → keypad during a running cycle) the menu shows only what is turned on and off as the cycle runs. Refer to *Figure 43*.

Abbreviations for the Inputs and Outputs are defined in the following table:

Inputs	
DR	Loading Door
LD	Lint Door
AFS	Airflow Switch
FCRS	Fan Motor Contactor Switch
FCLS	Fan Motor Centrifugal Switch
CL	Cabinet High Limit
SL1	Store 1 High Limit
SL2	Store 2 High Limit
IL	Ignition Lockout
RS	Rotation Sensor
DIP1	Dip Switch 1
DIP2	Dip Switch 2
DIP3	Dip Switch 3
DIP4	Dip Switch 4
DIP5	Dip Switch 5
DIP6	Dip Switch 6
DIP7	Dip Switch 7
DIP8	Dip Switch 8
Temp	Temperature
RPM	Rotations per Minute
Moisture	Moisture Level
Outputs	
DM	Damper Motor
FM	Fan Motor
FW	Forward Contactor
RV	Reverse Contactor
HT	Heater
EA	External Alarm
IR	Ignition Reset

Table 4

Alarms Menus

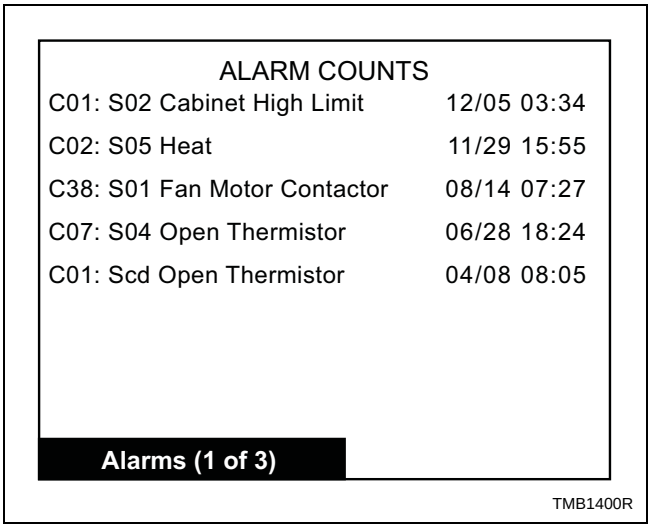


Figure 44

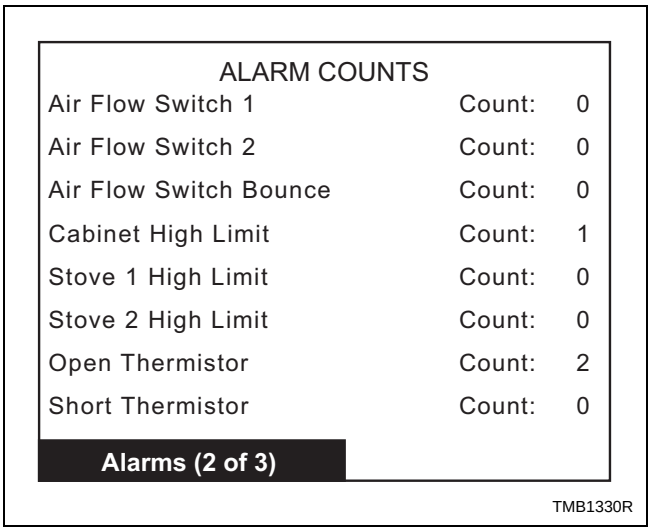


Figure 45

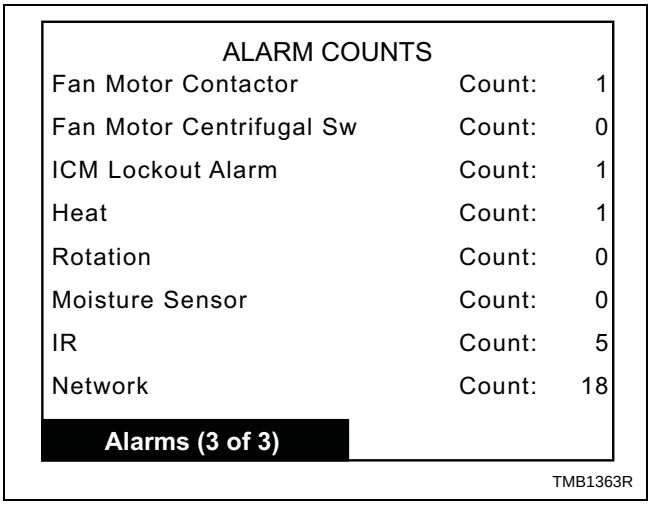


Figure 46

The Alarms Menu contains three screens of information. On the first screen, Alarms (1 of 3), the eight most recent alarms will contain Cycle Number, Segment Number, Alarm Type, and the Date/Time of the Alarm.

The second screen, Alarms (2 of 3), alarm counts list 1 through 8. Alarm counts consist of how many times a specific alarm has occurred.

The third screen, Alarms (3 of 3), is a continuation of the alarm counts 9 through 16.

Press the ← or → keypad to navigate to the different screens in the Alarms Menu. Press the ← keypad to go from screen 1 to screen 3. The actual menus are informational only and cannot be navigated. Press the BACK keypad to return to display to Diagnostic Menu or the Run Diagnostic Menu.

Machine ID Menu

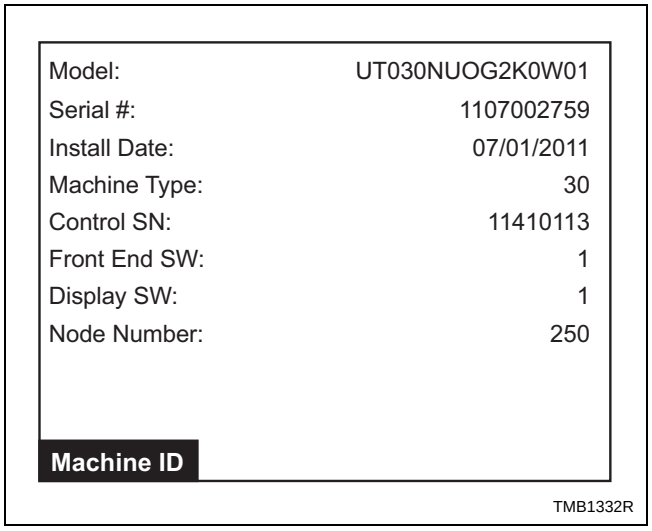


Figure 47

The Machine ID Menu provides several different types of manufacturing and machine information that can be useful to the user and technician. The Machine ID Menu cannot be navigated. Pressing the BACK keypad will return to Diagnostic Menu or the Run Diagnostic Menu.

Machine Errors

The control displays and logs errors as they occur. When the control senses the error condition, the audit counter for that error increases by one. The control saves the time and date of the last eight (8) errors that have occurred. Following is a list of possible errors:

PDA Communications Error

These errors may occur during communications. When an error occurs, the display indicates the error message on the control for a few seconds. When a PDA communication error occurs, the audit counter Total Bad IR Communications is incremented, the hour, date, and year of the event are saved, and the error code is saved. An active machine cycle is not affected when there is an error during PDA communications and this error information is not stored in the Last Eight Alarms Menu.

Network Communications Error

Network errors may occur during communication with a network. When a network communication error occurs, the audit counter Total Bad Network Communications is incremented, the hour, date, month, and year of the event are saved, and the error code is saved. This error is not saved in the Last Eight Alarms Menu and has no affect on an active machine cycle.

Open Thermistor Error

Any time the control senses a temperature less than 0 °F after the first three minutes of an active cycle, the control will go to Cool Down, display this error message, and then turn on the audio signal. The control will continue to display the error message until any of the keypads are pressed, the Cool Down portion of the cycle has ended, and the temperature reading is greater than 0°F. Press any keypad to stop audio signal. Once all three occur, the control will return to the Idle Mode. This error will cause the corresponding Open Thermistor Audit Counter to be incremented and is saved in the Last Eight Alarms Menu.

Shorted Thermistor Error

Any time the control senses a temperature greater than 210 + 4 °F during an active cycle, the control will enter the Cool Down portion of the cycle, display this error message, and turn on the audio signal. The control will continue to display the error message until any of the keypads are pressed, the Cool Down portion of the cycle has ended, and the temperature reading is less than 210 °F. Press any keypad to stop audio signal. Once all three occur, the control will return to the Idle Mode. This error will cause the corresponding Shorted Thermistor Error Audit Counter to be incremented and is saved in the Last Eight Alarms Menu.

Stove and Cabinet Limit Errors

There are up to two Stove Limit thermostats and one Cabinet Limit thermostat on the machine. While the heat relay is on, if the stove temperature or cabinet temperature reaches the high temperature for the particular limit thermostat, the heater will turn off automatically and the control will continue the cycle with no heat until the limit thermostat resets. Once the control reaches the End of Cycle the control will display the appropriate error message, if programmed to do so, and sound the audio signal. The control will continue displaying the error message until the control returns to Idle mode.

The control will increment the appropriate stove or cabinet error counter and record the error in the Last Eight Alarms Menu.

NOTE: On some models the stove and cabinet limit thermostats need to be manually reset. The remainder of the cycle will be run with no heat. On these models, the thermostat(s) must be reset prior to cycling power or the control will return back to Error Mode.

Auto Ignition Retry (Gas Models Only)

If the Ignition Control Module (ICM) fails to ignite the gas valve the ICM will send an ICM Lockout Alarm to the control. When the control receives the ICM Lockout Alarm it will increment the ICM Lockout Alarm audit counter. When the error becomes fatal (user input needed to restart the machine) the control will increment the Heat Error audit counter and record the Heat Error in the Last Eight Alarms Menu.

If the ICM needs to be manually reset, when the control receives the ICM Lockout Alarm it will display the Cycle Stopped Menu with text prompting the user to press the START ENTER keypad to reset the ICM. The user can continue to reset the ICM until there are no more programmable retry attempts (factory default is 3) or the gas ignites. On machines equipped with an ICM that does not need to be manually reset, when the control receives the ICM Lockout Alarm it will turn the heat relay off for twenty (20) seconds and then turn it back on to try and ignite the gas. The control will continue to try and ignite the gas until there are no more programmable retry attempts (factory default is 3) or the gas ignites. If the ICM fails to ignite the gas on the last attempt the control will start the Cool Down portion of the cycle, display the heat error message and sound the audio signal. When the Cool Down portion of the cycle ends the control will continue to display the error message until power is cycled to the machine or a user presses the BACK keypad.

Air Flow Switch Errors

The control will flag an Airflow Switch Error under several conditions. Airflow Switch Errors will be processed differently depending upon what state the machine was in when the error was detected.

Airflow Switch Sensed Closed While Not In Run Mode

If an airflow switch is sensed closed 30 seconds after entering Idle Mode, or End of Cycle Mode, the control will display an error message until power is cycled or the error clears. The cycle will not start and all user inputs will be ignored. If the error does clear, the control will go back to its previous mode of operation. When this error occurs the Airflow Switch 1 error counter will be incremented and the error will also be saved to the Last Eight Alarms Menu.

Airflow Switch Does Not Close After Cycle Started

If the airflow switch does not close within 5 seconds of the start/re-start of a cycle, the control will go to the Cool Down portion of the cycle, display an error message and sound the audio alarm. Once the Cool Down portion of the cycle ends, the control will continue to display the error message until the power is cycled to the machine or the BACK keypad is pressed. When this error occurs, the Airflow Switch 2 error counter will be incremented and the error will also be saved to the Last Eight Alarms Menu.

Airflow Switch Bounces During A Running Cycle

If the airflow switch is open for at least one second, the heat will be turned off and will remain off until the switch is observed closed for at least 5 seconds (it is flagged as an airflow switch bounce). If there are 5 airflow switch bounces within 5 minutes the control will go to the Cool Down portion of the cycle, display an error message and sound the audio signal. When the Cool Down portion of the cycle ends, the control will continue displaying the error message until power is cycled or a user presses the BACK keypad. When this error occurs, the Airflow Switch Bounce Error will be incremented and the error will also be saved to the Last Eight Alarms Menu. The Airflow Switch Bounce counter will be incremented for every instance of an airflow switch bounce.

Rotation Sensor Error

If the machine is equipped with a rotation sensor, the control will constantly monitor the input and calculate the cylinder’s rpm. If the rpm drops to zero while the cylinder is supposed to be spinning, the control will go to the Cool Down portion of the cycle. The control will display an error message and sound the audio signal. Once the Cool Down portion ends, the control will continue to display the error message until power is cycled to the machine or the correct keypad is pressed. This error will increment the Rotation Sensor Error counter and will be saved in the Last Eight Alarms Menu.

Moisture Sensor Error

While in Idle Mode and on the Cycle Menu, the control will begin to monitor the moisture sensor input after one minute without user input. If the moisture sensor circuitry detects a load present signal read consistently (every second) for a ten minute period without user input, the control will declare, if programmed to do so, a load sensed. If at any time during this sensing period, user input is detected or the control determines that there is no load present, it resets the load detected counter. After this ten minute period with a consistent load sensed, the control queues the Load Sensed Menu to display. When user interaction is sensed, the display will wake and show the Load Sensed Menu prompting the user to answer whether the machine is currently empty. If the operator selects No, the control returns to the Cycle Menu. If the operator selects Yes, the control will increment the Moisture Sensor Error counter and record the error in the queue of the last eight machine errors and display the Service Moisture Sensor Menu, instructing the operator to service the moisture sensor soon and press the BACK keypad to return to the Cycle Menu. The Load Sensed prompt will only appear once a day, unless machine power is cycled. If the control is idle, with the Load Sensed Menu queued, and a Service Schedule Reminder is then queued as well, when detecting user interaction, the control will first display the appropriate Service Schedule Menu and then display the Load Sensed Menu after a key has been pressed.

Fan Motor Contactor Error

If the control attempts to turn on the heater relay and the control does not sense that the Fan Motor Contactor is closed, the control will go to the Cool Down portion of the cycle, display an error message and turn on the audio signal. Once the Cool Down portion of the cycle ends, the control will continue displaying the error message until power is cycled or the BACK keypad is pressed. This error will increment the Fan Motor Contactor Error counter and will be saved in the Last Eight Alarms Menu.

Fan Motor Centrifugal Switch Error

If the control attempts to turn on the fan motor and the fan motor contactor is sensed closed but the Fan Motor Centrifugal Switch fails to close, the control will go into the Cool Down portion of the cycle, display an error message and turn on the audio signal. Once the Cool Down portion of the cycle ends, the control will continue displaying the error message until power is cycled or the BACK keypad is pressed. This error will increment the Fan Motor Centrifugal Switch error counter and will be saved in the Last Eight Alarms Menu.

DIP Switch/Harness Index Mismatch Error

On power up the control reads the Temperature Index Harness value and compares that with the value of switch 1, switch 2 and switch 3 on the DIP switch configuration. If the result is an invalid setup the control will not enter Idle mode and instead enter Error Mode. The control will ignore all user inputs and display an error message. The machine must be powered down and the correct temperature index harness must be installed and/or the DIP switch configuration must be corrected.

Laundry Management

Laundry Management Menus

The Laundry Management Menu contains three screens. The Laundry Management 1 Menu displays total cycle counts, total run hours, total heat hours, total number of rapid advance cycles, total number of cycles aborted, average End of Cycle to Door Open Minutes, average End of Cycle to Run Mode Minutes and total number of times anti-wrinkle was exceeded. The Laundry Management 2 Menu shows user the number of times cycles 1 through 24 have been run. Laundry Management 3 Menu shows the number of times cycles 25 through 41 have been run and the number of Heat Relay cycles (Heat). Press the → keypad to move from screen to screen.

Press the BACK keypad in any of the Laundry Management Menus to enter System Menu.

SUMMARY

Total Cycle Counts: 10009

Total Run Hours: 7507

Total Heat Hours: 7007

Total Number Of Rapid Advance Cycles: 600

Total Number Of Cycles Aborted: 450

Avg Cycle End to Door Open Minutes: 5

Avg Cycle End to Run Mode Minutes: 30

Anti-Wrinkle Time Exceeded: 5

Laundry Mgmt. (1 of 3)

TMB1333R

Figure 48

CYCLE COUNTS

CY01:	0	CY09:	0	CY17:	0
CY02:	0	CY10:	0	CY18:	0
CY03:	0	CY11:	0	CY19:	0
CY04:	0	CY12:	0	CY20:	0
CY05:	0	CY13:	0	CY21:	0
CY06:	0	CY14:	0	CY22:	0
CY07:	0	CY15:	0	CY23:	0
CY08:	0	CY16:	0	CY24:	0

Laundry Mgmt. (2 of 3)

PHM1065R

Figure 49

CYCLE COUNTS

CY25:	10009	CY33:	0	CY41:	0
CY26:	0	CY34:	0	Heat:	10090
CY27:	0	CY35:	0		
CY28:	0	CY36:	0		
CY29:	0	CY37:	0		
CY30:	0	CY38:	0		
CY31:	0	CY39:	0		
CY32:	0	CY40:	0		

Laundry Mgmt. (3 of 3)

TMB1344R

Figure 50

Maintenance

Service Schedule Menu

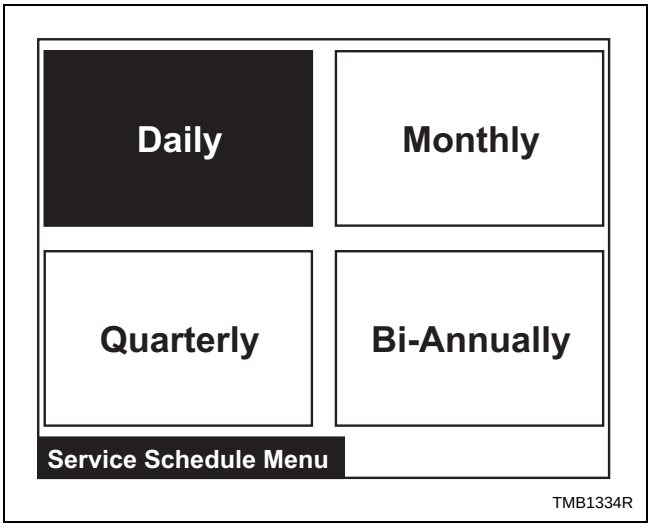


Figure 51

Press BACK from Cycle Menu to enter Service Schedule Menu. The Service Schedule Menu provides a user with a time based service reminder list. The list is broken up into “Daily”, “Monthly”, “Quarterly” and “Bi-Annually” Menus. Press the LCD, ↓, ← or → keypad to navigate to a menu item. Press the START ENTER keypad when menu is selected. Press the BACK keypad to return to Cycle Menu.

Daily Menu (Service)

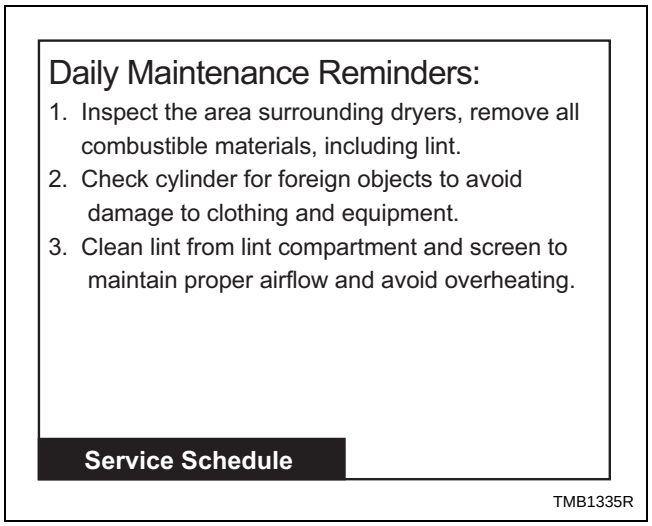


Figure 52

The Daily Menu contains all daily service reminders that need to be performed. Press the BACK keypad to return to the Service Menu.

Monthly Menu (Service)

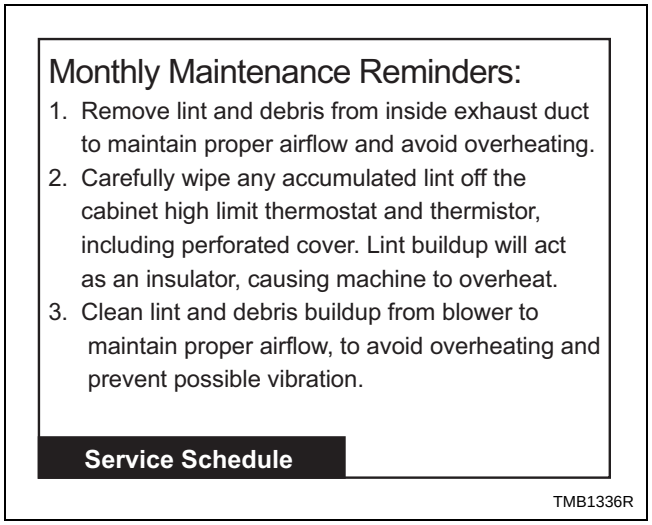


Figure 53

The Monthly Menu contains all monthly service reminders that need to be performed. Press the BACK keypad to return to the Service Menu.

Quarterly Menu (Service)

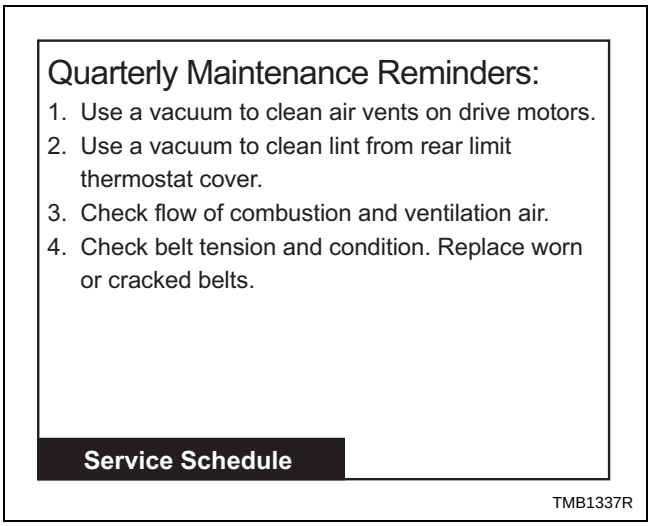


Figure 54

The Quarterly Menu contains all service reminders that need to be performed four times a year.

Press the BACK keypad to return to Service Menu.

Bi-Annual Menu (Service)

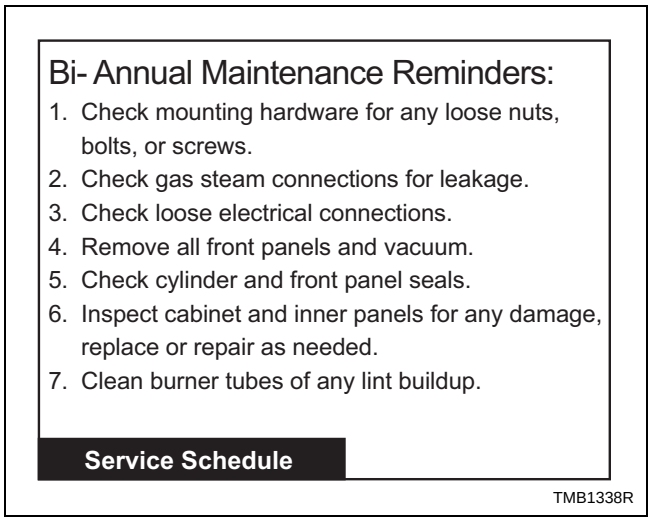


Figure 55

The Bi-Annual Menu contains all service reminders that need to be performed twice a year. Press the BACK keypad to return to Service Menu.

Cycle Charts

Cycle No	Cycle Name	Cycle Type	Material Type	Reversing	Temperature	Target Moisture or Time
1	Towels	Moisture Dry	Cotton	OFF	190°F/88°C	1%
2	Sheets Blend	Moisture Dry	Bedding	ON	160°F/71°C	5%
3	Sheets Cotton	Moisture Dry	Bedding	ON	190°F/88°C	5%
4	Sheets Blend Iron	Moisture Dry	Bedding	ON	160°F/71°C	20%
5	Sheets Cotton Iron	Moisture Dry	Bedding	ON	190°F/88°C	20%
6	Duvet Cotton	Moisture Dry	Bedding	ON	190°F/88°C	5%
7	Duvet Blend	Moisture Dry	Bedding	ON	160°F/71°C	5%
8	Napkins Synthetic	Moisture Dry	Synthetic	OFF	140°F/60°C	3%
9	Napkins Blend	Moisture Dry	Blend	OFF	160°F/71°C	3%
10	Napkins Synthetic Iron	Moisture Dry	Synthetic	OFF	140°F/60°C	20%
11	Napkins Blend Iron	Moisture Dry	Blend	OFF	160°F/71°C	20%
12	Napkins Cotton Iron	Moisture Dry	Cotton	OFF	190°F/88°C	20%
13	Uniform Perm Press	Moisture Dry	Synthetic	OFF	140°F/60°C	5%
14	Uniform Cotton	Moisture Dry	Cotton	OFF	190°F/88°C	5%
15	Aprons Blend	Moisture Dry	Blend	OFF	160°F/71°C	3%
16	Aprons Cotton	Moisture Dry	Cotton	OFF	190°F/88°C	5%
17	Sweaters	Moisture Dry	Delicate	OFF	120°F/49°C	15%
18	Rayon	Moisture Dry	Delicate	OFF	120°F/49°C	20%
19	Silk	Moisture Dry	Delicate	OFF	120°F/49°C	20%
20	Wool	Moisture Dry	Wool	OFF	140°F/60°C	15%
21	Perm Press	Moisture Dry	Synthetic	OFF	140°F/60°C	5%
22	Cotton	Moisture Dry	Cotton	OFF	190°F/88°C	5%
23	Denim	Moisture Dry	Cotton	OFF	190°F/88°C	7%
24	Handwash	Moisture Dry	Delicate	OFF	120°F/49°C	15%
25	Drapery	Moisture Dry	Delicate	ON	120°F/49°C	15%
26	30 Minute High	Time Dry	n/a	OFF	190°F/88°C	30 minutes
27	30 Minute Med	Time Dry	n/a	OFF	160°F/71°C	30 minutes
28	30 Minute Low	Time Dry	n/a	OFF	140°F/60°C	30 minutes
29	30 Minute No Heat	Time Dry	n/a	OFF	n/a	30 minutes
30	15 Minute High	Time Dry	n/a	OFF	190°F/88°C	15 minutes
31	15 Minute Med	Time Dry	n/a	OFF	160°F/71°C	15 minutes
32	15 Minute Low	Time Dry	n/a	OFF	140°F/60°C	15 minutes
33	15 Minute No Heat	Time Dry	n/a	OFF	n/a	15 minutes
34	10 Minute High	Time Dry	n/a	OFF	190°F/88°C	10 minutes
35	10 Minute Med	Time Dry	n/a	OFF	160°F/71°C	10 minutes
36	10 Minute Low	Time Dry	n/a	OFF	140°F/60°C	10 minutes
37	10 Minute No Heat	Time Dry	n/a	OFF	n/a	10 minutes
38	5 Minute High	Time Dry	n/a	OFF	190°F/88°C	5 minutes
39	5 Minute Med	Time Dry	n/a	OFF	160°F/71°C	5 minutes
40	5 Minute Low	Time Dry	n/a	OFF	140°F/60°C	5 minutes
41	5 Minute No Heat	Time Dry	n/a	OFF	n/a	5 minutes

n/a = not applicable
- All cycles include a 2 minute, 100°F (38°C) cool down
- All cycles with reversing on rotate for 120 seconds and pause for 6 seconds
- Cool down and reversing settings can be changed from what is pre-programmed from the factory
- If machine does not have the moisture sensing option, the moisture sensing cycles in the table above are automatically changed to Auto-Dry cycle type with Dryness Level 0 (zero)