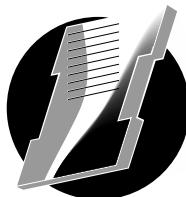


Troubleshooting guide



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CARPET WIZARD



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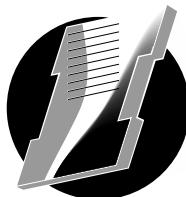
To use this trouble shooting guide please read the following.

In the table of contents you will find a list of general problems that might affect your unit. Then each general problem has its own table of content. This table lets you narrow down the problem you might have. Once you know what page to look at turn there.

Then you will see a statement like "Check for line voltage power to the unit." to the left side of the page. The numbers next to that will be what figure and part you will want to refer to. This helps you locate where you are supposed to check. Then there will be a question to ask yourself. Then it is simply a matter of following the flow arrows depending on your answer.

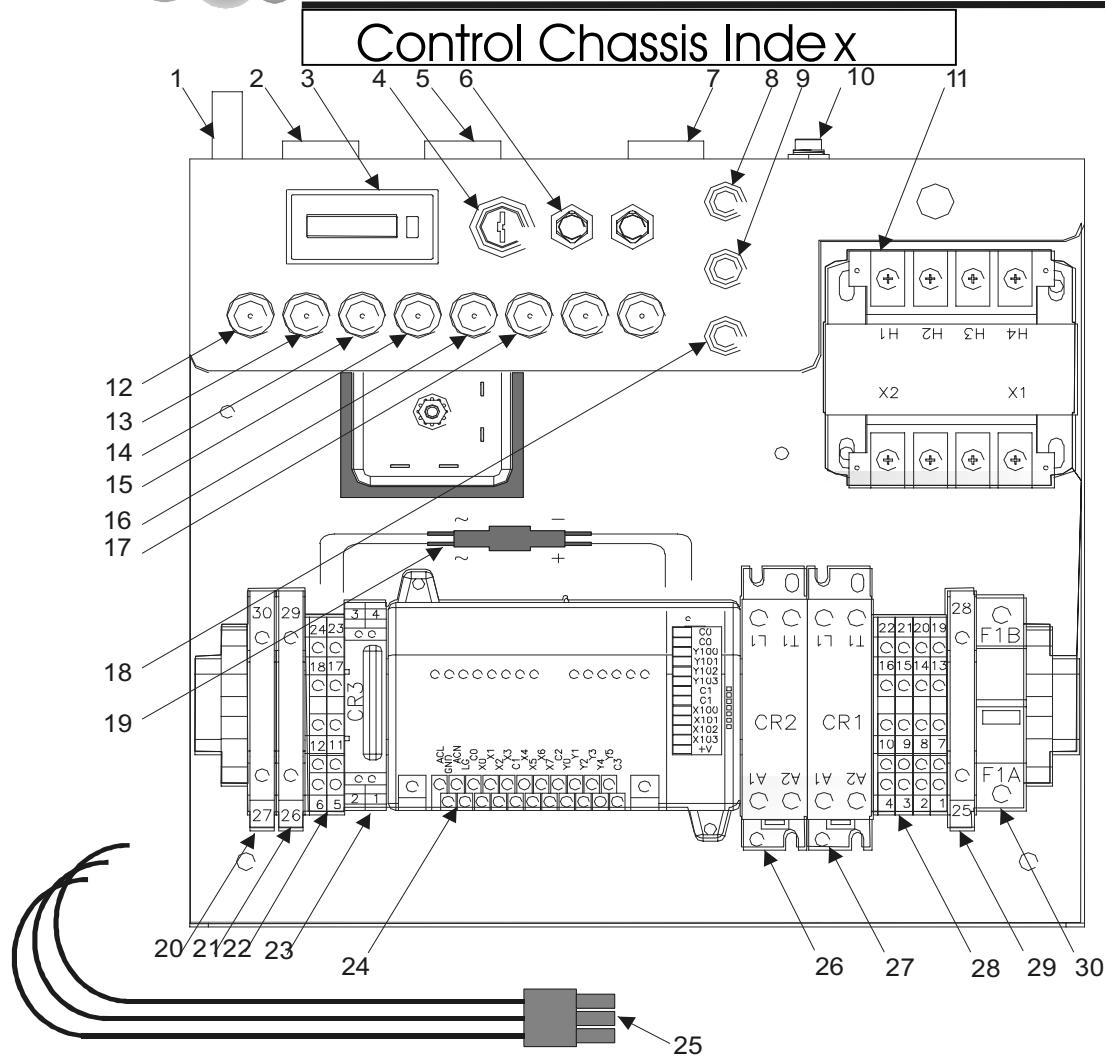
Now let's give an example. Let's say there is a problem with the Pump & Compressor control output. I would look at figure 2 part 24 and find it on the machine. Then once I have located the part I would ask myself, "With the timer counting down and the Shampoo or Spot Remover mode selected and indicated on the door, and does the Y3 status indicator come on?" Now let's say the Y3 indicator does not come on, I would follow the no arrow and read the next box. "There is an internal hardware or software failure in the PLC. Call 1-800-968-8227 for Tech Support to confirm. Replace the PLC." Now I would call the number and tell them the problem and follow their instruction to confirm if the PLC needs to be replaced.

If you have a problem that isn't listed in our guide please call 1-800-968-8227 for assistance.



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Part Description

- 1 Motor harness connection
- 2 Timer harness connection
- 3 Coin counter
- 4 Coin counter reset switch
- 5 VPL harness connection
- 6 Timer reset switch
- 7 Door interface harness connection
- 8 Motor 1 circuit breaker

Part Description

- 9 Motor 2 circuit breaker
- 10 Primer button
- 11 Transformer
- 12 115 Vac indicator LED (red)
- 13 CR1 output indicator LED (red)
- 14 CR2 output indicator LED (red)
- 15 24 VAC indicator LED (yellow)
- 16 Timer output indicator LED (yellow)
- 17 Trigger switch indicator LED (yellow)

Continued on next page

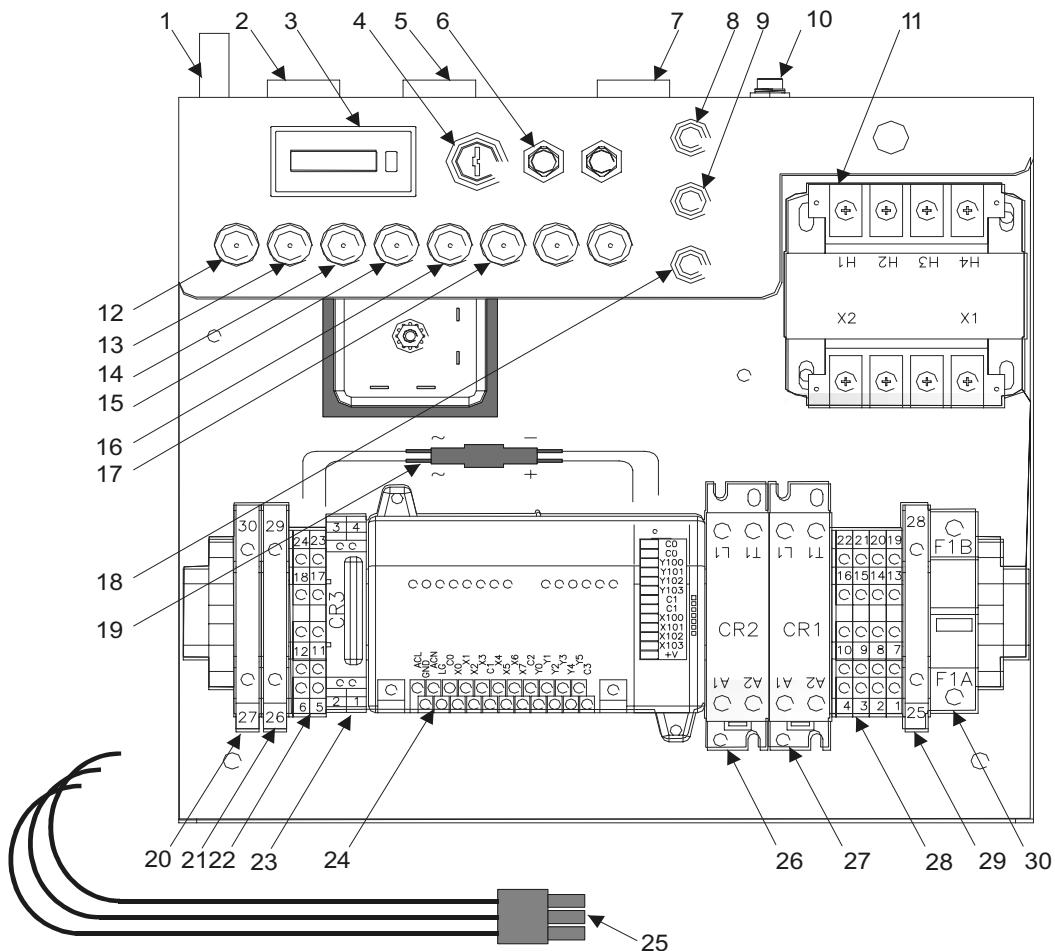


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Figure 1 Page 4

CARPET WIZARD

Control Chassis Index



Part Description

- 18 Pump / Compressor circuit breaker
- 19 Diode bridge
- 20 24 VAC fuse holder (ABC4)
- 21 Timer fuse holder (ABC2)
- 22 Terminal Blocks-24 VAC

Part Description

- 23 CR3-Timer signal conditioning solid state relay
- 24 PLC
- 25 Main power harness connection
- 26 CR2-Pump & Compressor solid state relay
- 27 CR1-Vacuum motors solid state relay
- 28 Terminal Blocks-115 VAC
- 29 PLC fuse holder (ABC2)
- 30 Main fuse holder (FNQ20)



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Figure 2 Page 5



Electrical Problems

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<u>Unit Doesn't Operate</u>	
No Lights or Display
	7



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CARPET WIZARD

Unit doesn't operate.
No lights or display.

lights or display.

Check for Line Voltage Power to the unit

Fig. 1 Item

Fig. Item

Fig. 1 Item

Check for Low Voltage (24 vac)

Power to the unit

(Assumes line voltage supply to the unit is satisfactory)

15 Is the yellow 24vac indicator on the chassis

Nc

100

No Door Selection Indicator Lights

front panel on?
No
See Low Voltage section above

Yes See PLC Troubleshooting section

1



Vacuum Motor Problems

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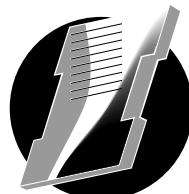
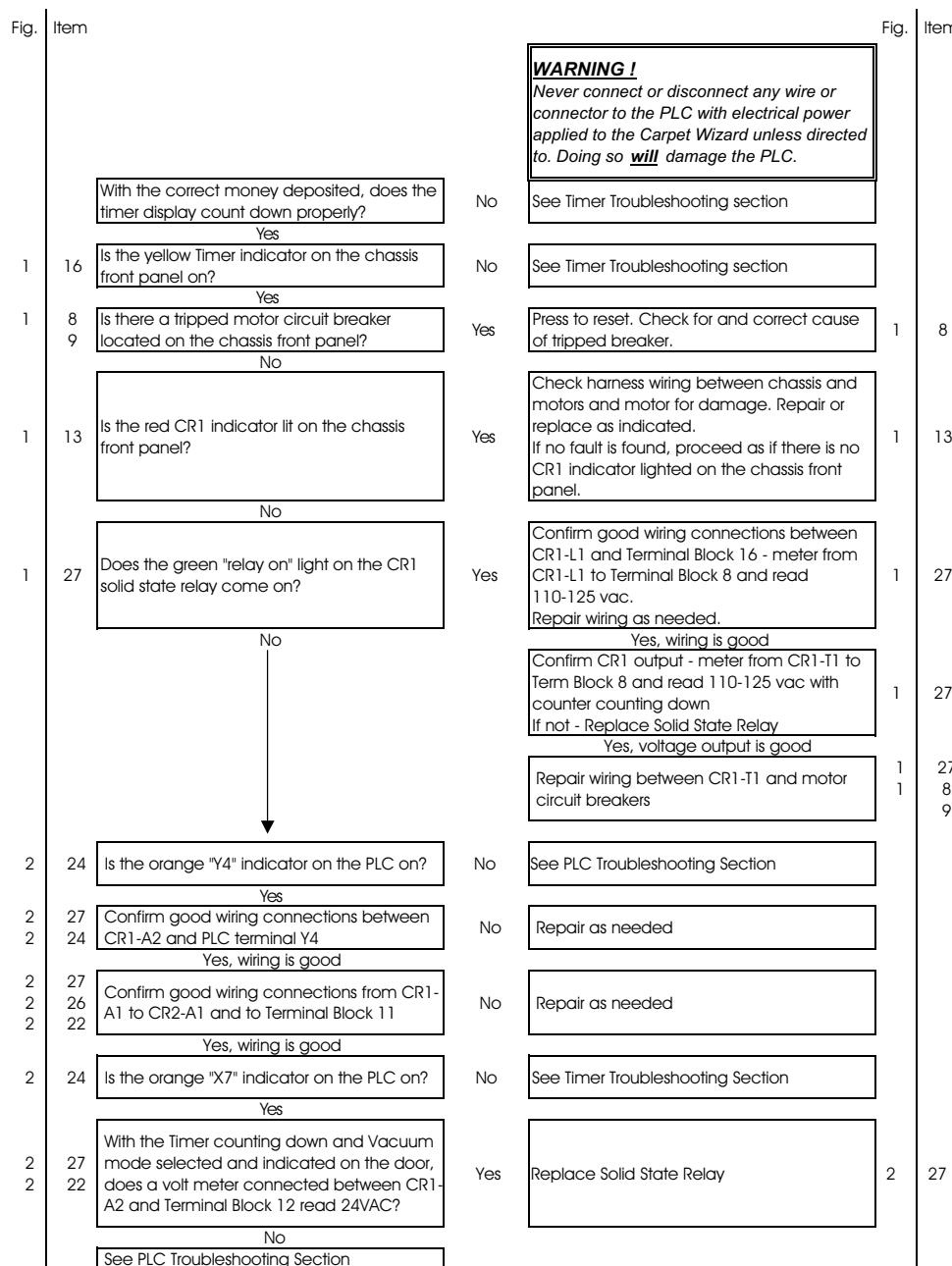
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CARPET WIZARD

Vacuum motors don't operate.

(Assumes red 115vac and yellow 24vac indicators on chassis front panel are on, and Vacuum mode is selected and indicated)



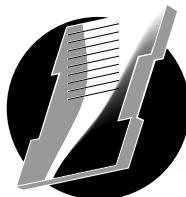
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Shampoo Delivery Problems

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CARPET WIZARD

Improper or No Shampoo

Delivery From Brush

(Assumes red 115vac and yellow 24vac indicators on chassis front panel are on, and Fragrance mode is selected and indicated on the door)

Fig. Item

Do not dilute the shampoo concentrate.

The Carpet Wizard uses a 2 part system - water in the large tank and concentrate in the smaller tank. There is no need to premix anything.

Fig. Item

When "Shampoo" is selected, the PLC directs the pump and valves deliver a ratio of 7 parts water and 1 part concentrate to the foam block. There, the 2 solutions are deposited on a piece of foam generating medium and agitated by the air from the compressor to create the foam.. When "Spot Remover" is selected, the PLC directs the pump and valves to deliver only the concentrate to the piece of foam generating medium to be agitated into foam.

Pump and/or Compressor don't run

		With the correct money deposited, does the timer display count down properly? Yes	No	See Timer Troubleshooting section
1	16	Is the yellow Timer indicator on the chassis front panel on? Yes	No	See Timer Troubleshooting section
2	18	Is there a tripped Pump/Compressor circuit breaker located on the chassis front panel? No	Yes	Press to reset. Check for and correct cause of tripped breaker.
1	14	Is the red CR2 indicator lit on the chassis front panel? No	Yes	Check VPL harness wiring between chassis and Pump/Compressor and motors for damage. Repair or replace as indicated. If no fault is found, proceed as if there is no CR2 indicator lighted on the chassis front panel.
2	26	Does the green "relay on" light on the CR2 solid state relay come on? No	Yes	Confirm good wiring connections between CR2-L1 and Terminal Block 16 - meter from CR2-L1 to Terminal Block 8 and read 110-125 vac. Repair wiring as needed. Yes, wiring is good
				Confirm CR2 output - meter from CR2-T1 to Term Block 8 and read 110-125 vac with counter counting down. If not - Replace Solid State Relay
				Yes, voltage output is good Repair wiring between CR2-T1 and Pump/Compressor circuit breaker
2	24	Is the orange "Y3" indicator on the PLC on? Yes	No	See PLC Troubleshooting Section
2	26	Confirm good wiring connections between CR2-A2 and PLC terminal Y3 Yes, wiring is good	No	Repair as needed
2	26	Confirm good wiring connections from CR2-A1 to Terminal Block 11 22 (CR2-A1 to CR3-A1 then to Terminal Block 11 if 3rd motor equipped) Yes, wiring is good	No	Repair as needed
2	24	Is the orange "X7" indicator on the PLC on? Yes	No	See Timer Troubleshooting Section
2	26	With the Timer counting down and Shampoo or Spot Remover mode selected and indicated on the door, does a volt meter connected between CR2-A2 and Terminal Block 12 read 24VAC? No	Yes	Replace Solid State Relay
				See PLC Troubleshooting Section



CARPET WIZARD

Compressor and Pump run -

No or Low Foam delivery

(Do Not Dilute the Shampoo Concentrate.)
The pump delivers a very small volume of solution (Shampoo is about 1-1/4 teaspoon of concentrate and 9-1/2 teaspoons of water per minute - 4-3/4 teaspoons of concentrate alone for Spot Remover) delivered at nearly 0 psi.

The compressor agitates the solution at low pressure of 10 to 15 psi.

Plumbing Issues

The smaller tubing is connected by means of push connect fittings. To release the tubing from these fittings, press down on the blue ring and then grasp the tubing and gently pull the tubing from the connector. To install the tubing, do not push on the blue ring - just insert the cleanly cut end of the tubing into the fitting and push firmly until you feel it engage and seat in the fitting.

Pick-up tube sets have 2 tubes - a larger clear tube and a smaller colored or translucent tube. The large clear tube is the pick-up tube, and the other is a pump return line. Both are placed in the tank. Under the dome, the pick-up tube is connected to the pump and the return line is connected to the top of the selector valves.

Is there adequate solution in the tanks?

Yes

No

Re-fill tanks and re-prime the system.

Are the weighted pick-up tubes and strainers in the bottom of the tanks?

Yes

No

Position tubes in the bottom of the tanks and re-prime the system.

Are the pick-up tube strainers obstructed with debris?

No

Yes

Clear the strainers and re-prime the system.

Are the pick-up tubes pinched or kinked or broken?

No

Yes

Correct or replace as indicated and re-prime the system.

Pick-up tubes are connected to the front leg of the pump tubing by a check valve, and the check valve is oriented with the sloped end pointed to the pump.

Yes

No

Correct or repair as indicated and re-prime the system.

Check the colored tubing connected to the output side of the pump and the bottom straight fitting of the selector valve.

Yes

No

Correct or repair as indicated and re-prime the system.

Check pump output to the valve by disconnecting the return line from the TOP of the selector valve and pressing the primer button momentarily and observing a very small amount of solution come out of the valve. The brush trigger switch must be off for this test. The fourth valve is the compressor valve and has no return line and no top fitting. When the primer button is pressed, during this test, air should come out of the top of the fourth valve.

Yes, there is proper pump output

Verify that the elbow push fitting is installed in the valve port marked "1" and the pump output tubing is connected to the opposite fitting on the valve body. If not, call 1-800-968-8227 for Tech Support.

Yes, the fittings and tubes are correct
Replace the valve.

Check for proper operation of the selector valve by disconnecting the valve output tubing from the elbow push fitting installed in valve port "1" (There is a "1" stamped on the valve body at the port). With the brush trigger switch in the on position, press the primer button momentarily and observe a small amount of solution come out of the fitting. The uncolored tubing is the compressor line and has no fluid.

Yes, there is proper valve output

See the "Electrical Issues" portion of this section

Confirm there is proper flow to the delivery hose assembly by disconnecting the union push fittings in the electrical compartment one at a time and observing product flow using the primer button and brush trigger switch as before. The uncolored tubing is the compressor line and has no fluid.

Yes, there is proper flow.

Correct Clogged, pinched, kinked, or broken tubing or fittings

Examine the foam block (item 1 pg 32) for clogged outlet. Unscrew the 3 port fitting from the nozzle block & check for internal blockage. The foam generating media is located behind the 3 port fitting.

No blockage.

Correct as indicated.

Check visible portions of the delivery hose tubing for obvious kinks, breaks, or blockages. With the 3 port fitting disconnected from the foam block, test each selection and check for blocked tubing within the delivery hose by observing fluid delivery into the fitting.

No flow

Repair or replace delivery hose set.

1 Perform this test one selection at a time.
Reconnect tubing after each test.

1 Perform this test one selection at a time.
Reconnect tubing after each test.

1 Perform this test one selection at a time.
Reconnect tubing after each test.



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CARPET WIZARD

WARNING !

Never connect or disconnect any wire or connector to the PLC with electrical power applied to the Fresh'N Up unless directed to. Doing so **will** damage the PLC.

When Shampoo is selected - the Front valve and the Second valve will open when the brush trigger switch is placed in the ON position

When Spot Remover is selected - the Third valve will open when the brush trigger switch is placed in the ON position

Yes, there is proper flow.
Reassemble brush and return to service.

Electrical Issues

When the timer is counting down, and Shampoo or Spot Remover is selected, does the corresponding red door indicator come on?

Yes

2 24 When the timer is counting down, and a fragrance is selected, does the corresponding orange PLC output indicator come on?
"Y0" = Shampoo selection
"Y1" = Spot Remover selection

Yes

2 24 Confirm good wire connection at PLC terminals
"Y0" = Shampoo selection
"Y1" = Spot Remover selection

Wiring connections are good.

1 17 When the brush trigger switch is placed in the ON position, does the yellow "Trigger" indicator comes on.

Yes

With the timer counting down, check for proper valve actuation (one at a time), by disconnecting the violet common wire from all but the valve(s) being selected.

Front valve = Shampoo selection water

Second valve = Shampoo selection

concentrate

Third valve = Spot Remover selection

concentrate

Rear valve = Compressor (should switch with each trigger actuation regardless of selection)

Yes, the valve actuates.

If the valve appears to pass both the electrical and plumbing issues, call 1-800-968-8227 for Tech Support

The Carpet Wizard will always start in the vacuum mode. Shampoo and Spot Remover selections can be made at anytime the timer is counting down.

No See PLC Troubleshooting Section

No See PLC Troubleshooting Section

No Repair wiring connections as indicated.

No See Trigger Switch troubleshooting section below.

No Replace valve

Trigger Switch Troubleshooting

Is the Brush Trigger Switch wire connector plug in the left side of the electrical controls area connected with no broken wires.

Yes

Open the brush and check for broken wires attached to the switch.

No

Check trigger switch for continuity

Switch checks good.

Check continuity of individual wires in the delivery hose set.

Wires check good.

Check for good connections of violet and brown wires to terminal strip under the dome at right of compressor.

Wires check good.

1 2 5 22 Check the VPL Harness plug connection at the Chassis. Check pin 9 - Brown wire to terminal strip just checked and Violet wire in the chassis to Terminal Block 12

Wires and connections check good.

Call 1-800-968-8227 for Tech Support

Troubleshooting the Brush Trigger Switch is indicated when the Yellow "Trigger" indicator on the chassis front panel fails to light up when the brush trigger switch is placed in the ON position.

No Repair as indicated

Yes Repair as indicated

Bad Replace Switch

Bad Replace delivery hose set.

Bad Repair as indicated

Bad Repair as indicated



CARPET WIZARD

Solution is Delivered to the Gun, but Poor Foam generation or Lack of foam generation.
(Assumes the compressor and pump turn on and off correctly and there are no outstanding plumbing issues checked above)

Do not dilute the shampoo concentrate.
The Carpet Wizard uses a 2 part system - water in the large tank and concentrate in the smaller tank. There is no need to premix anything.

When "Shampoo" is selected, the PLC directs the pump and valves deliver a ratio of 7 parts water and 1 part concentrate to the foam block. There, the 2 solutions are deposited on a piece of foam generating medium and agitated by the air from the compressor to create the foam.. When "Spot Remover" is selected, the PLC directs the pump and valves to deliver only the concentrate to the piece of foam generating medium to be agitated into foam.

1	10	Is the system fully primed? Hold the prime switch with the trigger switch in the ON position until there is a consistent flow. Full prime can take several minutes. Check individual selections for correct prime using normal operational vend cycle.	
		When using the Prime button, foam generation may be poor due to the volume of fluid being delivered to the foam block. The Prime button delivers both solutions to the nozzle at the same time thereby overloading the foam block. When priming is complete, you can test the foam generation of the individual selections by making a regular vend.	Bad Reprime the system as indicated.
		System is fully primed.	
		Foam block may be damaged or partially blocked. Open the brush and unscrew the 3 port fitting from the nozzle block. The Foam Generating Media is located behind the 3 port fitting.	Bad Correct or replace as indicated.
		No damage or blockage.	
		Check visible portions of the delivery hose tubing for obvious kinks, breaks, or blockages.	Bad Repair or replace the delivery hose set as indicated
		No visible obstruction or damage.	
		Is there positive airflow at the brush foam outlet port?	Yes Call 1-800-968-8227 for Tech Support
		No	
Reconnect tubing after test	1	Disconnect the union push fitting for the uncolored tubing in the electrical compartment. When the primer button is pressed and brush trigger switch is turned on, is there positive airflow from the uncolored tube?	Yes The uncolored air flow tubing in the delivery hose is kinked, broken, clogged, or pinched. Repair or replace the delivery hose set as indicated.
Reconnect tubing after test	1	Disconnect the uncolored tubing from the push fitting elbow installed in the compressor. When the primer button is pressed and brush trigger switch is in the On position, is there positive airflow from the compressor?	No Replace the compressor
		Yes	
	1	With the Brush Trigger Switch in the OFF press and hold the primer button. Is there airflow from the top port of the 4th or rear valve? (This valve has no fitting on the top port)	No Verify that the elbow push fitting is installed in the valve port marked "1" and the compressor output tubing is connected to the opposite fitting on the valve body. If not, call 1-800-968-8227 for Tech Support
Reconnect wires after test		Yes, there is proper pump output.	Yes, the fittings and tubes are correct Disconnect the violet wire from all but the 4th or rear valve (the compressor valve). With the unit in an idle status, does the valve actuate when the brush trigger switch is turned on? If not see the Trigger Switch Troubleshooting section above. Yes the valve actuates. Replace valve
Reconnect tubing after test	1	Disconnect the uncolored tubing from the elbow push fitting installed in valve port "1".	
	10	When the primer button is pressed and brush trigger switch is turned on, is there positive airflow from the valve?	No Replace valve



CARPET WIZARD

Yes

Check the uncolored tubing going to the delivery hose tubing connection in the electrical compartment for obstructions.

No obstructions

Call 1-800-968-8227 for Tech Support

Yes

Correct Clogged, pinched, kinked, or broken tubing or fittings



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Timer Problems

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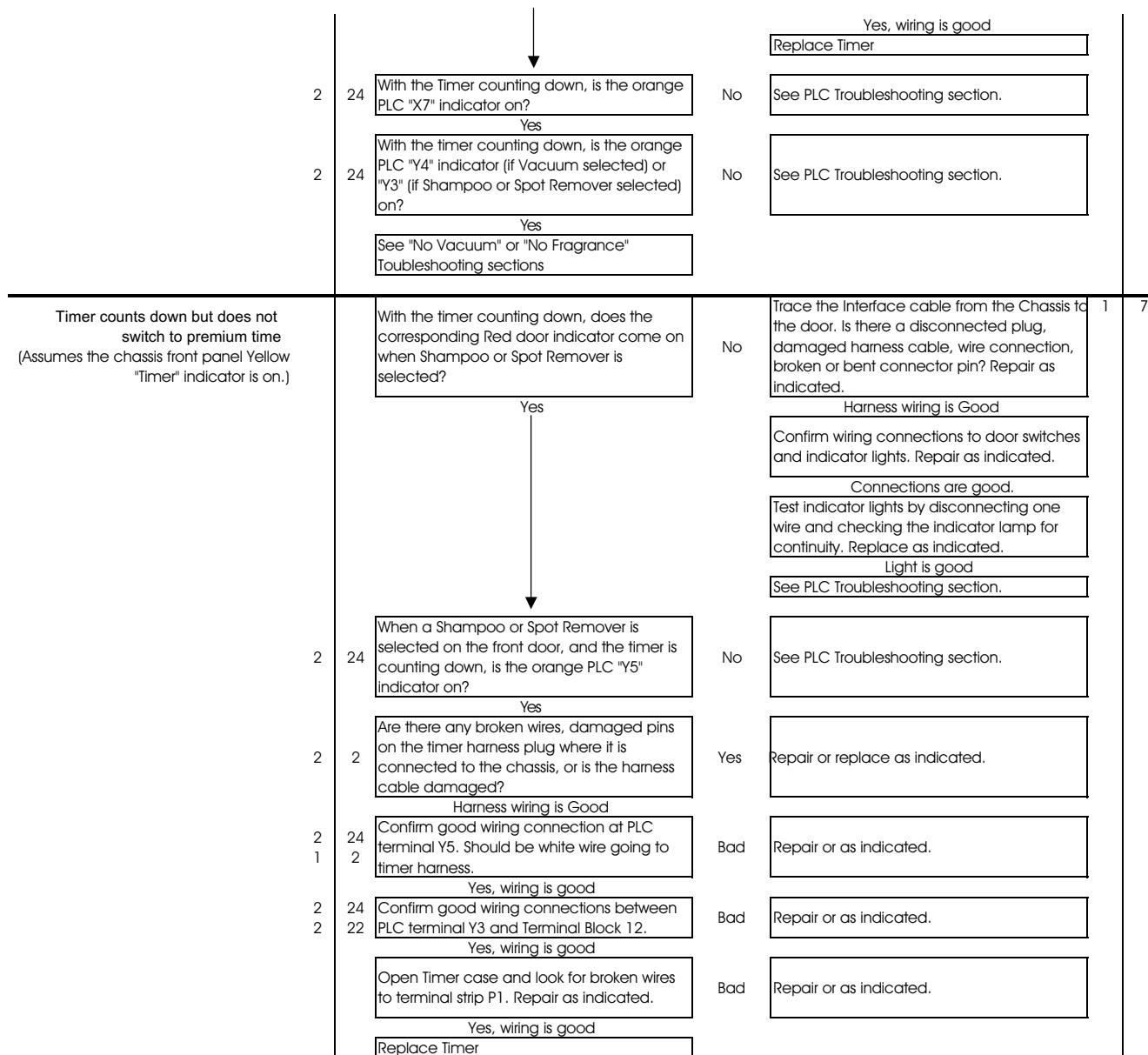
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CARPET WIZARD

Timer Troubleshooting (Assumes red 115vac and yellow 24vac indicators on chassis front panel are on)		Fig. Item		Fig. Item	
				WARNING ! Never connect or disconnect any wire or connector to the PLC with electrical power applied to the Fresh'N Up unless directed to. Doing so will damage the PLC.	
No Display at all	2	21	Is the Timer (ABC2) fuse holder blown fuse light on? No	Yes	Replace Timer (ABC2) fuse
	2	2	Is 6 pin timer harness connector plugged into the controls chassis? Yes	No	Correct problem
	2	2	Are there any broken wires, damaged pins on the timer harness plug or is the harness cable damaged? No	Yes	Repair as indicated
			Open Timer case and look for broken wires to terminal strip P1 Yes	No	Replace Timer
			Repair as indicated		
Timer display is on but does not count down at all			Has correct amount of money been deposited? Yes		
			Is value accumulated on the display correctly for the money deposited? Yes	No	Are there any broken wires or damaged pins where the Timer harness is connected to the chassis or is the harness cable damaged? Repair or replace as indicated.
			Confirm the timer is programmed with the correct number of "Coins To Start" and the correct "Cycle Time". Correct as indicated. (See page 13 - LED Timer Setup) Programming is Correct	No	Trace the Interface cable from the Chassis to the door. Is there a disconnected plug, damaged harness cable, wire connection, broken or bent connector pin? Repair or replaced as indicated.
			Replace Timer	No	Open Timer case and look for broken wires to terminal strip P1. Repair as indicated.
				No	See Coin Mech/Bill Acceptor Troubleshooting.
Timer counts down but No Vacuum or Shampoo function The Carpet Wizard will always start in the vacuum mode. Shampoo or Spot Remover selection can be made at anytime the timer is counting down. (Also see No Vacuum and No Shampoo Delivery trouble shooting sections.)	1	16	With the Timer counting down, is the yellow "Timer" indicator on the chassis front panel on? Yes	No	Are there any broken wires, damaged pins on the timer harness plug where it is connected to the chassis, or is the harness cable damaged? Repair or replace as indicated.
					Harness wiring is Good
				No	Confirm good wiring connection at CR3 terminal 4. There should be (2) green wires. Repair wiring as needed.
					Yes, wiring is good
				No	Confirm good wiring connection between CR3-3 and Terminal Block 24. Repair wiring as needed.
					Yes, wiring is good
				No	With the timer counting down, meter between CR3-4 and Terminal Block 18. If you read 24 VAC, replace the chassis front panel "Timer" indicator and re-start this section
					No 24 vac.
					Open Timer case and look for broken or loose wires to terminal strip P1. Repair as indicated.



CARPET WIZARD

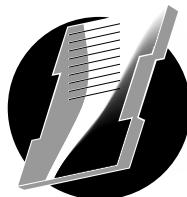




Coin/Bill Acceptor Problems

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CARPET WIZARD

Coin Mechanism and Bill Validator
(Assumes red 115vac and yellow 24vac
Indicators on chassis front panel are on)

Coin Mechanism rejects all coins

Does the coin mechanism indicate that there is power applied to the coin mechanism?

No

WARNING !
Never connect or disconnect any wire or connector to the Coin Mechanism or Bill Acceptor with electrical power applied to the Carpet Wizard. Doing so **will** damage the Coin Mechanism or Bill Acceptor.

Trace the Interface cable from the Chassis to the coin mechanism. Is there a disconnected plug, damaged harness cable, wire connection, broken or bent connector pin? Repair as indicated.

Harness wiring is Good

Meter from pin 1 to pin 2 of the coin mechanism 3 pin plug. Does the meter read 24 VAC?
If it does, replace the coin mechanism.

No

Confirm the chassis interface harness connections to chassis terminal blocks 17 (black wire) and 18 (red wire). Repair as indicated.

Connections are good

Call 1-800-968-8227 for Tech Support

Yes

Check for coin jams

None

Check the coin path for damage

None

Check coin mech programming.

Program appears ok

Call 1-800-968-8227 for Tech Support

Yes Clear or repair as indicated

Yes Repair or replace as indicated

Bad Reprogram as indicated

Coin Mechanism & Bill Validator accepts coins and/or bills, but Timer does not accumulate value.

Has correct amount of money been deposited?

Yes

Does the digital coin counter register the money being deposited (\$1.00 will register as 4 coins).

No

Trace the Interface cable from the Chassis to the coin mechanism and the bill validator. Is there a disconnected plug, damaged harness cable, wire connection, broken or bent connector pin? Repair or replaced as indicated.

1

7

Yes

Are there any broken wires or damaged pins where the Timer harness is connected to the chassis or is the harness cable damaged? Repair or replace as indicated.

Wires and connections are good
See Timer Troubleshooting section

Wires and connections are good
See Timer Troubleshooting section

Coin Jams

Check the coin path for obstruction or other damage.

No

Is the coin drawer full?

No

Is there an obstruction between the coin mechanism and coin box?

No

Call 1-800-968-8227 for Tech Support

Yes Repair or replace as indicated

Yes Empty coin drawer

Yes Clear obstruction.

Bill Validator has a high bill rejection rate

WARNING !

Never connect or disconnect any wire or connector to the Coin Mechanism or Bill Acceptor with electrical power applied to the Carpet Wizard. Doing so **will** damage the Coin Mechanism or Bill Acceptor.

TIP -

Don't try the same rejected bill more than 3 consecutive times. Doing so may temporarily "teach" the validator that the bill is a bad bill. This will make further troubleshooting more difficult.

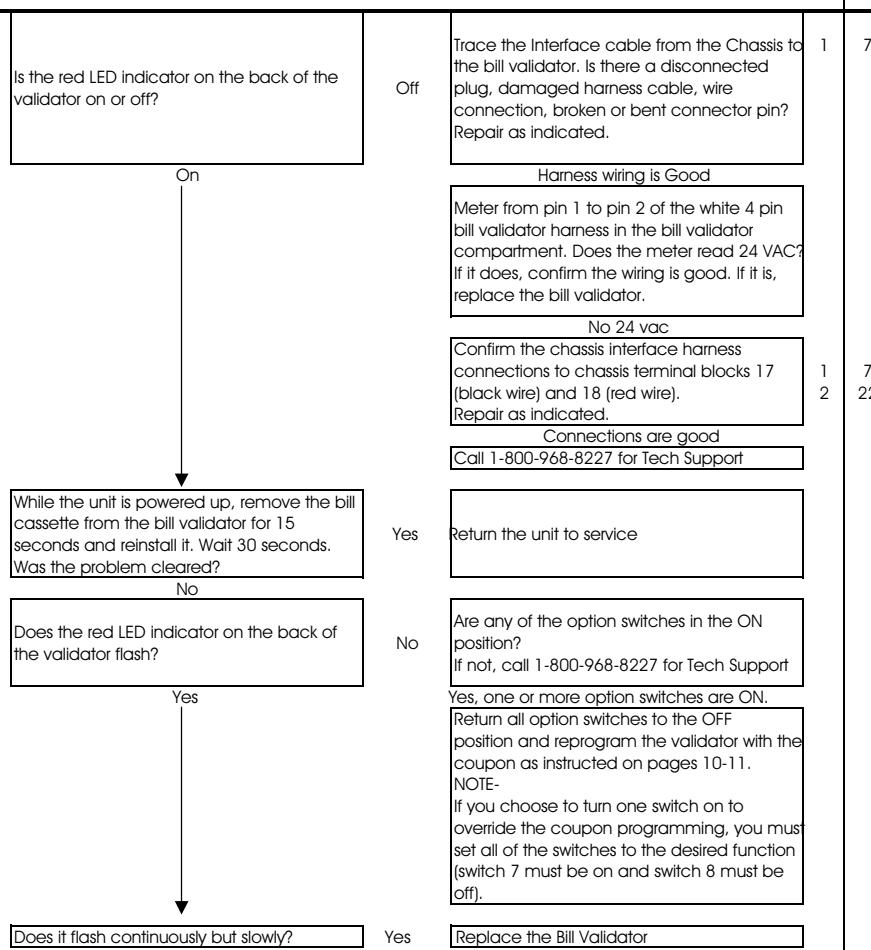
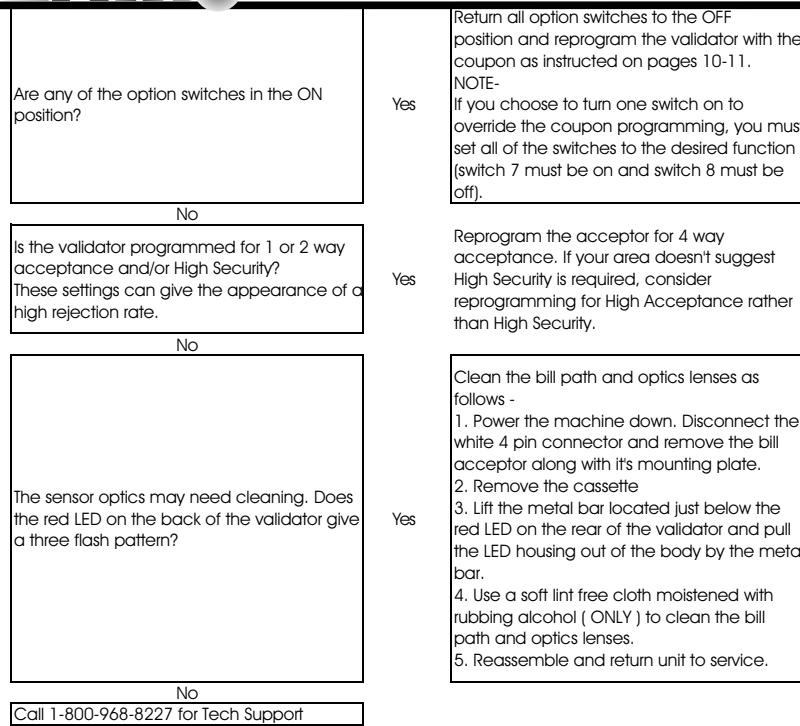


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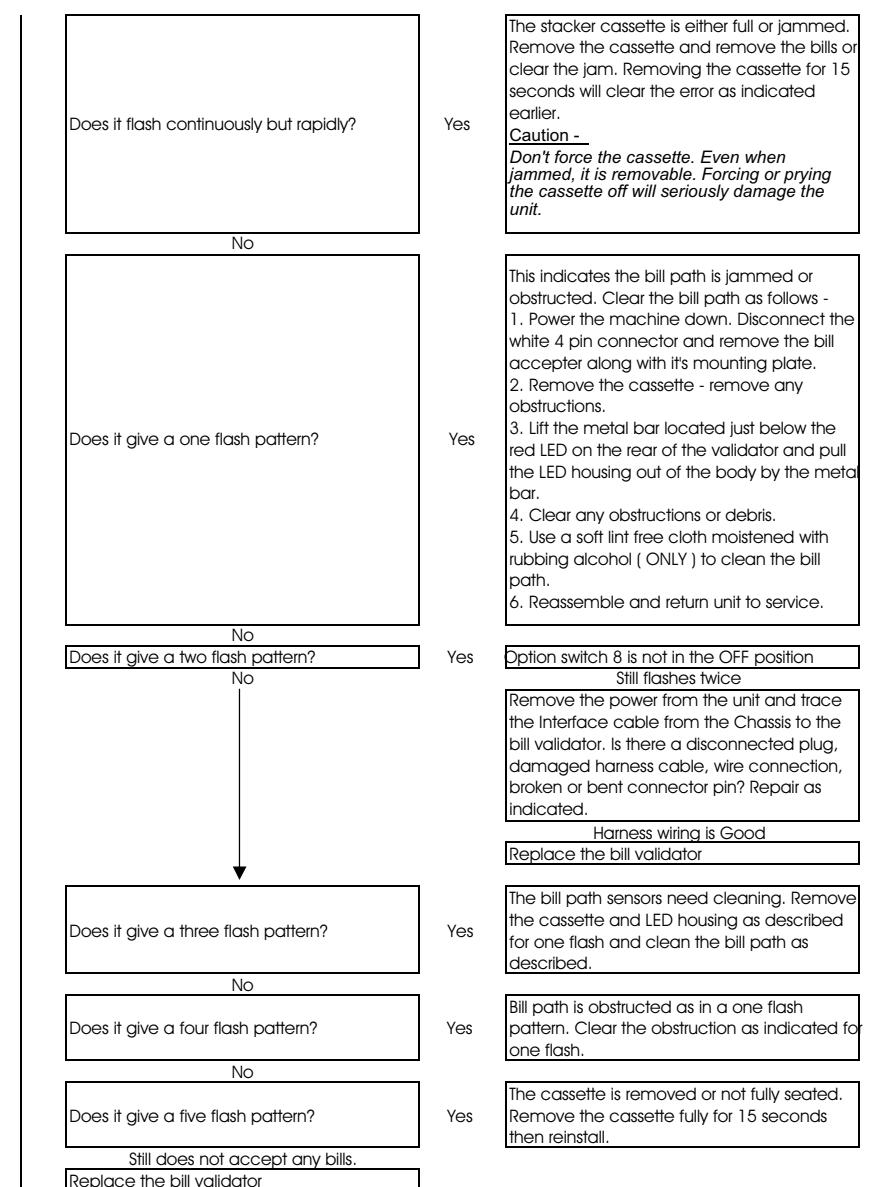


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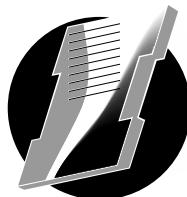
Bill Validator doesn't accept any bills
WARNING !
 Never connect or disconnect any wire or connector to the Coin Mechanism or Bill Acceptor with electrical power applied to the Carpet Wizard. Doing so will damage the Coin Mechanism or Bill Acceptor.



CARPET WIZARD



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PLC Problems

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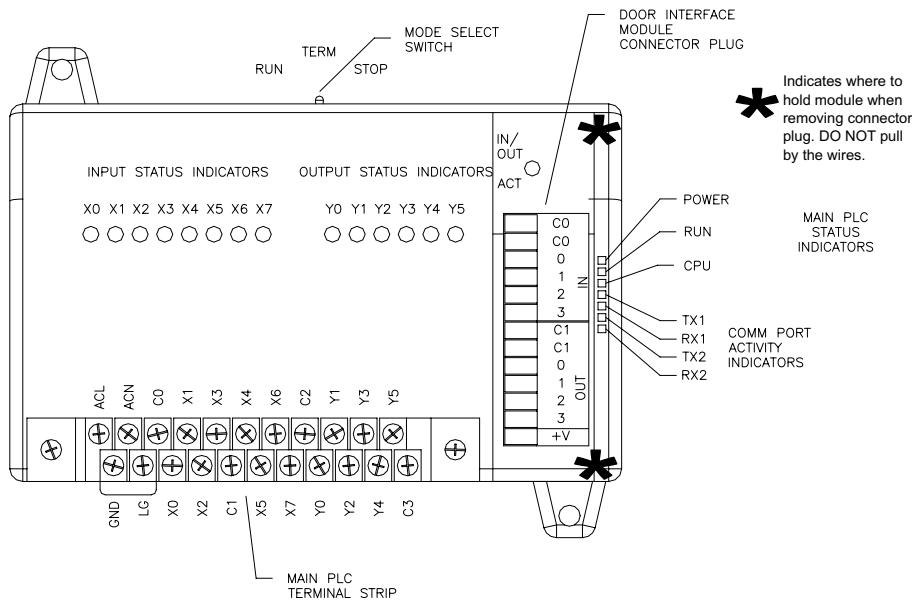


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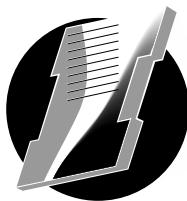
PLC Trouble Shooting

WARNING!

Never connect or disconnect any wire or connector to the PLC with electrical power applied to the Carpet Wizard unless directed to. Doing so **will** damage the PLC.



(Square indicators on right side of PLC) Main PLC Status Indicators	POWER	On (Green)	Indicates 120VAC is applied to PLC terminals ACL and ACN
		Off	No power applied to PLC. Check the ABC2 PLC fuse.
		On (Green)	The Mode Select Switch is in the RUN position. This is the correct position for the switch.
Main PLC Status Indicators	RUN	Off	The Mode Select Switch is in the TERM or STOP position. The PLC will not function properly unless the switch is in the RUN position.
		On (Red)	There is an internal hardware or software failure in the PLC. Call 1-800-968-8227 for Tech Support to confirm.
		Off	Replace the PLC. This indicator is off for normal operation.
Comm Port Activity Indicators (Square green indicators)	TX1	Not used in the field at this time.	
		TX1	Not used in the field at this time.
		TX2	Not used in the field at this time.
		RX2	Not used in the field at this time.
In/Out Act Indicator (Round green indicator)	Indicates door interface module is powered and communicating with the main PLC CPU.	On	Normal operation
		Off	Indicates a hardware failure. Call 1-800-968-8227 for Tech Support to confirm. Replace the PLC
Input Status Indicators (Round orange indicators)	These indicators turn on when an input signal of the proper voltage is applied to the corresponding PLC terminal and is received by the CPU.	X0	Not used in the field at this time.
		X1	Not used in the field at this time.
		X2	Not used in the field at this time.
		X3	Not used in the field at this time.



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Output Status Indicators (Round orange indicators)	X4	Not used in the field at this time.	
	X5	Not used in the field at this time.	
	X6	On	Primer button input of 120VAC is applied to PLC terminal X6 (Connected to one primer button terminal).
	X7	On	Input from the Timer is converted to 120VAC by CR3 and applied to PLC Terminal X7 (Connected to CR3-2).
	Shampoo Mode	Y0	On
		Y1	On
	Y2		Only used on a Fresh'N Up Fragrance unit
Compressor & Pump	Y3	On	Switches CR2-A2 to 24VAC neutral. Connect PLC Terminal Y3 to terminal block 12 via PLC Terminal C3 (Compressor and Pump - Shampoo or Spot Remover mode).
	Y4	On	Switches CR1-A2 to 24VAC neutral. Connect PLC Terminal Y3 to terminal block 12 via PLC Terminal C3. (Vac Motors - Vac mode)
	Y5	On	Switches the Timer "2-Timer" leg to 24VAC neutral. Connect PLC Terminal Y5 to terminal block 12 via PLC Terminal C3.
Door Interface Module Connects the door selector switches and door selection indicators to the PLC. There are no individual status indicators for the door interface module.	Module C0 and C0 (internally connected) (also jumpered to module C1)		-24VDC (sinking) common for the door selector switches. Connected to diode bridge (-) by blue wire.
	Module Input 0		Input from Vacuum selector switch on the door.
	Module Input 1		Input from Shampoo selector switch on the door.
	Module Input 2		Input from Spot Remover selector switch on the door.
	Module Input 3		Only used on a Fresh'N Up Fragrance unit
	Module C1 and C1 (internally connected) (also jumpered to module C0)		-24VDC (sinking) common for the door selector indicators. Connected to diode bridge (-) or blue wire via jumper to module C0.
	Module Output 0		Output for Vacuum selector indicator light on the door.
	Module Output 1		Output for Shampoo selector indicator light on the door.
	Module Output 2		Output for Spot Remover selector indicator light on the door.
	Module Output 3		Only used on a Fresh'N Up Fragrance unit
	+V		+24VDC power supply for module. Connected to diode bridge (+) by green wire. Yellow wire at this position provides +24VDC to door selection switches and indicator lamps.



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Fig.	Item	Fig.	Item	
NOTICE - The following troubleshooting steps assume you have been directed to this section by another troubleshooting step, and have eliminated other potential faults such as power faults.				
Begin all PLC troubleshooting with these steps	<p>Is the Main Status "Power" LED on?</p> <p>Yes</p> <p>Is the "In/Out ACT" LED on?</p> <p>Yes</p> <p>Is the Main Status "CPU" LED on?</p> <p>No</p> <p>Is the Main Status "RUN" LED on?</p>	<p>WARNING ! Never connect or disconnect any wire or connector to the PLC with electrical power applied to the Carpet Wizard unless directed to. Doing so will damage the PLC.</p> <p>No</p> <p>There is no 120VAC applied to the PLC. Confirm good wiring connections between PLC Terminal A1L and ABC-2 Fuse terminal 28, also Between PLC Terminal A1N and terminal block 1.</p> <p>No</p> <p>Indicates a hardware failure. Call 1-800-968-8227 for Tech Support to confirm. Replace the PLC</p> <p>Yes</p> <p>There is an internal hardware or software failure in the PLC. Call 1-800-968-8227 for Tech Support to confirm. Replace the PLC.</p> <p>No</p> <p>The Mode Select Switch is not in the "RUN" position.</p>	<p>2 24</p> <p>2 29</p> <p>2 28</p>	
No Door Selection Indicator Lights The Carpet Wizard will always start in the vacuum mode. Shampoo and Spot Remover mode can only be selected with the Timer counting down.	<p>Test indicator lights by disconnecting one wire and checking the indicator lamp for continuity.</p> <p>Light is good</p> <p>Confirm wiring connections to door switches and indicator lights.</p> <p>Connections are good.</p> <p>Trace the Interface cable from the Door Interface Module to the door. Is there a disconnected plug, damaged harness cable, wire connection, broken or bent connector pin?</p> <p>Harness wiring is Good</p> <p>Power down the unit. Check the Door Interface Module plug for loose or broken wires.</p> <p>Wiring is good.</p> <p>Disconnect power to the unit and unplug the Door Interface Module connector as indicated above. Apply power to the unit and connect a voltmeter set to read DC Voltage to the "+V" and "C1" terminals of the Door Interface Module plug making sure to observe the polarity given above.</p> <p>Does the voltmeter read 23 to 25 VDC?</p> <p>Yes</p> <p>There is an internal hardware or software failure in the PLC. Call 1-800-968-8227 for Tech Support to confirm. Replace the PLC.</p>	<p>Lamp is bad</p> <p>Wiring is bad</p> <p>Wiring is bad</p> <p>Wiring is bad</p> <p>Wiring is bad</p> <p>No</p>	<p>Replace as indicated.</p> <p>Repair as indicated.</p> <p>Repair as indicated.</p> <p>1. Hold Module where indicated above & gently work the green connector plug loose, and remove from the module. 2. Make sure the wires are inserted into the connector plug and tighten the terminal screws firmly with a properly sized screwdriver. 3. Reconnect the plug, seating it fully.</p> <p>Replace the diode bridge. Observing the wire connections and polarity given above.</p>	<p>2 19</p>
The timer is counting down, but no vacuum, shampoo or spot remover function.	<p>With the timer counting down, is the "X7" Input status indicator on?</p> <p>No</p>	<p>Yes</p> <p>If a voltmeter connected to PLC Terminals X7 and ACN reads 120VAC with the timer counting down, see the Vacuum Motor and Pump and Compressor Troubleshooting sections below.</p>		



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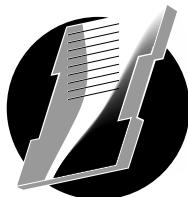
2	24	Are the wiring connections at PLC Main Terminals X7, C1, and ACN and terminal block 1 good? Yes	No	Repair as indicated.	
2	24	Does a voltmeter connected to PLC Main Terminals C1 and ACN read 120VAC? Yes	No	Repair faulty wiring between PLC-C1, ACN, and/or terminal block 1.	2 24 2 28
2	24	With the timer counting down, does a voltmeter connected to PLC Terminals X7 and ACN read 120VAC? No	Yes	See the Vacuum Motor and Fragrance Output Troubleshooting sections below.	
2	23	Are all 4 wiring connections to CR3 good? CR3-1 connects to PLC-ACL and fuse 28. CR3-2 connects to PLC-X7. CR3-3 connects to terminal block 24. CR3-4 connects to the timer harness pin 6. Yes	No	Repair as indicated.	
2	22	With the timer counting down, does a voltmeter connected to CR3-4 and terminal block 24 read 24VAC? No	Yes	Replace CR3	2 23
		See Timer Troubleshooting Section			
Vacuum Motor control output Troubleshooting (Assumes X7 Input Status indicator is on)		With the timer counting down and Vacuum mode selected and indicated on the door, does the "Y4" status indicator come on?	Yes	Does a voltmeter connected to PLC Main Terminal C3 and Terminal Block 11 read 24VAC? If it does, repair wiring between PLC terminal C3 and Terminal Block 12. Wiring is good.	2 24 2 22
		No		With the timer counting down and Vacuum mode selected and indicated, does a voltmeter connected to PLC Main Terminal Y4 and Terminal Block 11 read 24VAC? If it does, see Vacuum Motor Troubleshooting section. No	2 22 2 22
				There is an internal hardware or software failure in the PLC. Call 1-800-968-8227 for Tech Support to confirm. Replace the PLC.	
Pump & Compressor control output Troubleshooting (Assumes X7 Input Status indicator is on)		With the timer counting down and Shampoo or Spot Remover mode selected and indicated on the door, does the "Y3" status indicator come on?	Yes	Does a voltmeter connected to PLC Main Terminal C3 and Terminal Block 11 read 24VAC? If it does, repair wiring between PLC terminal C3 and Terminal Block 12. Wiring is good.	2 24 2 22
		No		With the timer counting down and Shampoo or Spot Remover mode selected and indicated, does a voltmeter connected to PLC Main Terminal Y3 and Terminal Block 11 read 24VAC? If it does, see Shampoo Delivery Troubleshooting section. No	2 24 2 22
				There is an internal hardware or software failure in the PLC. Call 1-800-968-8227 for Tech Support to confirm. Replace the PLC.	
		There is an internal hardware or software failure in the PLC. Call 1-800-968-8227 for Tech Support to confirm. Replace the PLC.			



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Timer will not shift to premium time value (Assumes the Timer Troubleshooting Section has been completed and assumes X7 Input Status indicator is on)	2	24	With the timer counting down and Shampoo or Spot Remover mode selected and indicated on the door, does the "Y5" status indicator come on?	Yes	Does a voltmeter connected to PLC Main Terminal C3 and Terminal Block 11 read 24VAC? If it does, repair wiring between PLC terminal C3 and Terminal Block 12. Wiring is good.	2	24
					With the timer counting down and Shampoo or Spot Remover mode selected and indicated, does a voltmeter connected to PLC Main Terminal Y5 and Terminal Block 11 read 24VAC? If it does, see Shampoo Delivery Troubleshooting section.	2	22
				No	There is an internal hardware or software failure in the PLC. Call 1-800-968-8227 for Tech Support to confirm. Replace the PLC.	2	24
					There is an internal hardware or software failure in the PLC. Call 1-800-968-8227 for Tech Support to confirm. Replace the PLC.	2	22





Notes



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