SERVICE AND WIRING SHEET

W10492485 E

⚠ 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.

- Normal operating conditions are viewed when the air temperature is between 55 and 100°F (45°F to 100°F on KUIO models) .Best results when air is between 70 and 90°F

NOTE: Watt and pressure readings will vary and are influenced by the existing condition of the appliance, such as iced-up evaporator, condition of condenser, defrost cycle, pull-down time and customer use.

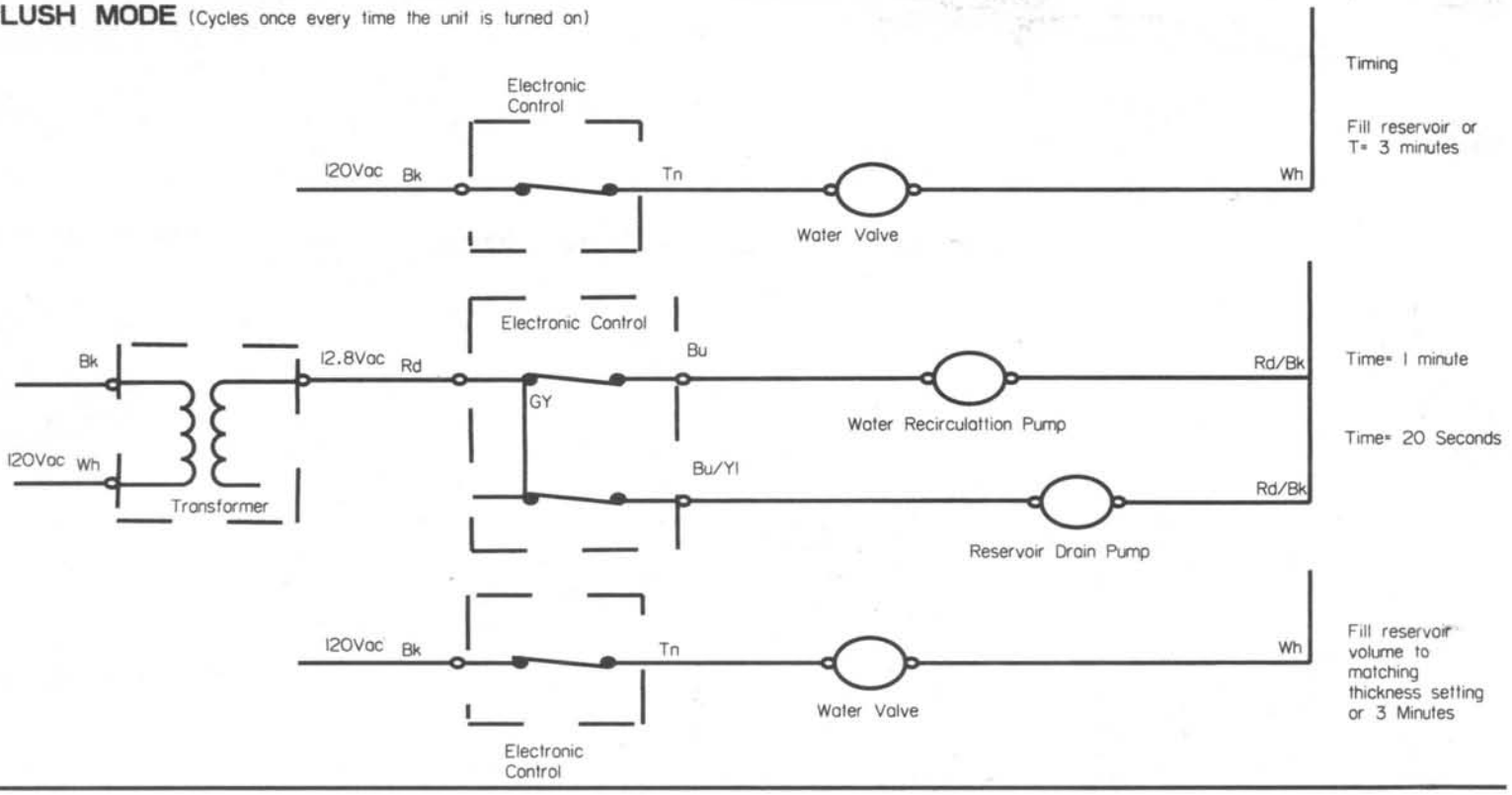
SERVICE INFORMATION (W10492484 D)

1. REFRIGERANT CHARGE MUST BE APPLIED TO THE HIGH SIDE ONLY.
2. THE TRANSFORMER, CUTTER GRID AND ELECTRONIC CONTROL REMAIN ENERGIZED IN ON MODE & CLEAN MODE.
3. THE ELECTRONIC CONTROL REMAINS ENERGIZED IN OFF MODE.

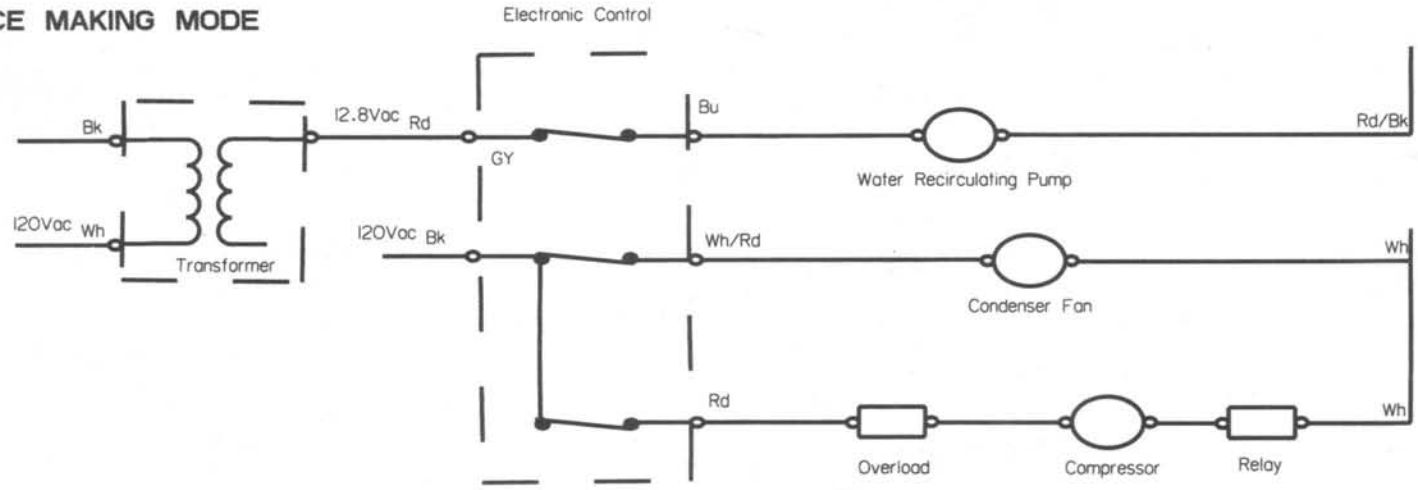
STRIP CIRCUITS

The following individual circuits are for use in diagnoses, and are shown in the ON position. Do not continue with the diagnosis of the ice maker if a fuse is blown, a circuit breaker is tripped, or if there is less than a 120 volt power supply at the wall outlet.

FLUSH MODE (Cycles once every time the unit is turned on)



ICE MAKING MODE



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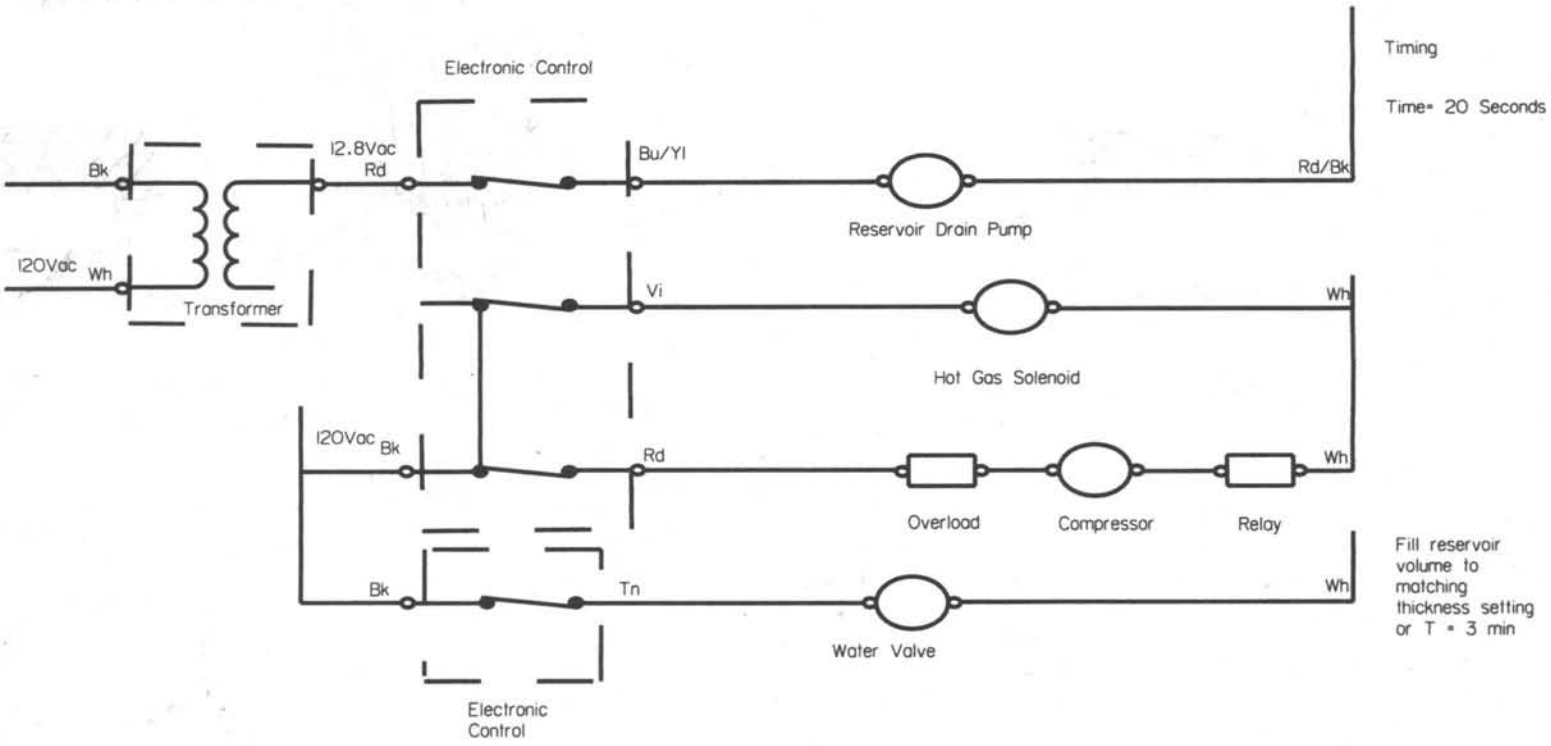
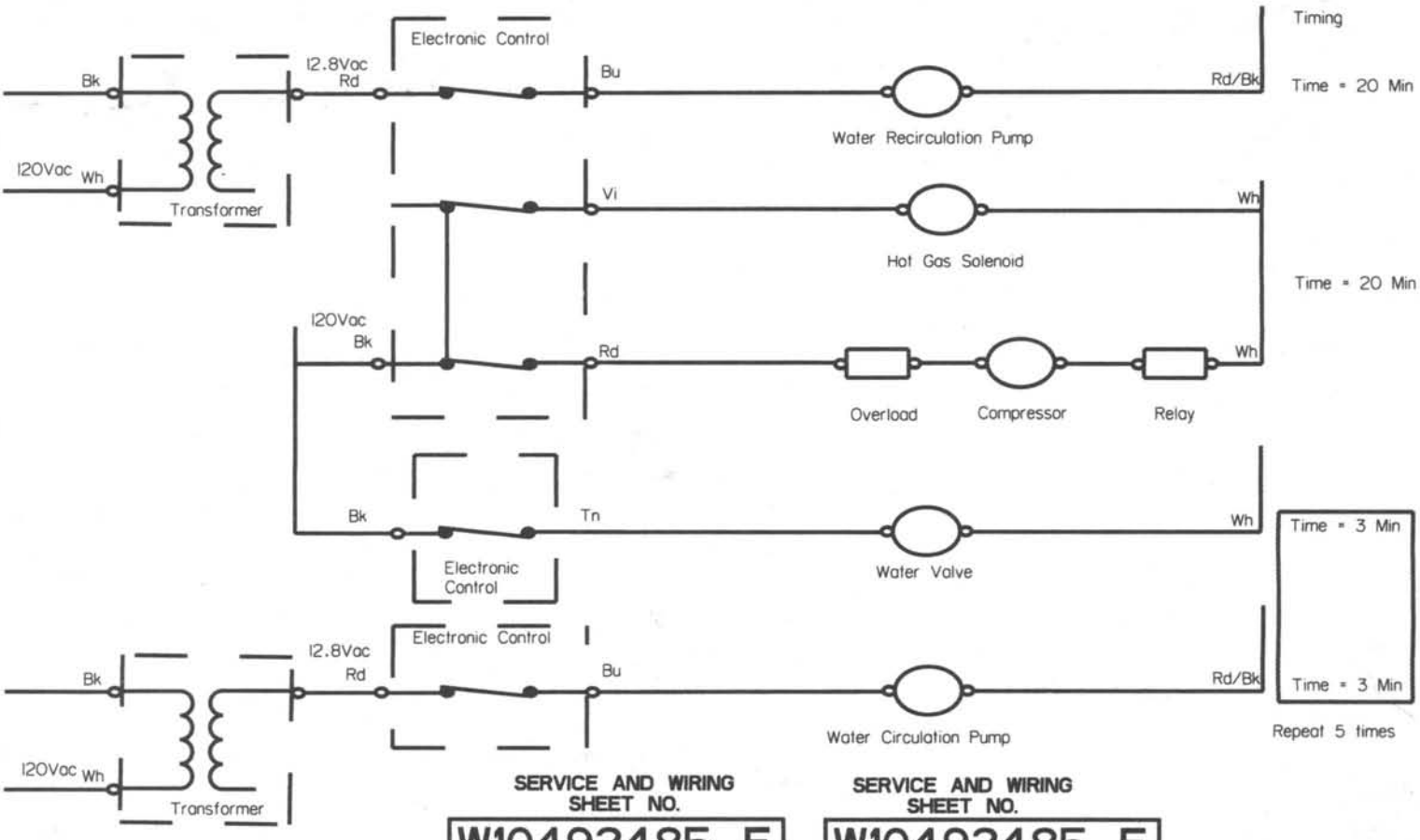
HARVEST MODE



CLEAN MODE



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DIAGNOSTICS

1. Do not continue with the diagnosis of the ice maker if a fuse is blown, a circuit breaker is tripped, or if there is less than a 120 volt power supply at the wall outlet.
2. All units that have failed during the first few days of use should be checked for loose connections or miswiring.

Entering and Navigating - Manual Diagnostics

- Turn the product on. Within 20 seconds of Power On press and hold the Clean button then the ON button together. Release both buttons when all user interface LEDs begin to flash.
- Within 5 seconds of all LEDs flashing, push MaxIce button on the user interface. This begins the manual step through diagnostics.
- If no button is pressed within 5 seconds then the product goes into the automatic diagnostic mode used at the assembly plant. Each component is cycled for 5 seconds.
- The MaxIce button moves down through each step.
- To exit manual diagnostics mode, without stepping through all the components, press the On button. After 20 minutes with no key presses, the product turns off.

Component Steps

After pressing any button to enter manual diagnostics all LEDs will illuminate for 5 seconds. The controls will then automatically move to the first component.

Step	Max Time	Component	On/Off LED	Clean LED	MAX ICE LED	CLEANING COMPLETE
1	5 sec	Entry into Test Mode(All LED'S turn ON)		ALL LED'S ON		
2		Bin Thermistor	ON Solid=OK 2 Blinks=Open 4 Blinks=Short	OFF	OFF	OFF
3		Evaporator Thermistor	OFF	ON Solid=OK 2 Blinks=Open 4 Blinks=Short	OFF	OFF
4		Unit Thermistor	OFF	OFF	ON Solid=OK 2 Blinks=Open 4 Blinks=Short	OFF
5	1 min	Water valve turns On until water is detected by touch sensor or max time is reached.	OFF	ON	On solid = reservoir full Blinking = reservoir empty	OFF
6		Recirculation Pump	ON	ON	ON	OFF
7		Reservoir Drain Pump	ON	OFF	OFF	OFF
8		Compressor and Condenser Fan Motor	ON Solid while cooling	ON Solid while cooling	Off while cooling, evap therm > 4.5°F Blinking when evap thermistor <= 4.5°F ,full frost pattern should be visible	OFF
9		Compressor and Hot Gas Valve	ON Solid while heating	ON Solid while heating	On solid while heating, evap therm < 12°F Blinking when evap thermistor >= 12°F	OFF
10		Ice Thickness	OFF	OFF	2 Blinks = Thin 4 Blinks = Normal 6 Blinks = Thick Press Clean button to cycle between settings.	OFF
11*		UI software version	Blinks = numeric value for Major	Blinks = numeric value for Minor	Blinks = numeric value for test	OFF
12*		ACU Software version	Blinks = numeric value for Major	Blinks = numeric value for Minor	Blinks = numeric value for test	ON

* Steps 11 & 12 are for manufacturing use only.

ERROR DISPLAYS

The On/Off LED blinking indicates a bin thermistor failure. Check that the bin thermistor is plugged in to the control box. Check that the bin thermistor is not open or shorted. Replace the thermistor if it is open or short.
The On/Off LED and Max Ice LED blinking indicates a harvest failure. Check that the evaporator thermistor is connected to the sealed system tubing. If the thermistor is plugged in ensure that it is fully connected to the control box. (The ice maker will operate on a timed cycle if the evaporator thermistor is unplugged.) Check the resistance of the thermistor. If the thermistor checks good then look for a frost pattern on the evaporator plate. The unit may be low on refrigerant.
If the frost pattern is good, then check for a harvest cycle. If the harvest cycle is slow to react, then check for a restriction in the gas loop of the sealed system tubing and for a functioning hot gas valve.

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TROUBLESHOOTING TESTS

Test #1 - Ice Bin Thermistor 2.7kΩ ◘ 25°C (77°F)

	ICE BIN NOT FULL		ICE BIN FULL	
	TEMPERATURE	RESISTANCE	TEMPERATURE	RESISTANCE
Bin	>37°F ± 0.3°F	7.4k Ω ± 1%	<=37°F ± 0.3°F	7.6K Ω ± 1%

Test #2 - Evaporator Thermistor 2.7kΩ ◘ 25°C (77°F)

	END HARVEST MODE	
	TEMPERATURE	RESISTANCE
EVAP	52°F±0.3°F	5.1K Ω±1%

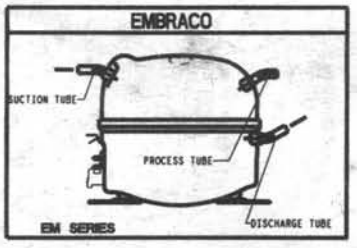
Test #3 - Unit Thermister 2.7kΩ◘ 25°C (77° F)

	CONDENSER FAN ON		CONDENSER FAN OFF	
	TEMPERATURE	RESISTANCE	TEMPERATURE	RESISTANCE
UNIT COMPARTMENT	>=115°F±1°F	1.10kΩ±3%	<114°F±1°F	1.17kΩ±3%

If the evaporator thermistor is not present or open then the electronic control will continue to harvest based on time instead of temperature. The timed harvest cycle is 6 minute.
If water fill sensor is faulty the electronic control will continue to make ice based on time. The timed cycle is 25 minutes for ice making.

SERVICABLE ELECTRICAL PARTS MATRIX

	PART NUMBER	WATTAGE @ 120V	RESISTANCE
COMPRESSOR	W10482479	205	#
RUN WINDINGS	#	#	1-5
START WINDINGS	#	#	3-11
RELAY	W10482495	#	
OVERLOAD	W10520264	#	
CIRCULATING PUMP	W10489122	7.5W @ 12V AC	3.6
RESERVOIR DRAIN PUMP	W10489125	4.5W @ 12V AC	3.6
WATER VALVE	W10217918	15 Nominal	320
SOLENOID COIL (HGV)	W10206473	7 - 9	385
BIN THERMISTOR	W10511923	#	2.7k ◘ 25°C (77°F) 8.7k ◘ 0°C (32°F)
EVAP THERMISTOR	W10492482	#	2.7k ◘ 25°C (77°F) 8.7k ◘ 0°C (32°F)
PC BOARD USER INTERFACE	PART CAN BE FOUND ON COMPONENT		
PC BOARD MAIN	W10485960		
TRANSFORMER	W10485951	73	3.5 - 4.5 ohm Primary Windings White to Black 0.11 - 0.14 ohm 9.4 VAC Secondary Blue to Blue 0.14 - 0.18 ohm 12.8 VAC Secondary Red to Red
CONDENSER FAN MOTOR & MTG PLATE ASSY	2315558 (EXCEPT KUIO MODELS) W10200032 (KUIO MODELS ONLY)	5.1-7.1	185
WATER FILL SENSOR	W10485962	Check with service diagnostics only	
CUTTER GRID	W10485968		5
DOOR SWITCH (REED)	W10485964		



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NOTE

1. WATER VALVE AND HOT GAS SOLENOIDS GROUNDED THOUGH MOUNTING.

⚠1 GROUND WIRE ON "KUIO18NNVS4" OUTDOOR ICE MAKERS ONLY.

⚠1 NOT POPULATED ON "KUIO18NNVS" OUTDOOR ICE MAKERS.

WIRING DIAGRAM

⚠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.

WIRE COLOR CODE

OR/BK : ORANGE/BLACK TRACER
BU/BK : BLUE/BLACK TRACER
BK/YL : BLACK/YELLOW TRACER
GN/YL : GREEN/YELLOW TRACER
BK/WH : BLACK/WHITE TRACER
RD/WH : RED/WHITE TRACER
LB/BK : LIGHT BLUE/BLACK TRACER
RD/YL : RED/YELLOW TRACER
BU/YL : BLUE/YELLOW TRACER
RD/BK : RED/BLACK TRACER
WH/BR : WHITE/BROWN TRACER
OR/WH : ORANGE/WHITE TRACER
BK/RD : BLACK/RED TRACER
TN/RD : TAN/RED TRACER
YL/BU : YELLOW/BLUE TRACER

WIRE COLOR CODE

BU : BLUE
BK : BLACK
RD : RED
WH : WHITE
YL : YELLOW
OR : ORANGE
BR : BROWN
GY : GRAY
V : VIOLET
LB : LIGHT BLUE

MANUFACTURED UNDER ONE OR MORE OF THE FOLLOWING UNITED STATES PATENTS

3,960,634 4,659,157 4,765,696 4,908,544 5,011,101
4,084,725 4,665,708 4,767,886 4,911,508 5,033,182
4,090,841 4,694,553 4,768,353 4,914,928 5,033,273
4,102,663 4,706,469 4,776,178 4,920,758 5,042,268
4,327,553 4,707,401 4,787,216 4,924,680 5,044,704
4,330,324 4,709,556 4,799,362 4,934,541 5,050,771
4,440,432 4,715,517 4,800,935 4,936,647 5,070,706
4,649,712 4,728,759 4,801,181 4,944,566 5,077,985
4,649,717 4,745,636 4,833,894 4,958,890 D309,461
4,649,718 4,745,775 4,862,577 4,996,848

OTHER PATENTS PENDING

SYMBOL CODE

- CONNECTOR - SCREW ON
- CONNECTOR - CLOSED END
- DISCONNECT TERMINAL
- PERMANENT CONNECTION
- PLUG CONNECTOR
- GROUND (CHASSIS)

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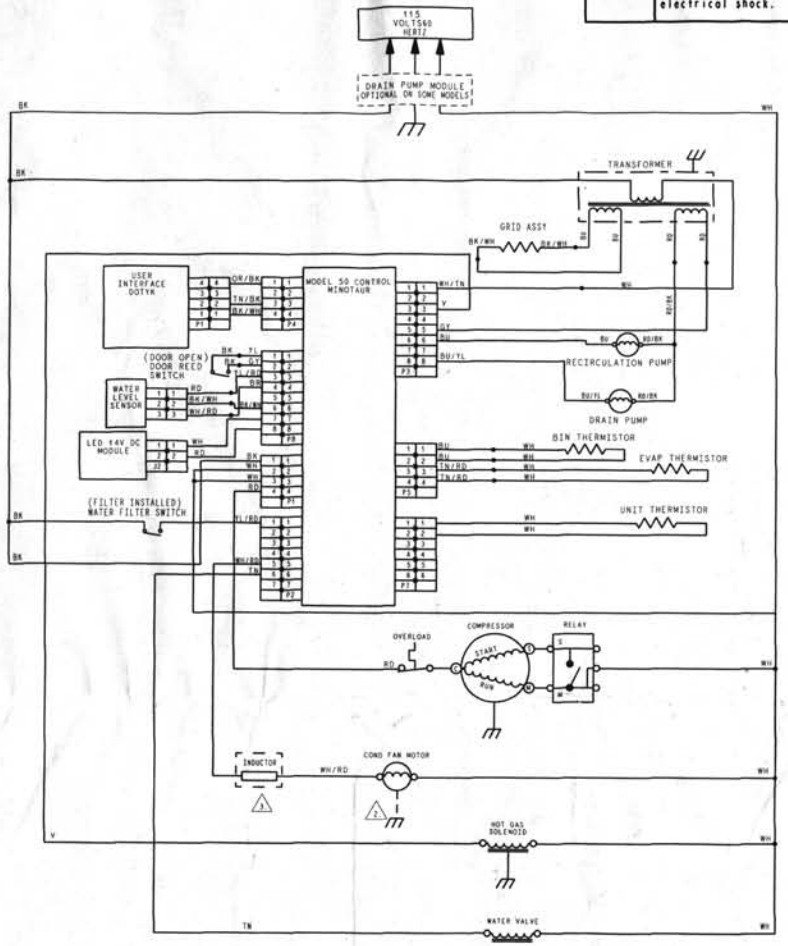

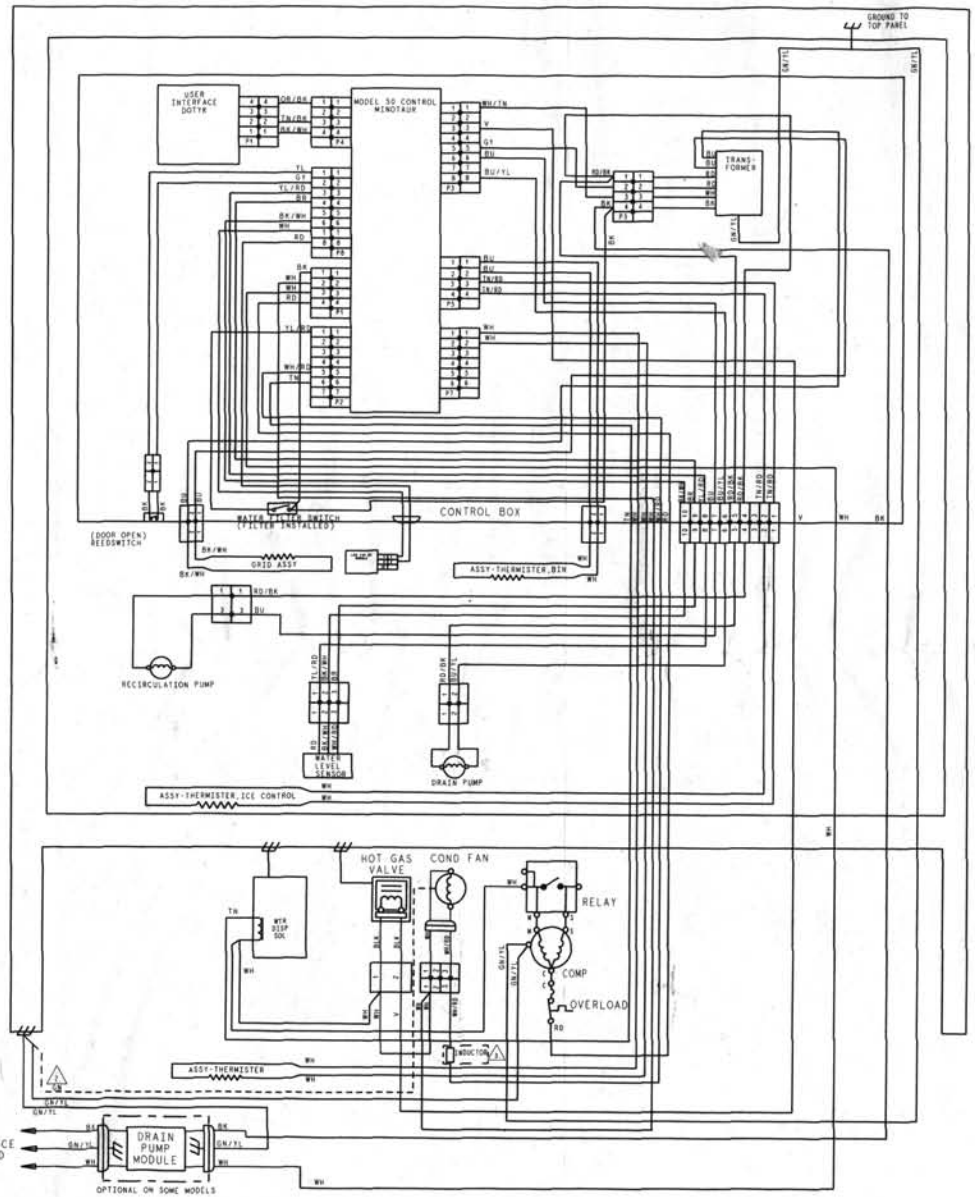

		FROM	COLOR	TO	COLOR	CONDITIONS
				VOLTAGE TEST POINTS MINOTAUR		
MAIN CONTROL	P1	P1-1	BK	P1-2	WH	120VAC INPUT - CONSTANT WHEN UNIT PLUGGED IN
		P1-4	RD	P1-2	WH	120VAC OUTPUT TO COMPRESSOR
	P2	P2-1	YL/RD	P1-2	WH	120VAC INPUT WATER FILTER SWITCH FEEDBACK
		P2-5	WH/RD	P1-2	WH	120VAC OUTPUT TO CONDENSER FAN
		P2-6	TN	P1-2	WH	120VAC OUTPUT TO WATER VALVE
	P3	P3-1	WH/TN	P1-1	BK	120VAC NEUTRAL OUTPUT FOR TRANSFORMER
		P3-3	V	P1-2	WH	120VAC OUTPUT TO HOT GAS VALVE
		P3-5	GY	4 CKT PIN 2	RD/BK	12.8VAC INPUT FROM TRANSFORMER
		P3-6	BU	4 CKT PIN 2	RD/BK	12.8VAC OUTPUT TO RECIRCULATING PUMP
		P3-8	BU/YL	4 CKT PIN 2	RD/BK	12.8VAC OUTPUT TO DRAIN PUMP
	P4	P4-1	OR/BK	P4-4	BK/WH	14VDC OUTPUT USER INTERFACE
		P4-3	TN/BK	P4-4	BK/WH	COMMUNICATION
	P5	P5-1	BU	P5-2	BU	5VDC INPUT BIN THERMISTOR
		P5-3	TN/RD	P5-4	TN/RD	5VDC INPUT EVAP THERMISTOR
	P7	P7-1	WH	P7-2	WH	5VDC INPUT UNIT THERMISTOR
	P8	P8-1	YL	P8-2	GY	5VDC INPUT DOOR REED SWITCH
		P8-3	YL/RD	P8-4	BR	5VDC INPUT WATER LEVEL SENSOR (WHEN WATER IS PRESENT)
		P8-6	BK/WH	P8-4	BR	14VDC OUTPUT WATER LEVEL SENSOR
		P8-7	WH	P8-8	RD	14VDC OUTPUT DIAMOND LED LIGHT
				VOLTAGE TEST POINTS DOTYK UI		
UI	J1	J1-4	OR/BK	J1-1	BK/WH	14VDC INPUT USER INTERFACE
	J2	J1-2	TN/BK	J1-1	BK/WH	COMMUNICATION
				VOLTAGE TEST POINTS DIAMOND LED		
	J2	J2-1	WH	J2-2	RD	14VDC INPUT DIAMOND LED LIGHT
				VOLTAGE TEST POINTS TRANSFORMER		
		4CKT PIN3	WH	4CKT PIN4	BK	120VAC INPUT TO TRANSFORMER
		4CKT PIN1	RD	4CKT PIN2	RD	12.8VAC OUTPUT FROM TRANSFORMER
		3CKT PIN1	BU	3CKT PIN3	BU	9.4VAC OUTPUT FROM TRANSFORMER