



# **EcoSmart**

# **Washer Manual**

## **Medium and High Speed**

## **M Models**

## **UL 1.0 and Above**

**American Dryer Corporation**  
88 Currant Road  
Fall River MA 02720-4781 USA  
Telephone: +1 (508) 678-9000 / Fax: +1 (508) 678-9447  
e-mail: [techsupport@amdry.com](mailto:techsupport@amdry.com)

[www.adclaundry.com](http://www.adclaundry.com)

# Retain This Manual in a Safe Place for Future Reference

This product embodies advanced concepts in engineering, design, and safety. If this product is properly maintained, it will provide many years of safe, efficient, and trouble free operation.

**Only qualified technicians should service this equipment.**

**OBSERVE ALL SAFETY PRECAUTIONS** displayed on the equipment or specified in the installation manual included with the washer.

## Washer Safety

### Your safety and the safety of others are very important.

We have provided many important safety messages in this manual and on your appliance. Always read and obey all safety messages.



This is the safety alert symbol.

This symbol alerts you to potential hazards that can kill or hurt you and others.

All safety messages will follow the safety alert symbol and either the word "DANGER" or "WARNING."

These words mean:

**! DANGER**

You can be killed or seriously injured if you don't immediately follow instructions.

**! WARNING**

You can be killed or seriously injured if you don't follow instructions.

All safety messages will tell you what the potential hazard is, tell you how to reduce the chance of injury, and tell you what can happen if the instructions are not followed.

We have tried to make this manual as complete as possible and hope you will find it useful. The manufacturer reserves the right to make changes from time to time, without notice or obligation, in prices, specifications, colors, and material, and to change or discontinue models. The illustrations included in this manual may not depict your particular washer exactly.

## IMPORTANT

For your convenience, log the following information:

DATE OF PURCHASE \_\_\_\_\_ MODEL NO. \_\_\_\_\_

RESELLER'S NAME \_\_\_\_\_

SERIAL NUMBER(S) \_\_\_\_\_

Replacement parts can be obtained from your reseller or the ADC factory. When ordering replacement parts from the factory, you can FAX your order to ADC at +1 (508) 678-9447 or telephone your order directly to the ADC Parts Department at +1 (508) 678-9000. Please specify the washer model number and serial number in addition to the description and part number, so that your order is processed accurately and promptly.

## IMPORTANT SAFETY INSTRUCTIONS

### ⚠ WARNING

To reduce the risk of fire, electric shock, or injury to persons when using the washer, follow basic precautions, including the following:

- Read all instructions before using the washer.
- Do not wash articles that have been previously cleaned in, washed in, soaked in, or spotted with gasoline, dry cleaning solvents, other flammable, or explosive substances as they give off vapors that could ignite or explode.
- Do not add gasoline, dry cleaning solvents, or other flammable, or explosive substances to the wash water. These substances give off vapors that could ignite or explode.
- Under certain conditions, hydrogen gas may be produced in a hot water system that has not been used for 2 weeks or more. HYDROGEN GAS IS EXPLOSIVE. If the hot water system has not been used for such a period, before using the washing machine, turn on all hot water faucets and let the water flow from each for several minutes. This will release any accumulated hydrogen gas. As the gas is flammable, do not smoke or use an open flame during this time.
- Do not allow children to play on or in the washer. Close supervision of children is necessary when the washer is used near children.
- Before the washer is removed from service or discarded, remove the door or lid.
- Do not reach into the washer if the drum, tub or agitator is moving.
- Do not install or store the washer where it will be exposed to the weather.
- Do not tamper with controls.
- Do not repair or replace any part of the washer or attempt any servicing unless specifically recommended in this manual or in published user-repair instructions that you understand and have the skills to carry out.
- See "Electrical Requirements" for grounding instructions.

**SAVE THESE INSTRUCTIONS**

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# Quick Reference Programming Guide for EcoWash UL 1.0 and above

## Configuration (CONF)

### Price

P1  
P2  
P3  
P4  
P5  
P6

### Water Level (leul)

Level 1 (lowest level)  
Level 2  
Level 3 (highest level)

### Standard Cycle Programming P1-4

Pre wash \_\_\_\_\_ 0-99 minutes  
Wash \_\_\_\_\_ 6-99 minutes  
Rinse1 \_\_\_\_\_ 0-99 minutes  
Rinse2 \_\_\_\_\_ 0-99 minutes  
Spin1 \_\_\_\_\_ 0-10 minutes  
Rinse3 \_\_\_\_\_ 0-99 minutes  
Spin 2 \_\_\_\_\_ 2-10 minutes

### Extended Cycle Programming P5 & 6

Pre wash \_\_\_\_\_ 0-99 minutes  
Wash \_\_\_\_\_ 6-99 minutes  
Rinse1 \_\_\_\_\_ 0-99 minutes  
Rinse2 \_\_\_\_\_ 0-99 minutes  
Spin1 \_\_\_\_\_ 0-10 minutes  
Rinse3 \_\_\_\_\_ 0-99 minutes  
Spin 2 \_\_\_\_\_ 2-10 minutes

### Currency (Cur)

Numbered 0-9  
(Number 3 should be selected [U.S. currency])

### Timer (tImr)

ON  
OFF

### PAY

CP (debit)  
OFF  
Coin

## Maintenance (MANT)

### Input

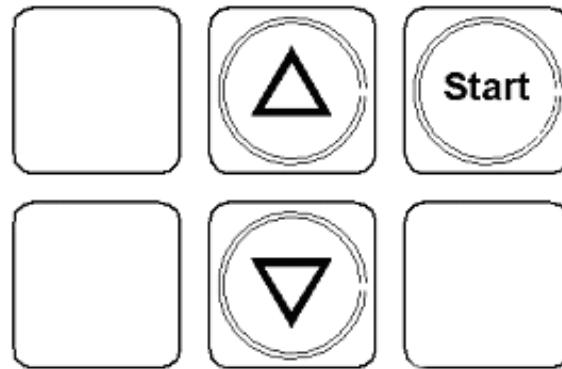
Input 1-12

### Output

Output 1-17

### Statistics

Cycles (CiCl)  
Hours (HOUR)  
Errors (Err)  
Spins (Spd)



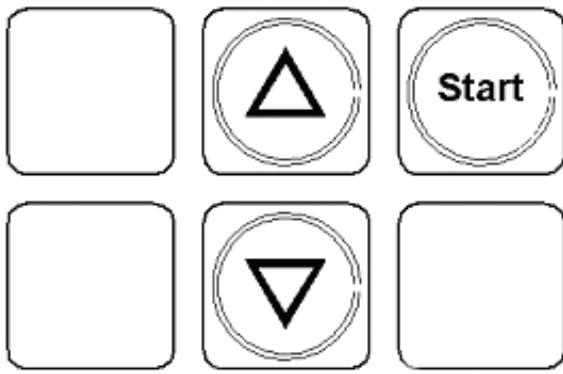
### Quick Tips

**Enter program mode:** Turn the top left lock then hold the up and down arrow for 5 seconds.

**Run a free cycle:** Turn the top left lock then press and hold the top left blank button until you hear a beep. You are now in free mode, select any cycle and press start.

**Pause a cycle:** Enter free mode and press start. Display will show Pause.

**End cycle/advance cycle:** Enter free mode, press the bottom right key to advance. Pause the machine and press the bottom left key to end a cycle.



**NOTE:** Coin or Debit keypad.

**ATTENTION:** When installing a new board enter password 2-4-8-0 to enter model.

## 1. Main Menu

With the washer on but not running a cycle turn the top left lock (program switch) and then press and hold the up and down arrow for 5 seconds until CONF is displayed

MANT  
→ CONF

Press DEC (▼) to select "CONF" if "MANT" is initially displayed.

To enter the Configuration display, when the option CONF (Configuration) is displayed, press START.

- Price (Model)
- LEuL (Water levels)
- StCl (Standard Cycles)
- Ecl (Extended Cycles)
- Cur (Currency)
- timr (Timer)
- PAY (Self-service)

Configuration menu

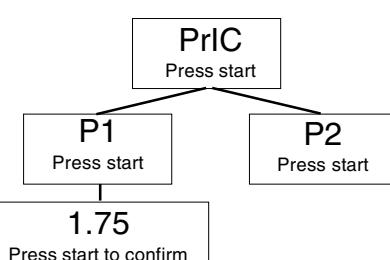
### 1.1 PrIC P1-P6 (Price for Each Program)

This sub-menu is used to configure the price for each program.

Within the "configuration menu", when "PrIC" is displayed, press START. P1 will be displayed. Use the INC (▲) or DEC (▼) to choose the program that you want. Press START key to adjust the price of the selected program.

Modify the price, using the INC (▲) or DEC (▼) key. After that press START to confirm the value.

Example: To modify the price of the first program



### 1.2 LEuL (Water Levels)

This sub-menu is used to select three different water levels. By default, the machines are set to wash using the minimum required amount of water, that is LEu1 (level 1).

If the user wishes to increase the water levels, there are two other possibilities, LEu2 (level 2) and LEu3 (level 3).

Within the "configuration menu", when LEuL is displayed, press START. The current value selected is displayed, for example LEu1 (level 1), or LEu2 (level 2) or LEu3 (level 3).

To change the selected level, press the INC (▲) or DEC (▼) key until the required level is displayed. Press START to confirm.

LEu1  
LEu2  
LEu3

LEuL Display (Water Levels)

- Level 1 (LEu1) is the minimum level which may be selected.
- Level 2 (LEu2) is the medium level which may be selected.
- Level 3 (LEu3) is the maximum level which may be selected.

Press the bottom left key to return to the configuration menu.

The following tables show the different levels.

### Level 1

Washer Extractor (Lb)	25	30	40	60
Low level	inch	2.75	2.95	3.34
	mm	70	75	85
Medium level	inch	4.33	5.31	5.70
	mm	110	135	145
High level	inch	5.90	7.67	7.87
	mm	150	195	200

Shaded areas are stated in metric equivalents

### Level 2

	25	30	40	60
Low level	inch	3.54	3.74	4.33
	mm	90	95	110
Medium level	inch	5.11	5.90	6.69
	mm	130	150	170
High level	inch	7.08	8.26	9.25
	mm	180	210	235

Shaded areas are stated in metric equivalents

## Level 3

		25	30	40	60
Low level	inch	4.33	4.72	5.31	6.10
	mm	110	120	135	155
Medium level	inch	5.90	7.08	7.67	8.46
	mm	150	180	195	215
High level	inch	7.87	9.44	10.03	10.82
	mm	200	240	255	275

Shaded areas are stated in metric equivalents

### 1.3 StCl (Standard Cycle)

This sub-menu is used to program the standard cycles. Each program has 7 different programmable settings as shown below.

**Pre** (pre wash) 0-99 minutes  
**Wash** (Main Wash) 6-99 minutes  
**Rns1** (rinse 1) 0-99 minutes  
**Rns2** (rinse 2) 0-99 minutes  
**Spn1** (spin 1) 0-10 minutes  
**Rns3** (rinse 3) 0-99 minutes  
**Spn2** (spin 2) 2-10 minutes

Use the up and down arrows to adjust the time and start to accept the time shown.

### 1.4 ECL (Extended Cycle)

This sub-menu is used to program the extended cycles. Each program has 7 different programmable settings as shown below.

**Pre** (pre wash) 0-99 minutes  
**Wash** (Main Wash) 6-99 minutes  
**Rns1** (rinse 1) 0-99 minutes  
**Rns2** (rinse 2) 0-99 minutes  
**Spn1** (spin 1) 0-99 minutes  
**Rns3** (rinse 3) 0-99 minutes  
**Spn2** (spin 2) 2-10 minutes

Use the up and down arrows to adjust the time and start to accept the time shown.

### 1.5 Cur (Currency)

This sub-menu is used to set the currency. When the washer is used in the U.S. the setting should be set for 3, which is U.S. currency.

### 1.6 tIMr (Timer)

This sub-menu is used to enable or disable the timer option. This option is used to display the time remaining of the selected program. To disable or enable the TIMER option:

Within the "configuration menu", when "tIMr" is displayed, press START to enable or disable the TIMER function, using the INC (↑) or DEC (↓) key. After that, press START to confirm.

**tIMr**

Press start

**ON** (timer option)

**OFF**

Press start

### 1.7 PAY (Self-Service)

This sub-menu is used to configure the self-service options. It will be configured by Coin Drop or Central Pay.

Within the "configuration menu", when "PAY" is displayed, press START to select self-service ON or OFF:

CP (Central pay)  
→ OFF  
COIn (Coin drop system)

To view both options, use the INC (↑) and DEC (↓) keys.

#### CP (Central Pay)

To configure the machine for CP/Debit (Central Pay), press START when "CP" is displayed.

Press the bottom left key to return to the configuration menu. "LOAD" is going to be shown in the display. Now the washer is ready to accept a debit input.

**LOAD**

#### COIn (Coin Drop System)

To configure the machine for COIn (Coin Drop System), press START when "COIn" is displayed.

Press the bottom left key to return to the configuration menu. The display will flash between P1 and the price.

**P1**

### 1.8 Run Free / OPL Cycle

To run a free/opl cycle turn the top left lock. Now press and hold the top left button until you hear a beep. You can now run the washer in Free mode. In Free mode you can advance through, pause, and end a cycle.

To start a washer at any phase press the bottom right key (advance) before you start a cycle. This will allow you to scroll through the 7 phases of the cycle and start at any point.

With the washer running a program you can pause the cycle by pressing the start key. With the cycle paused you can now end the program by pressing the bottom left key.

Please note: You cannot pause the machine during a high speed spin.

With the washer running a program you can advance through a phase by pressing the bottom right key (advance). Please allow a few seconds for the water to drain to advance to the next phase.

### 1.9 View Cycle Parameters / Real Time Data

As the machine is running turn the top left lock. Now press and hold the up arrow and down arrow for 5 seconds. It will now show PArA. This is how we view the parameters of the current cycle.

Press start key when Para is shown the press the up and down arrow to scroll through real time temperature, water level and remaining time.

When para is shown press the up or down arrow to access real time inputs and outputs.

When IN is displayed press start then the up and down arrow to scroll through the real time inputs.

When OUT is displayed press start then the up and down arrow to scroll through the real time outputs.

## 2. Main Menu – Maintenance

With the washer on but not running a cycle turn the left lock (program switch) **press the keys INC (↑) and DEC (↓) together for five seconds**; “CONF” is displayed.

→ CONF  
MANT

To enter the Maintenance display, press key (v) and when MANT (Maintenance) is displayed, press START:

→ In  
OUT  
Std

Maintenance Menu

As can be seen in the figure, the maintenance menu has three sub-menus. Use the INC (↑) and DEC (↓) keys and press “START” to select an option. To go back, press the bottom left key.

### 2.1 IN – Inputs

With the above “maintenance menu”, when IN is displayed, press START to view input status. Use the INC (↑) and DEC (↓) keys to enter the different input displays.

IN 1 (Door closed)	ON
IN 2 (Door locked)	OFF
IN 3 (Micro coin slot)	OFF
IN 4 (Motor hot wire)	ON

IN 5 (Thermostat)	ON
IN 6 (No connection)	OFF
IN 7 (No connection)	OFF
IN 8 (Magnetic balance switch)	ON

IN 9 (No connection)	OFF
IN 10 (bridge for M models)	
IN 11 (bridge for H models)	
IN 12 (No connection)	OFF

Leul (Real level)	0 mm
Temp. (Temperature)	Cold
(Press START to level to 0 mm)	

These screens can be used to check the status of the different inputs to the relay card. For example:

If “IN 1 ON” is displayed, this means that the relay card has detected that the micro switch for door closed is activated. If “IN 1 OFF” is displayed, this means that the relay card has detected that the micro switch for door closed is not activated.

To reset the pressostat, press “START” for 4 seconds while “Leul mm” is displayed.

The inputs connected to the relay card correspond to the following names on the electrical diagram:

- IN 1 - Door closed: (Ip)
- IN 2 - Door locked: (Rlpb)
- IN 3 - Micro Coin slot (MMo):  
Only for self-service versions.
- IN 4 - Motor hot wire (Termic of motor): TM
- IN 5 - Thermostat (Security thermostat): (Isc)
- IN 6 - No connection. Free.
- IN 7 - No connection. Free.
- IN 8 - Equilibrium (Balance switch): (Ides)
- IN 9 - No connection. Free.
- IN 10 - bridge for M models (Medium speed)
- IN 11 - bridge for H models (High speed)
- IN 12 - No connection. Free.

Leul  
Temp.  
(Press Start to level to 0 mm) 0 mm  
Cold

To adjust the electronic pressostat, press the “Start” key when “Leul” is displayed as described above. The minimum temperature detected by the thermostat is 26 degrees.

NOTES \_\_\_\_\_

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Press the bottom left key to return to the maintenance screen.

The status of the machine's different inputs can be viewed using the above method or they can be viewed directly.

On the rear of the relay card are red LEDs. Refer to figures 1 and 2. If the LED corresponding to an input is lit, this means that the input is activated.

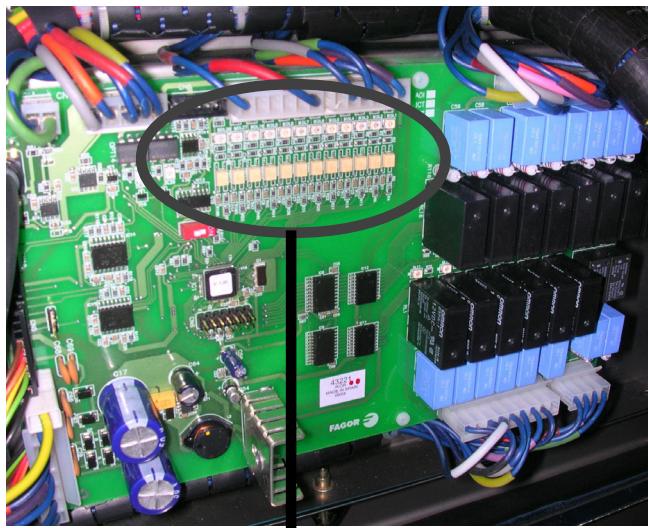
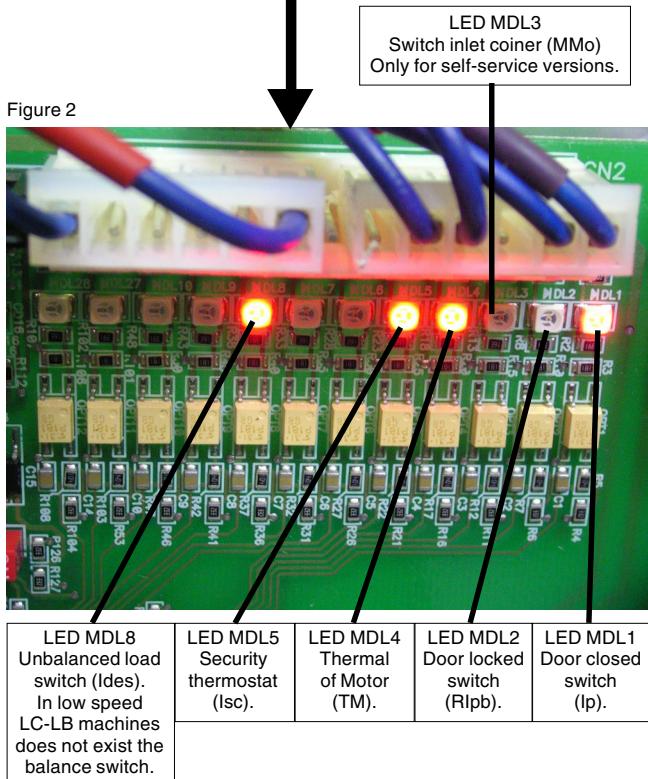


Figure 1



## 2.2 OUT (Outputs)

Within the "maintenance menu" when out is displayed, press START to view the status of the outputs. Use the INC ( $\wedge$ ) and DEC ( $\vee$ ) keys to enter the different output displays.

OU phase (heater CT1 in 60 models)	OFF
OU 1 (Hot water)	OFF
OU 2 (Cold water)	OFF
OU 3 (No connection)	OFF
OU 4 (Drain valve)	OFF

OU 5 (Heater) (heater CT2 in 60 models)	OFF
OU 6 (Fan-Inverter relay)	OFF
OU 7 (Door Locked)	OFF
OU 8 (Door Unlocked)	OFF

OU 9 (Dispenser 1)	OFF
OU 10 (Dispenser 2)	OFF
OU 11 (Dispenser 3)	OFF
OU 12 (Dispenser 4)	OFF

OU 13 (No connection)	OFF
OU 14 (No connection)	OFF
OU 15 (No connection)	OFF
OU 16 (Coin slot)	OFF
OU 17 (All LEDs)	OFF

These screens can be used to manually activate and check the status of the different outputs from the relay card. For example:

If "OU-1 OFF" is displayed, and the "START" key is pressed, the hot water solenoid valve is activated while the "START" key is held down, and "OU-1 ON" is displayed. This allows the status of each output component to be checked.

NOTE: To activate outputs 1 and 2, the door must be locked.

The outputs connected to the plate correspond to the following names on the electrical diagram:

- OU-1 Hot water solenoid valve: (e2)
- OU-2 Cold water solenoid valve: (e1)
- OU-3 No connection
- OU-4 Drainage valve: (VAC)
- OU-5 Heater contactors: (CT) or steam valve (e11)
- OU-6 Fan: (VM and CVF) Main fan motor. Inverter relay CVF.
- OU-7 Door locked: (Ep) Door electromagnet activated.
- OU-8 Door unlocked: (Ep) Door electromagnet deactivated.
- OU-9 Dispenser 1: (Dispenser point 1) (Empties prewash drawer)
- OU-10 Dispenser 2: (Dispenser point 2) (Empties wash drawer)
- OU-11 Dispenser 3: (Dispenser point 3) (Empties bleach drawer)
- OU-12 Dispenser 4: (Dispenser point 4) (Empties softener drawer)
- OU-13 No connection
- OU-14 No connection
- OU-15 No connection
- OU-16 Coin slot (Mo)
- OU-17 All LEDs of the frontal panel are displayed.

Press the bottom left key to return to the maintenance screen.

In addition to checking the status of the machine outputs in this way, it is also possible to directly observe whether the input-output plate activates the relay corresponding to each component.

On the rear of the relay card are red LEDs. Refer to figures 3 and 4. Each relay activates an output; when the relay is activated, the red LED for each relay also lights up.

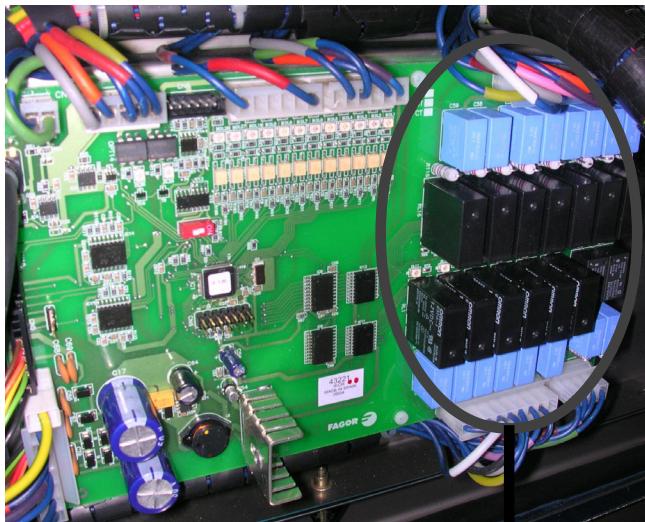


Figure 3

Relay R94 LED DL19 "No connection"	Relay R93 LED DL20 "No connection"	Relay R92 LED DL21 "Dispenser 4" (4-e6)	Relay R91 LED DL22 "Dispenser 3" (3-e5)	Relay R90 LED DL23 "Dispenser 2" (2-e4)
Relay R95 LED DL25 "CVF only in LB-25"				
Relay R96 LED DL26 "Coin slot"				
Relay R81 LED DL11 "Hot water" (e2)				
Relay R82 LED DL12 "Cold water" (e1)	Relay R83 LED DL13 "No connection"	Relay R84 LED DL14 "Drain" (VAC)	Relay R86 LED DL16 "Fan-CVF"	Relay R88 LED DL18 "Unlock door" (Ep)
				Relay R87 LED DL17 "Lock door" (Ep)
			Relay R85 LED DL15 "Heater" (CT or e11)	

LED. Specifically DL11.

The different outputs with the corresponding relays and LEDs are listed below.

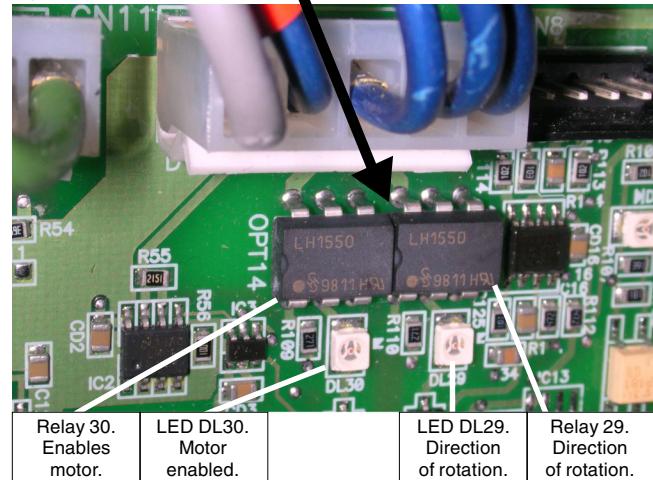
	Symbol	Relay number	LED number
Hot water solenoid valve	e2	R81	DL11
Cold water solenoid valve	e1	R82	DL12
—	—	R83	DL13
Drainage valve	VAC	R84	DL14
Heater contactors	CT	R85	DL15
Steam valve	e11	R85	DL15
Fan and CVF (except in LB-25)	VM-CVF	R86	DL16
Dispenser 1 (Empties prewash drawer)	1 – e3	R89	DL24
Dispenser 2 (Empties wash drawer)	2 – e4	R90	DL23
Dispenser 3 (Empties bleach drawer)	3 – e5	R91	DL22
Dispenser 4 (Empties softener drawer)	4 – e6	R92	DL21
—	—	R93	DL20
—	—	R94	DL19
—	—	R95	DL25
Coin slot	Mo	R96	DL26
Electromagnet for unlocking door	Ep	R88	DL18
Electromagnet for locking door	Ep	R87	DL17

Figures 5 and 6 show the mini-relays and their location.



Figure 5

Figure 6



Mini-relay 30 enables the VFD to supply the motor. Whenever the motor rotates, the mini-relay should be activated and LED DL30 lit.

Mini-relay 29 controls the direction of rotation through the VFD.

When the mini-relay is activated and LED DL29 lit, the motor should turn clockwise viewed from the front of the washer extractor.

When the mini-relay is not activated and LED DL29 is not lit, the motor should turn counterclockwise viewed from the front of the washer extractor.

### 2.3 Std (Statistics)

With the "maintenance menu" displayed (refer to page 8), press DEC (▼) key until "Std" is displayed, then press START to view the statistics.

→Std  
→ CICL (Cycles)  
HOUr (Hours)  
Err (Errors)  
Spd (Spins)

Use the INC (▲) and DEC (▼) keys to enter the different options.

To view the **cycles performed by the washer**, press START when **CICL** is displayed:

Tot (Total) 283  
PArt (Partial) 7

To go from total to partial counter, press DEC (▼).

To reset the partial value, press the bottom right key for 2 seconds.

Press the bottom left key to return to the statistics screen.

To view the **number of hours of operation of the washer**, press START when **HOUr** is displayed:

Tot (Total) 241  
PArt (Partial) 6

To go from total to partial counter, press DEC (▼).

To reset the partial value, press the bottom right key for 2 seconds.

Press the bottom left key to return to the statistics screen.

To view the **alarms and errors which have occurred**, press START when **Err** is displayed:

Use the DEC (▼) key to view the machine error log.

**ALARM Er1 "FAULT IN CLOSING-DOOR"**

**ALARM Er2 "FAULT IN LOCK"**

**ALARM Er3 "FAULT IN DRAIN"**

**ALARM Er4 "FAULT WATER INLET"**

**ALARM Er5 "FAULT IN HEATING"**

**ALARM Er6 "MAXIMUM TEMPERATURE"**

**ALARM Er7 "SECURITY THERMOSTAT OPEN"**

**ALARM Er8 "MAXIMUM WATER LEVEL"**

**ALARM Er9 "MOTOR HEATING"**

**ALARM Er10 "UNBALANCED"**

**ALARM Er11 "HOT CLOTHES"**

**ALARM Er12 "WATER IN TUB"**

Press the bottom right key for 2 seconds to reset the value of the errors and 0 is displayed.

Press the bottom left key to return to the statistics screen.

To view the **spin statistics**, press START when **Spd** is displayed:

C 300: 0  
C 350: 0  
C 400: 0  
C 450: 0

C 500: 0  
C 550: 0  
C 600: 0  
C 650: 0

C 700: 0  
C 750: 0  
C 800: 0  
C 850: 0

C 900: 0  
C 950: 0  
C 999: 109

Press the bottom left key to return to the statistics screen.

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## 2.4 Troubleshooting Guide

Error Code	Description	Possible Cause	Action
PUR FAUL UAIT	Power failure	Power is interrupted during a cycle	Wait 2 minutes and then press the start key, cycle will resume
E2	Door lock Fault	Failed lock mechanism or circuitry	Door lock may need to be replaced, call a certified technician
E3	Drain valve not opening	Drain valve failure	Drain valve may need to be replaced, call a certified technician
E4	Water level not increasing	Low or no water pressure	Check water connection, make sure water is on and between 28 and 56 PSI
		Clogged inlet port	Clean screens on water inlets on rear of machine
		Open drain valve	Check drain valve is clear of obstacles that are keeping it from closing
E5	Heating fault	Miswired Element	Check element wiring is corrected to schematic
		Bad element	Replace element
E6	Thermostat exceeded 203F/90C	Inlet water too Hot	Check inlet water temperature
		Contactor stuck on causing element to always be on	Check/replace contactor
E7	Thermostat high limit open	Water in tub too hot	Drain water from tub and allow thermostat to reset by allowing it to cool
E9	Motor high limit	Motor overheating	Motor or fan may need to be replaced, contact a certified technician
E10	Out of Balance	Vibration switch/out of balance sensor was activated	Run washer if problem persists Check lag bolts/shocks and springs
		Inverter sensor imbalance	Run washer if problem persists Check belt
E11	Hot Clothes	Water temperature exceeded 122F/50C	Customer warning
E12	Water remains in tub after the cycle ends	Drain valve stuck closed	Drain valve may need to be replaced, call a certified technician
		Clog in drain line	Inspect and clean drain line if necessary

