FOR SERVICE TECHNICIAN'S USE ONLY

Tech Sheet **Do not Discard**

⚠WARNING



Electrical Shock Hazard
Disconnect power before servicing.
Replace all parts and panels before operating.
Failure to do so can result in death or electrical shock.

⚠DANGER



Electrical Shock Hazard
Only authorized technicians should perform diagnostic voltage measurements.
After performing voltage measurements, disconnect power before servicing.
Failure to follow these instructions can result in death or electrical shock.

Voltage Measurement Safety Information

When performing live voltage measurements, you must do the following:

- Verify the controls are in the off position so that the appliance does not start when energized.
- Allow enough space to perform the voltage measurements without obstructions.
- Keep other people a safe distance away from the appliance to prevent potential injury.
- Always use the proper testing equipment.
- After voltage measurements, always disconnect power before servicing.

No-Load Performance, Controls in Normal Position

	Kw/24 hr ±0.4	Percent Run Time ±10%	Cycles/24 hr ±10	Refrigerator Compartment Average Food Temperature ±4°F	Freezer Compartment Average Food Temperature ±5°F	Ice Maker Compartment Average Food Temperature ±5°F
Ambient °F	70° 90° 110°	70° 90° 110°	70° 90° 110°	70° 90° 110°	70° 90° 110°	70° 90° 110°
25 cu ft	0.8 1.3 2.2	40 70 90	18 16 10	38 38 38	0 0 0	15 15 15

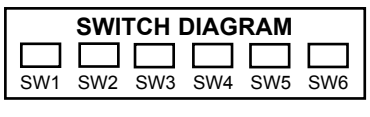
Temperature Relationship Test Chart

	Evaporator Outlet ±3°F	Evaporator Inlet ±3°F	Suction Line ±7°F	Average Total Wattage ±10%	Suction Pressure ±2 PSIG	Head Pressure ± 5 PSIG
Ambient °F	70° 90°	70° 90°	70° 90°	70° 90°	70° 90°	70° 90°
25 cu ft	-5 -3	-5 -3	70 99	60-80 70-90	6.0 3.6	70 125

Component Specifications

Component	Specifications all parts 115VAC/60HZ unless noted
Compressor	BTUH..... Variable VEGZ7H Watt..... 60 Hz / 113 watts Current Lock rotor..... 3.3 amps± 15% Current Full load..... 3.3 amps± 15% Resistance Run windings..... 6.4 ohms± 15% Resistance Start windings..... 6.4 ohms± 15% Inverter..... 3-6 VDC, Red / White =120 VAC
Electric damper control	Maximum closing time..... 16 seconds Temperature Rating..... -11°F- 110°F RPM..... 3
Thermistor	Temperature..... Resistance 77°F..... 2700 ohms± 5.0% 36°F..... 7964 ohms± 1.0% 0°F..... 23345 ohms± 2.0%
Condenser motor	Rotation (facing end opposite shaft)..... Clockwise RPM..... 1090 RPM Watt..... 3.4 watts±15%@115VAC Current..... 0.085 amps± 15%@115VAC
Evaporator fan motor	Rotation (facing end opposite shaft)..... Clockwise RPM..... 3000 RPM Watt..... 5.5 ±15% watts@12 VDC Note: Fan blade must be fully seated on shaft to achieve proper airflow.
Thermostat (Defrost)	Volt..... 120/240 VAC Watt..... 495 watts Current..... 3.75/1.87 amps Resistance across terminals: 56 K ohms Above 42°F ±5°..... Open Below 12°F ±7°..... Closed
Evaporator heater	Volt..... 115 VAC Wattage..... 470 ±5% watts @ 115VAC Resistance..... 28.1 ±5% ohms
Control board	Volt..... 120VAC, 60 HZ
Dual Water Valve	Watts..... Green side 20w,Yellow side 35w
Isolation Valve	Watts..... 20w (Brown)
Ice Box Fan	Rotation (facing end opposite shaft)..... Clockwise RPM..... 3000 RPM Watt..... 5.5 ±15% watts@12 VDC
Light switch	Type..... SPDT NO/NC Volt..... 125/250 VAC Current..... 8/4 amps

SWITCH DIAGRAM



Control board Troubleshooting

Press any key to activate.
Service Tip: If the control does not respond, remove power from the entire appliance for 10 seconds. Re-apply power, wait 10 seconds, and perform the service diagnostics routine.
NOTE: The ice door motor cycles 1 minute after on ice dispensing.

Control board Troubleshooting

To ENTER SERVICE DIAGNOSTICS Mode:
Press SW1 and SW2 simultaneously for 3 seconds. Release both buttons when you hear the CHIME indicator.
Unit must not be in Lockout prior to entering SERVICE DIAGNOSTIC MODE.
The display will show 01 to indicate the control is in step 1 of the diagnostics routine.

To EXIT SERVICE DIAGNOSTICS Mode: do one of the following 3 options:

- Press SW1 and SW2 simultaneously for 3 seconds.
- Disconnect the product from power.
- Allow 20 minutes to pass.

Following the exit of the diagnostic mode, the controls will then resume normal operation.

Cooling diagnostics are steps 1 through 7 and 32 through 38. Dispensing diagnostics are steps 8 through 31. Each step must be manually advanced. Press SW5 to move to the next step in the sequence. Press SW4 to back up in the sequence to the previous step. Diagnostics will begin at Step 1. Each step is displayed in the two digits of the dispenser user interface display. The step results are displayed in the two digits on dispenser user interface display 2 seconds after the step number is displayed. An amber order filter light will be shown to designate that the step number is being displayed and a red replace filter light will be shown to designate that the status of the step is being displayed. All button and pad inputs shall be ignored and all inputs shall be off except as described in the actions for each step.

Service Test - 1 FC thermistor
- The board will check the resistance value of the thermistor and display flashes results on the RC Temp Display. (**01** = Pass, **02** = Open, **03** = Short)

Service Test - 2 RC thermistor
- The board will check the resistance value of the thermistor and display the results on the RC Temp. Display (**01** = Pass, **02** = Open, **03** = Short)

Service Test - 3 Evaporator fan motor and air baffle motor
- Turns on the evaporator fan motor and opens air baffle. Verify air flow from the evaporator fan. Check to see if the baffle opens. Status indicator will be blank.

Service Test - 4 Compressor/ condenser fan motor
- Press SW3 to activate compressor / condenser fan circuit. (**01** = ON, **02** = OFF).

Service Test - 5 Compressor Status / Speed
Press an option to change compressor status or speed
Status ON / MAX OFF / MIN

Service Test - 6 Defrost heater/Bi-metal
- Note: if bi-metal is open, it will need to be by-passed for heater to operate. Heater should be on. Display will be blank until a valid reading is displayed. (**01** = Bi-metal closed, **02** = Bi-metal open)

Service Test - 7 Defrost mode
- The defrost mode can be set by using SW3. In ADC Mode the product will automatically defrost after a minimum of 8 hours of compressor runtime up to maximum of 96 hours of compressor runtime, depending upon product usage. In Basic Mode the product will automatically defrost after 8 hours of compressor runtime. (**01** = ADC ON, **02** = Basic Mode ON) 8 hour timer

Service Test - 8 All UI indicators
- Verify that all LED indicators and UI display digits turn on automatically. All indicators ON for 30 second timeout.

Service Test - 9 UI Button and Pad Test
- Displays the user Interface Buttons and Ice and Water Pads status as described in the Component Status Indicator column,below.

NOTE: Do not use SW4 and SW5 as these are used only to navigate through the Service Diagnostics.

Press	Digit 1	Digit 2
SW1	1	
SW2	2	
SW3	3	
SW6	6	
Ice Pad		1`
Water Pad		2
Ice & Water Pads		3

NOTE: SW4 and SW5 are used for navigation and are not displayed.

Service Test - 11 Dispenser Lighting
- Pressing SW3 will change the dispenser lighting setting from OFF (0%) to ON (100%) to DIM (50%) Status indicator is Blank

Service Test - 12 Accent Light Turns on

Service Test - 16 RC Door Switch Input
- Displays the RC Door status in realtime on the UI display. Verify that the open and close status display correctly. (**01** = RC Door open, **02** = RC Door closed)

Service Test - 17 FC Door Switch Input
- Displays the FC Door status in realtime on the UI display. Verify that the open and close status display correctly. (**01** = FC Door Open, **02** = FC Door Closed)

Service Test - 18 Ice Door Motor
- Displays the Ice Door stepper motor state on the UI display. Press ice paddle and verify that the mechanical operation of the ice door corresponds to the component status indicator. NOTE: Ice door will have a delay in closing after an ice paddle is released. (**01** = Closed, **02** = Opening, **03** = Open, **04** = Closing)

Service Test - 20 Water Filter Usage Rating
- Displays in two sequential flashes the total water usage rating in gallons for the water filter on the UI display. Wait until dash is displayed which means end of the number. (00/0- to 99/9-) Example: 123 will be displayed as 12 3-

Service Test - 21 Water Filter Time Rating
- Displays in two sequential flashes the total time rating in days for the water filter on the UI display. Wait until dash is displayed which means end of the number. (00/0- to 99/9-) Example: 123 will be displayed as 12 3-

Service Test - 22 Water Filter Usage
- Displays in two sequential flashes the current water filter status in gallons used since last reset on the UI display. Wait until dash is displayed which means end of the number. (00/0- to 99/9-) Example: 123 will be displayed as 12 3-

Service Test - 23 Water Filter Time
- Displays in two sequential flashes the current water filter status in days since last reset on the UI display. Wait until dash is displayed which means end of the number. (00/0- to 99/9-) Example: 123 will be displayed as 12 3-

Service Test - 24 Water Filter Reset
- Display in two sequential flashes the current times the water filter was reset on the UI display. Wait until dash is displayed which means end of the number. (00/0- to 99/9-) Example: 123 will be displayed as 12 3-

Service Test - 25 Water dispensing and icemaker fill test
- Confirm Icemaker valve in fill test. The the icemaker will show icemaker fill status. Press the water pad to initiate the water dispense.

NOTE: To initiate icemaker fill jump icemaker thermostat T and H.

Digit 1	**0**=Icemaker fill OFF, **1**=Icemaker fill ON
Digit 2	**0**=Water valve OFF, **1**=Water valve ON

Service Test - 26 Main Control Software Version **NOTE:** Not normally used
- Displays in three sequential flashes the Main Control software version on the UI display. NOTE: This is repeatedly displayed during all time in this step. 00/00/00 to 99/99/99

Service Test - 27 Dispenser UI Control Software Version **NOTE:** Not normally used
- Displays in three sequential flashes the Dispenser UI Control software version on the UI display.

NOTE: This is repeatedly displayed during all time in this step. 00/00/00 to 99/99/99

Service Test - 31 Touch Input Module Software **NOTE:** Not normally used
- Displays in three sequential flashes the Dispenser UI Control software version on the UI display. NOTE: This is repeatedly displayed during all time in this step. 00/00/00 to 99/99/99

Service Test - 32 Ambient Thermistor UI Control
- This is an internal board test. The board will check the resistance value of the thermistor and display the results. (**01** = Pass, **02** = Open, **03** = Short)

Service Test - 33 Humidity Sensor UI Control
- Relative Humidity Test (Humidity % Value **0**-**99** = pass or **Er** = Fail)

Service Test - 34 Vertical Mullion Heater Mode
- Set the Vertical Mullion Heater Sensor Mode by selecting SW3. (**01** = Sensor Operation On, **02** = Sensor Operation Off) (Heater on 100%)

Service Test - 35 Vertical Mullion Heater Status
- Control the Vertical Mullion Heater selecting SW3 (toggle between On and Off) (**01** = ON, **02** = OFF)

Service Test - 36 Ice Box Fan
- Check for fan operation.

Service Test - 37 Ice Box Thermistor
- The board will check the resistance value of the thermistor and display the results on the RC Temp. Display (**01** = Pass, **02** = Open, **03** = Short)

Service Test - 38 Forced Defrost mode
- Set the Forced Defrost Mode by selecting SW3. **OF** = No Forced Defrost, **Sh** = Short Defrost, **Lo** = Long Defrost

Service Test - 40 Horizontal Mullion Heater Mode
- Set the Horizontal Mullion Heater Sensor Mode by selecting SW3. (**01** = Sensor Operation On, **02** = Sensor Operation Off) Heater on 100%

Service Test - 41 Horizontal Mullion Heater Status
- Control the Horizontal Mullion Heater selecting SW3 (toggle between On and Off) (**01** = ON, **02** = OFF)

Service Test - 42 UI EEPROM Control Software Version **NOTE:** Not normally used
- Displays in three sequential flashes the Dispenser UI Control software version on the UI display.

NOTE: This is repeatedly displayed during all time in this step. 00/00/00 to 99/99/99

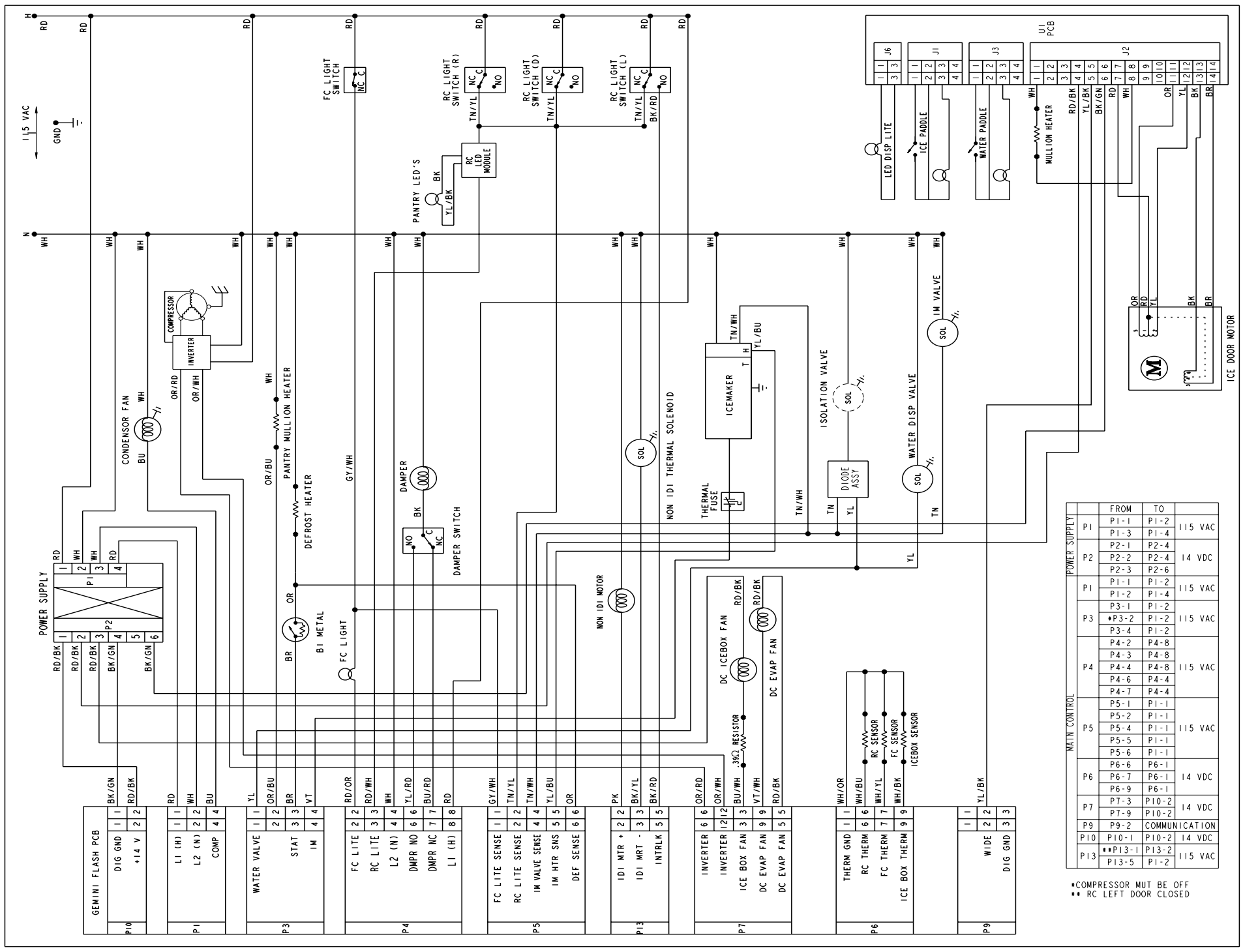
Service Test - 43 UI FLASH Control Software Version **NOTE:** Not normally used
- Displays in three sequential flashes the Dispenser UI Control software version on the UI display.

NOTE: This is repeatedly displayed during all time in this step. 00/00/00 to 99/99/99

NOTE: See the user guide for details on how to calibrate water flow from the dispenser.

Schematic

Rev: A



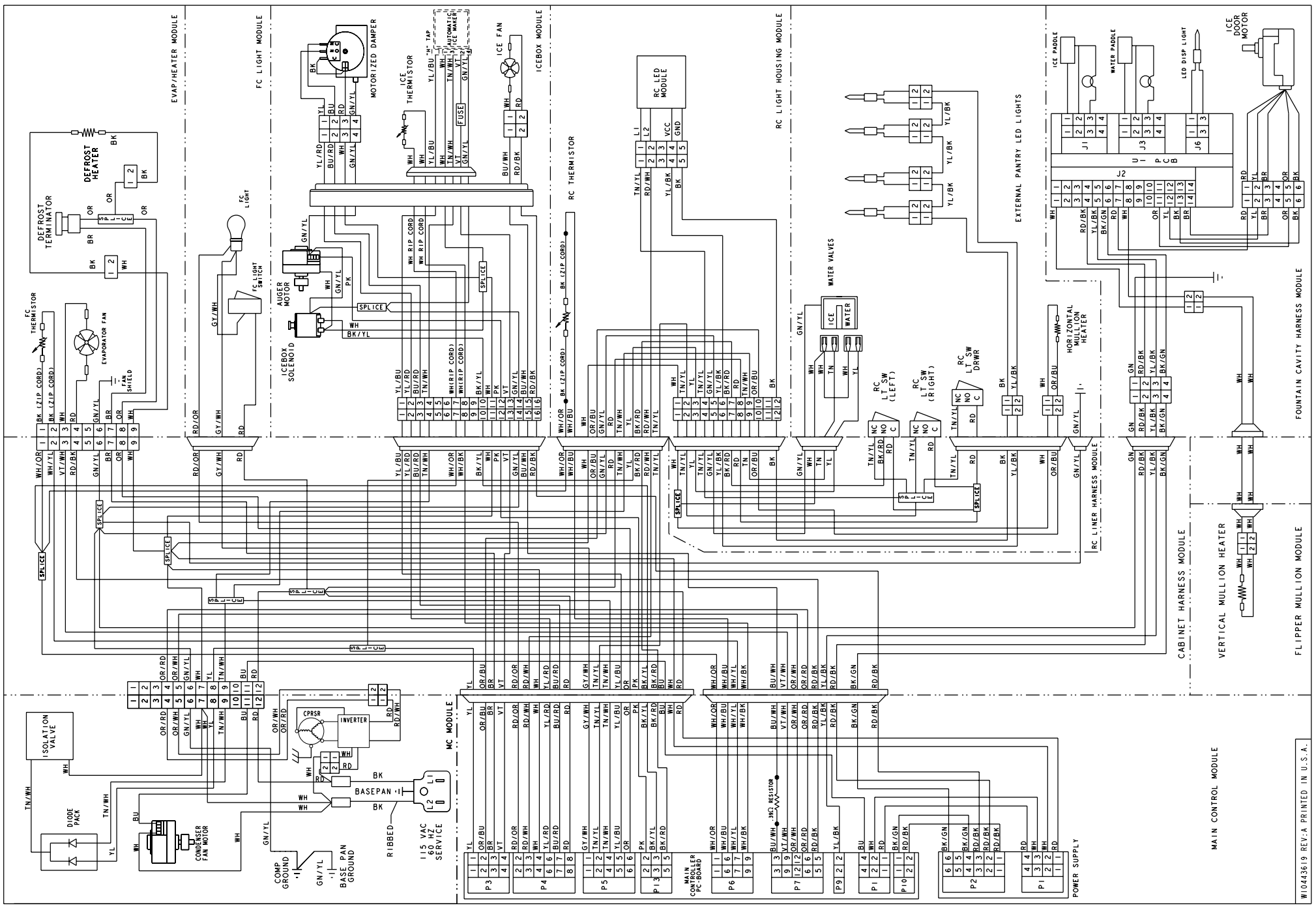
POWER SUPPLY		FROM	TO	
MAIN CONTROL	P1	P1-1	P1-2	115 VAC
		P1-3	P1-4	
	P2	P2-1	P2-4	14 VDC
		P2-2	P2-4	
		P2-3	P2-6	
	P1	P1-1	P1-2	115 VAC
		P1-2	P1-4	
	P3	P3-1	P1-2	115 VAC
		*P3-2	P1-2	
		P3-4	P1-2	
	P4	P4-2	P4-8	115 VAC
		P4-3	P4-8	
		P4-4	P4-8	
		P4-6	P4-4	
		P4-7	P4-4	
	P5	P5-1	P1-1	115 VAC
		P5-2	P1-1	
		P5-4	P1-1	
		P5-5	P1-1	
		P5-6	P1-1	
	P6	P6-6	P6-1	14 VDC
		P6-7	P6-1	
		P6-9	P6-1	
	P7	P7-3	P10-2	14 VDC
		P7-9	P10-2	
	P9	P9-2	COMMUNICATION	
	P10	P10-1	P10-2	14 VDC
	P13	**P13-1	P13-2	115 VAC
		P13-5	P1-2	

*COMPRESSOR MUT BE OFF
** RC LEFT DOOR CLOSED

W10445496A

Wiring Diagram

Rev: A



W10445496A

NOTE: This sheet contains important Technical Service Data.
FOR SERVICE TECHNICIAN ONLY
DO NOT REMOVE OR DESTROY