

TROUBLESHOOTING GUIDES

This section of the manual contains:

- Temperature Problem Diagnostic Worksheets
- Error Code Tables and the Error Code Troubleshooting Guides
- General Troubleshooting Guide
- Sealed System Diagnostic Tables
- Membrane Switch/Ribbon Cable Test Procedures
- Fan Relay Continuity Tests

Temperature Problem Diagnostic Worksheet

The Diagnostic Worksheets on the following three pages are designed to help identify the cause of temperature problems in a wine storage unit. To fill out the worksheet, familiarity with Diagnostic Mode and Temperature Log Recall Mode is required (See section 2 of this manual).

Follow the steps below and fill out a diagnostic worksheet before referencing the General Troubleshooting Guide.

1. Write down the temperatures shown on the display.
 - a. If unit is OFF, switch unit ON and go to step #2 below.
 - b. If unit does not run, but display is functioning, go to step #3 below.

NOTE: "EE" displayed in place of either compartment temperature indicates a compartment thermistor error. Thermistor errors cause power to the compressor and fans to be cut.
 - c. If unit does not run and display does not operate, go directly to General Troubleshooting Guide.
2. Write down the set-points, keep in mind that the initial key stroke does not change the set-point on the UW-24.
3. Initiate Diagnostic Mode by pressing and holding either COLDER key and the POWER key, then write down any Error codes that may appear and the temperature readings for each thermistor location. (See Thermistor Location Code Table at right.)
 - a. If error codes appear, go directly to Error Code Troubleshooting Guide.
 - b. If "EE" is displayed in place of temperature, this indicates a thermistor error in that location.
4. Initiate Temperature Log Recall Mode by pressing and holding the desired compartment WARMER key and the POWER key, then toggle through the indexes, writing down the temperature of each index for both compartments. If the ALARM or SERVICE indicators light up during an index, circle it on the worksheet.
 - a. By observing the temperatures logged, it is possible to see if any warming or cooling trends occurred, whether this trend was in one or both compartments, and if there was a power interruption (ALARM illuminated), or that the unit was switched OFF (SERVICE illuminated).
 - b. If double dashes (- -) are displayed, the control board is defective.

NOTE: To see the index/time correlation, refer to the Temperature Log Index Chart on last page of section 2 of this manual.
5. Use the information gathered on the worksheet in conjunction with the General Troubleshooting Guide.

Wine Storage Thermistor Location Codes	
MODEL 424	
THERMISTOR LOCATION	CODE
<i>Upper Evaporator</i>	UE
<i>Lower Evaporator</i>	LE
<i>Upper Compartment</i>	UP
<i>Lower Compartment</i>	LO

TEMPERATURE PROBLEM DIAGNOSTIC WORKSHEET

Temperature Displayed: Lower _____ Upper _____

Set-Point: Lower _____ Upper _____

Diagnostic Mode Thermistor Readings: EC (Error Codes) _____

UE (Upper Evap) _____ LE (Lower Evap) _____ UP (Upper Cmppt) _____ LO (Lower Cmppt) _____

Index	Logged Temp.		Indicator Lit (Circle below if present)
	Lower	Upper	
1			ALARM / SERVICE
2			ALARM / SERVICE
3			ALARM / SERVICE
4			ALARM / SERVICE
5			ALARM / SERVICE
6			ALARM / SERVICE
7			ALARM / SERVICE
8			ALARM / SERVICE
9			ALARM / SERVICE
10			ALARM / SERVICE
11			ALARM / SERVICE
12			ALARM / SERVICE
13			ALARM / SERVICE
14			ALARM / SERVICE
15			ALARM / SERVICE
16			ALARM / SERVICE
17			ALARM / SERVICE
18			ALARM / SERVICE
19			ALARM / SERVICE
20			ALARM / SERVICE
21			ALARM / SERVICE
22			ALARM / SERVICE
23			ALARM / SERVICE
24			ALARM / SERVICE
25			ALARM / SERVICE
26			ALARM / SERVICE
27			ALARM / SERVICE
28			ALARM / SERVICE
29			ALARM / SERVICE
30			ALARM / SERVICE
31			ALARM / SERVICE
32			ALARM / SERVICE

Index	Logged Temp.		Indicator Lit (Circle below if present)
	Lower	Upper	
33			ALARM / SERVICE
34			ALARM / SERVICE
35			ALARM / SERVICE
36			ALARM / SERVICE
37			ALARM / SERVICE
38			ALARM / SERVICE
39			ALARM / SERVICE
40			ALARM / SERVICE
41			ALARM / SERVICE
42			ALARM / SERVICE
43			ALARM / SERVICE
44			ALARM / SERVICE
45			ALARM / SERVICE
46			ALARM / SERVICE
47			ALARM / SERVICE
48			ALARM / SERVICE
49			ALARM / SERVICE
50			ALARM / SERVICE
51			ALARM / SERVICE
52			ALARM / SERVICE
53			ALARM / SERVICE
54			ALARM / SERVICE
55			ALARM / SERVICE
56			ALARM / SERVICE
57			ALARM / SERVICE
58			ALARM / SERVICE
59			ALARM / SERVICE
60			ALARM / SERVICE
61			ALARM / SERVICE
62			ALARM / SERVICE
63			ALARM / SERVICE
64			ALARM / SERVICE

TEMPERATURE PROBLEM DIAGNOSTIC WORKSHEET

Temperature Displayed: Lower _____ Upper _____

Set-Point: Lower _____ Upper _____

Diagnostic Mode Thermistor Readings: EC (Error Codes) _____

UE (Upper Evap) _____ LE (Lower Evap) _____ UP (Upper Cmppt) _____ LO (Lower Cmppt) _____

Index	Logged Temp.		Indicator Lit (Circle below if present)
	Lower	Upper	
1			ALARM / SERVICE
2			ALARM / SERVICE
3			ALARM / SERVICE
4			ALARM / SERVICE
5			ALARM / SERVICE
6			ALARM / SERVICE
7			ALARM / SERVICE
8			ALARM / SERVICE
9			ALARM / SERVICE
10			ALARM / SERVICE
11			ALARM / SERVICE
12			ALARM / SERVICE
13			ALARM / SERVICE
14			ALARM / SERVICE
15			ALARM / SERVICE
16			ALARM / SERVICE
17			ALARM / SERVICE
18			ALARM / SERVICE
19			ALARM / SERVICE
20			ALARM / SERVICE
21			ALARM / SERVICE
22			ALARM / SERVICE
23			ALARM / SERVICE
24			ALARM / SERVICE
25			ALARM / SERVICE
26			ALARM / SERVICE
27			ALARM / SERVICE
28			ALARM / SERVICE
29			ALARM / SERVICE
30			ALARM / SERVICE
31			ALARM / SERVICE
32			ALARM / SERVICE

Index	Logged Temp.		Indicator Lit (Circle below if present)
	Lower	Upper	
33			ALARM / SERVICE
34			ALARM / SERVICE
35			ALARM / SERVICE
36			ALARM / SERVICE
37			ALARM / SERVICE
38			ALARM / SERVICE
39			ALARM / SERVICE
40			ALARM / SERVICE
41			ALARM / SERVICE
42			ALARM / SERVICE
43			ALARM / SERVICE
44			ALARM / SERVICE
45			ALARM / SERVICE
46			ALARM / SERVICE
47			ALARM / SERVICE
48			ALARM / SERVICE
49			ALARM / SERVICE
50			ALARM / SERVICE
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52			ALARM / SERVICE
53			ALARM / SERVICE
54			ALARM / SERVICE
55			ALARM / SERVICE
56			ALARM / SERVICE
57			ALARM / SERVICE
58			ALARM / SERVICE
59			ALARM / SERVICE
60			ALARM / SERVICE
61			ALARM / SERVICE
62			ALARM / SERVICE
63			ALARM / SERVICE
64			ALARM / SERVICE

TEMPERATURE PROBLEM DIAGNOSTIC WORKSHEET

Temperature Displayed: Lower _____ Upper _____

Set-Point: Lower _____ Upper _____

Diagnostic Mode Thermistor Readings: EC (Error Codes) _____

UE (Upper Evap) _____ LE (Lower Evap) _____ UP (Upper Cmppt) _____ LO (Lower Cmppt) _____

Index	Logged Temp.		Indicator Lit (Circle below if present)
	Lower	Upper	
1			ALARM / SERVICE
2			ALARM / SERVICE
3			ALARM / SERVICE
4			ALARM / SERVICE
5			ALARM / SERVICE
6			ALARM / SERVICE
7			ALARM / SERVICE
8			ALARM / SERVICE
9			ALARM / SERVICE
10			ALARM / SERVICE
11			ALARM / SERVICE
12			ALARM / SERVICE
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14			ALARM / SERVICE
15			ALARM / SERVICE
16			ALARM / SERVICE
17			ALARM / SERVICE
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21			ALARM / SERVICE
22			ALARM / SERVICE
23			ALARM / SERVICE
24			ALARM / SERVICE
25			ALARM / SERVICE
26			ALARM / SERVICE
27			ALARM / SERVICE
28			ALARM / SERVICE
29			ALARM / SERVICE
30			ALARM / SERVICE
31			ALARM / SERVICE
32			ALARM / SERVICE

Index	Logged Temp.		Indicator Lit (Circle below if present)
	Lower	Upper	
33			ALARM / SERVICE
34			ALARM / SERVICE
35			ALARM / SERVICE
36			ALARM / SERVICE
37			ALARM / SERVICE
38			ALARM / SERVICE
39			ALARM / SERVICE
40			ALARM / SERVICE
41			ALARM / SERVICE
42			ALARM / SERVICE
43			ALARM / SERVICE
44			ALARM / SERVICE
45			ALARM / SERVICE
46			ALARM / SERVICE
47			ALARM / SERVICE
48			ALARM / SERVICE
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57			ALARM / SERVICE
58			ALARM / SERVICE
59			ALARM / SERVICE
60			ALARM / SERVICE
61			ALARM / SERVICE
62			ALARM / SERVICE
63			ALARM / SERVICE
64			ALARM / SERVICE

Wine Storage Error Code Troubleshooting Guide Instructions

Error Codes indicate problems logged by specific components. If error codes are logged, they appear before temperature readings while in Diagnostic Mode and they can be toggled through with the temperature readings.

1. With the unit ON, initiate Diagnostic Mode by pressing and holding either COLDER key, then press the POWER key, then release both keys.
2. Check for Error Codes on the display, making sure to toggle through all possible readings by pressing either COLDER key. (See Error Code Table Below)
3. If Error Codes appear, reference the Error Code Troubleshooting Guide on the next page.
 - a. The left column of the Error Code Troubleshooting Guide lists the error codes.
 - b. The right column of the Error Code Troubleshooting Guide explains what tests and/or corrective actions to perform.

NOTE: If error codes are observed, the SERVICE indicator appears constant when Diagnostic Mode ends, indicating error codes are logged. To clear this and the error codes from the software memory, the problem must be corrected and the unit must be ON; then press and hold the ALARM key for 15 seconds. The control emits a quick “beep” when the SERVICE indicator and error codes are cleared.

WINE STORAGE ERROR CODE TABLE

CODE	INDICATION
05	<i>Upper Cabinet Thermistor read open or shorted for 10+ seconds, or repeatedly read erratic temp's</i>
06	<i>Upper Evaporator Thermistor read open or shorted for 10+ seconds, or repeatedly read erratic temp's</i>
07	<i>Lower Cabinet Thermistor read open or shorted for 10+ seconds, or repeatedly read erratic temp's</i>
08	<i>Lower Evaporator Thermistor read open or shorted for 10+ seconds, or repeatedly read erratic temp's</i>
10	<i>Upper Cabinet Warm Temperature alarm</i>
11	<i>Upper Cabinet Cold Temperature alarm</i>
12	<i>Lower Cabinet Warm Temperature alarm</i>
13	<i>Lower Cabinet Cold Temperature alarm</i>
15	<i>Sealed System Fault (evap temperature cannot drop 5° in 5 minutes, 3 consecutive valve activations)</i>

Wine Storage Thermistor Location Codes

MODEL ICB424	
THERMISTOR LOCATION	CODE
<i>Upper Evaporator</i>	UE
<i>Lower Evaporator</i>	LE
<i>Upper Compartment</i>	UP
<i>Lower Compartment</i>	LO

WINE STORAGE ERROR CODE TROUBLESHOOTING GUIDE

Error Code	Test / Action
EC 05	a. Check upper compartment thermistor electrical connections and continuity from thermistor to J2 on control board. Reconnect / repair connections. b. Check upper compartment thermistor for 30,000 to 33,000 ohms at 32°F. Replace thermistor if defective.
EC 06	a. Check upper compartment evaporator thermistor electrical connections and continuity from thermistor to J2 on control board. Reconnect / repair connections. b. Check upper evaporator thermistor for 30,000 to 33,000 ohms at 32°F. Replace thermistor if defective.
EC 07	a. Check lower compartment thermistor electrical connections and continuity from thermistor to J2 on control board. Reconnect / repair connections. b. Check lower compartment thermistor for 30,000 to 33,000 ohms at 32°F. Replace thermistor if defective.
EC 08	a. Check lower compartment evaporator thermistor electrical connections and continuity from thermistor to J2 on control board. Reconnect / repair connections. b. Check lower evaporator thermistor for 30,000 to 33,000 ohms at 32°F. Replace thermistor if defective.
EC 10 or EC 12	a. Check room ambient temperature. Unit performs best between 60°F - 90°F. b. Check for door obstructions, door seal and door adjustment issues; Remove obstruction, align door. c. Check switch depressor; Reposition or replace. d. Check cleanliness of condenser; Clean condenser. e. Check for obstructions at appropriate compartment fan blade; Remove obstruction. f. Check appropriate compartment evaporator fan blade spacing. Adjust if needed. g. Check appropriate fan motor and its electrical connections; Repair or replace. h. Check door switch and its electrical connections; Repair or replace. i. Check resistance of appropriate compartment thermistor for 30,000 to 33,000 ohms at 32°F. Replace if defective. j. Initiate manual valve activation mode for appropriate compartment: <ol style="list-style-type: none"> 1. Check for proper voltage from J3 on board to appropriate evaporator fan motor. Replace or repair defective components. 2. If <u>opposite</u> evaporator temperature drops, check for proper wiring at valve; repair wire connections. If wiring is correct, replace valve assembly. k. Check AMP draw of compressor. If high by 15% or more, replace compressor. l. Check sealed system for leaks; Repair replace defective parts.
EC 11 or EC 13	a. Check room ambient temperature. Unit performs best between 60°F - 90°F. b. Check for door obstructions, door seal and door adjustment issues; Remove obstruction, align door. c. Check appropriate compartment thermistor electrical connections and continuity from thermistor to J2 on control board. Reconnect / repair connections. d. Check resistance of appropriate compartment thermistor for 30,000 to 33,000 ohms at 32°F. Replace if defective.
EC 15	a. Initiate manual valve activation mode for <u>upper</u> compartment: <ol style="list-style-type: none"> 1. Check for proper voltage from J3 on board to appropriate evaporator fan motor. Replace or repair defective components. 2. If <u>lower</u> evaporator temperature drops, check for proper wiring at valve; repair wire connections. If wiring is correct, replace valve assembly. b. Initiate manual valve activation mode for <u>lower</u> compartment: <ol style="list-style-type: none"> 1. Check for proper voltage from J3 on board to appropriate evaporator fan motor. Replace or repair defective components. 2. If <u>upper</u> evaporator temperature drops, check for proper wiring at valve; repair wire connections. If wiring is correct, replace valve assembly. c. Check AMP draw of compressor. If high by 15% or more, replace compressor. d. Check sealed system for leaks, or restrictions; Repair replace defective parts.

NOTE: After repairs, always clear Error Codes by pressing ALARM key for 15 seconds.

General Troubleshooting Guide

The Table of Contents below indicates how the General Trouble Shooting Guide is arranged.

1. As close as possible, match the complaint, or description of the problem the unit is experiencing with those in the table of contents below.
2. To the left of the problem description, take note of the letter.
3. Locate that letter in the left column of the General Troubleshooting Guide.
 - a. In the center column of the General Troubleshooting Guide is a list of possible causes for the problem.
 - b. The information in the right column explains what tests and/or corrective actions to perform.

NOTES:

- If the complaint, or problem is warm temperatures, or temperatures too cold, in a wine storage compartment, be sure to complete a Temperature Problem Diagnostic Worksheet on the preceding pages before continuing.
- All key strokes necessary to help in diagnosing a problem are explained in section 2 of this manual.

Wine Storage Troubleshooting Guide Table of Contents

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PROBLEM	POSSIBLE CAUSE	TEST / ACTION
A. SERVICE FLASHING	See Error Code Troubleshooting Guide	See Error Code Troubleshooting Guide
B. WARM TEMPERATURE IN BOTH WINE STORAGE COMPARTMENTS	Control Set Too Warm	Check set-points. Adjust set-points COLDER
	Unit in Showroom Mode	Adjust set-points colder, listen for compressor & condenser fan operation. If they do not run, switch unit OFF, then press and hold <u>upper</u> COLDER & WARMER keys while pressing POWER key.
	Unit Recently Energized	Allow time for unit to pull down to temperature
	Unit Recently Stocked with Wine	Allow time for unit to pull down to temperature
	High Room Ambient	Instruct Customer that unit performs best between 60°F - 90°F
	Door Ajar a. Wine Rack Obstruction b. Door out of Adjustment c. Door or Cabinet Hinge Problem	a. Adjust wine rack b. Adjust the door. c. Check hinges. Replace if defective.
	Condenser Air Flow / Fan Fault a. Dirty Condenser b. Fan Blade Loose or Obstructed c. Fan Motor Disconnected or Malfunctioning	a. Check/clean condenser. b. Tighten blade or move obstruction. c. Check fan motor operation. Check fan motor electrical connections back to compressor. Check for power from fan motor to compressor. Reconnect or repair wires, or replace motor if defective.
	Evaporator Fan Circuit Fault a. Door Switch Disconnected or Malfunctioning b. No Power from Control Board	a. Check switch electrical connections. Check for power to / from switch. Reconnect or replace switch if defective. b. Check for power at J3 on control board. (NOTE: Unit must be running and not in Showroom Mode) If no power, replace board.
	No Power from Control Board to Compressor	Initiate Manual Valve Activation Mode, check for power at E2 on the control board. If no power, replace board.
	Compressor Fault a. Compressor Electricals Disconnected or Malfunctioning b. Compressor Inefficient, or Locked	a. Check integrity of compressor electricals. Check continuity back to control board. Check for power at E2 on control board. Correct wiring problems or replace compressor electricals if defective. If no power at E2, replace control board. b. Check AMP draw on compressor. If high by 15% or more, replace compressor.
	Sealed System Leak or Restriction	SEE SEALED SYSTEM DIAGNOSTIC INFORMATION

PROBLEM	POSSIBLE CAUSE	TEST / ACTION
C. WARM TEMPERATURE IN ONLY ONE WINE STORAGE COMPARTMENT	Control Set Too Warm	Check/adjust set-points.
	Unit Recently Energized	Allow time for unit to pull down to temperature
	Unit Recently Stocked with Wine	Allow time for unit to pull down to temperature
	High Room Ambient	Instruct Customer that unit performs best between 60°F - 90°F
	Door Ajar a. Wine Rack Obstruction b. Door out of Adjustment c. Door or Cabinet Hinge Problem	a. Adjust wine rack b. Adjust the door. c. Check hinges. Replace if defective.
	Thermistor Fault a. Evaporator Thermistor Location b. Evaporator Thermistor Wiring / Connections problem c. Evaporator or Compartment Thermistor Misread	a. Move to correct location. b. Initiate Diagnostic Mode. If "EE" is displayed in place of evap temp, check electrical connections back to J2 on control board. Repair wiring or connections. c. Check thermistor ohms = 30,000 - 33,000 at 32°F. Replace if defective.
	Condenser Air Flow / Fan Fault a. Dirty Condenser b. Fan Blade Loose, or Obstructed c. Fan Motor Disconnected or Malfunctioning	a. Check/clean condenser. b. Tighten blade or move obstruction. c. Check fan motor operation. Check fan motor electrical connections back to compressor. Check for power from fan motor to compressor. Reconnect or repair wires, or replace motor if defective.
	Evaporator Fan / Fan Circuit Fault a. Fan Blade out of Position or Obstructed b. Fan Motor Disconnected or Malfunctioning	a. Check fan blade position. Reposition blade or move obstructions. b. Check fan motor electrical connections. Check power to motor. Repair connections, replace motor if defective.
	Refrigerant Valve Fault a. Solenoid Disconnected, Mis-Wired, or defective b. Refrigerant Valve Stuck	a. Initiate Manual Valve Activation Mode. 1. If valve inoperative: a. Check electrical connections. b. Check solenoid resistance for 295 ± 10% ohms. Replace if defective. 2. Toggle through temp readings, if opposite evap temp drops, switch electrical connections. b. Initiate Manual Valve Activation Mode for one side, then the other, while observing evap temps. If only one side of valve activates, replace valve.

PROBLEM	POSSIBLE CAUSE	TEST / ACTION
D. ACTUAL VS. DISPLAYED TEMPERATURE OVER 10° DIFFERENT	Wrong Units of Measure Selected, (Fahrenheit - °F vs. Celsius - °C)	Initiate Temperature Units Selection Mode to check units of measure (°F or °C) selected.
	Compartment Thermistor Fault (Misread), or Control Board Fault	Check thermistor ohms = 30,000 - 33,000 at 32°F. Replace if defective. If thermistor is OK, replace control board.
E. ACTUAL VS. DISPLAYED TEMPERATURE LESS THAN 10° DIFFERENT	Control Board DC Offset Out of Adjustment	Contact Factory for DC Offset Adjustment Procedure.
F. EXCESSIVELY COLD TEMPERATURES IN BOTH WINE STORAGE COMPARTMENTS	Room Temperature Below Set-Point	Instruct Customer.
	Control Set Too Cold	Check set-points. Adjust set-points WARMER
	Door Ajar a. Wine Rack Obstruction b. Door out of Adjustment c. Door or Cabinet Hinge Problem	a. Adjust wine rack b. Adjust the door. c. Check hinges. Replace if defective.
	Compartment Thermistor Fault (Misread), or Control Board Fault	Check thermistor ohms = 30,000 - 33,000 at 32°F. Replace if defective. If thermistor is OK, replace control board.
G. EXCESSIVELY COLD TEMPERATURES IN ONLY ONE WINE STORAGE COMPARTMENT	Room Temperature Below Set-Point	Instruct Customer.
	Control Set Too Cold	Check set-point. Adjust set-points WARMER
	Door Ajar a. Wine Rack Obstruction b. Door out of Adjustment c. Door or Cabinet Hinge Problem	a. Adjust wine rack b. Adjust the door. c. Check hinges. Replace if defective.
	Refrigerant Valve Stuck	Initiate Manual Valve Activation Mode for one side, then the other, while observing evap temps. If only one side of valve activates, replace valve.
H. LIGHTS STAY ON	Display Lighting Activated (ON 100%)	Press & release LIGHTS key.
	Fan & Light Switch Wiring Crossed	Check wiring at fan & light switch, and at control board. Rewire if incorrect.
	Door Switch Malfunction	Press & release LIGHTS key, then depress door switch. Repeat steps. If no effect, replace switch.

PROBLEM	POSSIBLE CAUSE	TEST / ACTION
I. NO LIGHTS	Unit in Sabbath Mode	Press & release POWER key.
	Door Switch Disconnected or Malfunctioning	Check switch electrical connections. Check for power to / from switch. Reconnect or replace switch if defective.
	Light Strips Burned-out	If power from switch and relay, replace light strips.
	No Power from Control Board	Check for power at E3 of control board. If no power, replace board.
J. CONTROL PANEL KEYS MALFUNCTIONING	Control Panel Ribbon Cable Plugged in Wrong	Check control panel ribbon cable at control panel (silver area of terminal <u>away</u> from control board). Plug in correctly if incorrect.
	Control Panel or Ribbon Cable Defective (OR) No Signal Read at Control Board	SEE CONTROL PANEL TEST PROCEDURE AT BACK OF TROUBLESHOOTING GUIDE SECTION.
K. NO LED's	Unit Switched OFF	Press POWER key
	LED Ribbon Cable Plugged in Wrong	Check LED ribbon cable. Plug in correctly if incorrect.
	No Data from Control Board	Replace Control Board
L. <u>ALL</u> LED's LIT	Bad Data from Control Board	Replace Control Board
M. SAME LED SEGMENTS MISSING FROM BOTH DISPLAY WINDOWS	Bad Data from Control Board	Replace Control Board
N. LED SEGMENTS MISSING FROM ONLY ONE DISPLAY WINDOWS	Bad LED Board in Control Panel	Replace Control Panel Assembly
O. DOOR / UNIT UN-LEVEL	Door or unit needs adjustment	SEE INSTALLATION MANUAL

SEALED SYSTEM DIAGNOSTIC INFORMATION
NOTES:

- The temperature/pressure table below is for reference only. A unit's temperature/pressure correlation may differ from those listed due to: variations in evaporator thermistor location, set-points, where the sealed system is in the refrigeration cycle, ambient temperature, etc.
- If a unit is experiencing temperature problems, it is recommended to reference the Error Code Troubleshooting Guide and General Troubleshooting Guide before accessing the sealed system. After all mechanical and electrical components have been ruled out, sealed system pressures can be checked and compared against those listed in the tables below.
- Whenever entering the sealed system, always use solder-on process valves. Do **NOT** use bolt-on process valves as they are prone to leak.
- Whenever servicing the sealed system, the refrigerant valve assembly (includes high-side filter-drier) must be replaced.

NORMAL OPERATING PRESSURES

Model	Normal Low Side Pressures	Normal High Side Pressures
UW-24	10 psig to 36 psig	90 psig to 100 psig

PRESSURE INDICATIONS

If low side pressure is	& high side pressure is	possible problem is
NORMAL	NORMAL	MECHANICAL (see General Troubleshooting Guide)
LOW	LOW	LEAK
LOW	HIGH	RESTRICTION
HIGH	LOW	INEFFICIENT COMPRESSOR
HIGH	HIGH	OVER CHARGE

WINE STORAGE MEMBRANE SWITCH / RIBBON CABLE TEST PROCEDURE

The membrane switch is that part of the control panel assembly consisting of the function keys used for all input functions to the electronic control system. (See Figure 6-1)

Perform the eight continuity checks below if the integrity of the membrane switch and/or its ribbon cable is suspect. To perform these continuity checks, the ribbon cable must be disconnected from the control board.

NOTE: The wires of the ribbon cable are exposed at the back side of the terminal housing. With an Ohm Meter, check for continuity at these exposed points/pins. Pin #1 is at top of the terminal housing, closest to the arrow on the housing (see Figure 8-1).

1. Pressing no keys on the membrane switch; check for continuity across all pin combinations. With no keys pressed, there should be no continuity.
2. With POWER key pressed, there should be continuity across pins #4 & #6 only.
3. With lower wine storage COLDER key pressed, there should be continuity across pins #2 & #3 only.
4. With lower wine storage WARMER key pressed, there should be continuity across pins #3 & #4 only.
5. With upper wine storage COLDER key pressed, there should be continuity across pins #2 & #6 only.
6. With upper wine storage WARMER key pressed, there should be continuity across pins #6 & #7 only.
7. With LIGHTS key pressed, there should be continuity across pins #5 & #6 only.
8. With ALARM key pressed, there should be continuity across pins #3 & #7 only.

NOTE: If the membrane switch fails any of the above tests, the control panel assembly should be replaced. If all tests are passed and the control panel is still inoperable, replace the control board.

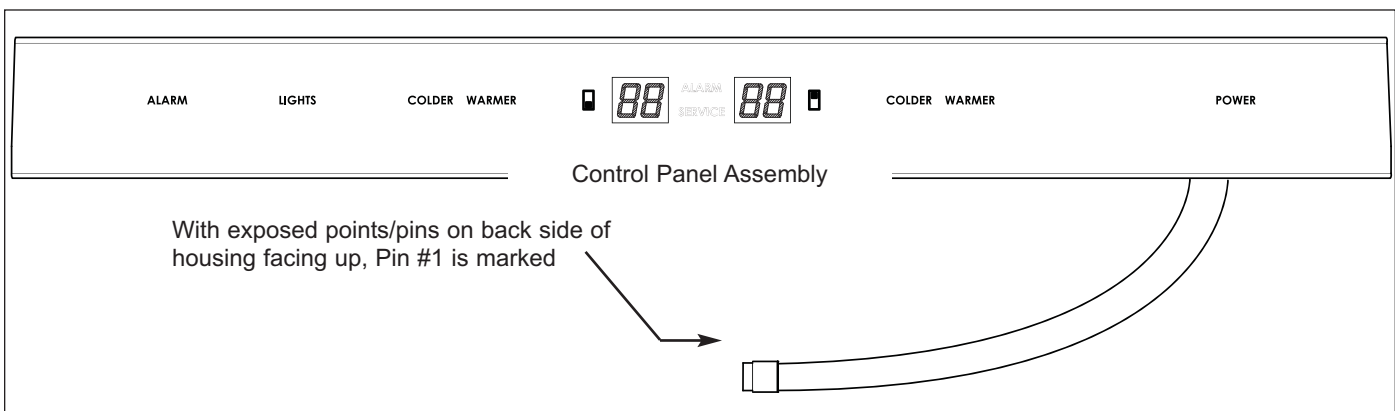


Figure 6-1. Control Panel / Membrane Switch