

SERVICE AND WIRING SHEET

W10217947A

16-Oct-2008 07:40:10

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. Best results when air is between 70 and 80°F.
 NOTE: Wall and pressure readings will vary and are influenced by the existing condition of the appliance, such as seal-up evaporator, condition of condenser, defrost cycle, pull-down time and customer use.

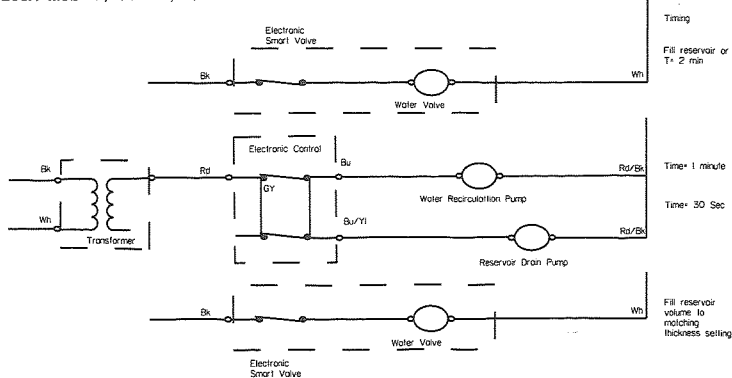
SERVICE INFORMATION (W10217948A)

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 TRANSFORMER AND ELECTRONIC CONTROL REMAIN ENERGIZED IN OFF AND SOME BRANDED FEATURE MODES.

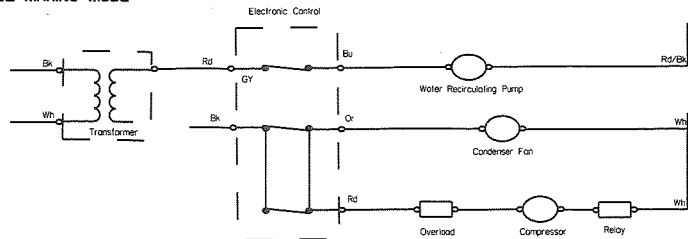
STRIP CIRCUITS

The following individual circuits are for use in diagnosis, 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)



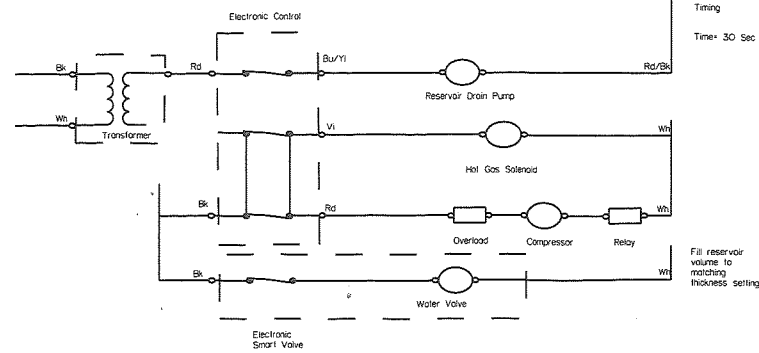
ICE MAKING MODE



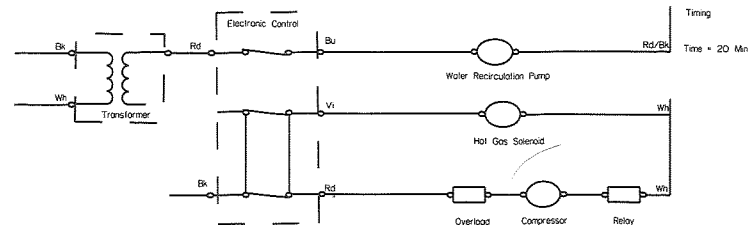
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HARVEST MODE



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 re-wiring.

Erasing and Navigating - Manual Diagnostics

- Turn the product on. Within 10 seconds of Power On, press and hold the On and the Clean buttons. Release both buttons when all user interface LEDs begin to flash.
- Within 5 seconds of all LEDs flashing, push any other 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 3 seconds.
- The Service button for Off button on some models moves down through each step.
- To exit manual diagnostics mode, without stepping through all of the components, press the Power button or (On button on some models). After 20 minutes with no key presses, the product turns off.

Display 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.

Order	Component	On/Off LED (On for some models)	Service LED (Off for some models)	Clean LED	Feature Light (for some models)
1	Entry into Test Mode	ON	ON	ON	ON
2	Bin Thermistor	ON Solid--OK 2 blinks--Open 4 blinks--Short	OFF	OFF	OFF
3	Evaporator Thermistor	OFF	OFF	ON Solid--OK 2 blinks--Open 4 blinks--Short	OFF
4a	Smart Valve 4 min time out Service button press will advance to step 6	OFF	ON Solid--reservoir full Blinking--reservoir empty	ON	OFF
4b	Touch Sensor	OFF	ON Solid--reservoir full Blinking--reservoir empty	ON	OFF
5	Recirculating Pump	ON	ON	ON	OFF
6	Reservoir Drain Pump	ON	OFF	OFF	OFF
7	Compressor and Condenser Fan Motor	ON Solid while cooling	Blinking when evap thermistor reaches 4.5°F Full frost pattern should be visible	ON Solid while cooling	OFF
8	Compressor and Hot Gas Valve	ON Solid while heating	ON Solid while heating Blinking when evap thermistor reaches 52°F	ON Solid while heating	OFF
9	Twice ice	OFF	OFF	ON Solid--No delay Blinking--10 min delay between cycles Press Clean button to cycle between settings	OFF
10	Ice Thickness	OFF	2 Blinks--Thin 4 Blinks--Normal 6 Blinks--Thick Press Clean button to cycle between settings	OFF	OFF

ERROR DISPLAYS

- **2 Blinks** -- Service Light is blinking twice in repeating intervals - This signifies 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 shorted.
- **3 Blinks** -- Service Light is blinking three times in repeating intervals - This signifies 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 reach, then check for a restriction in the gas loop of the sealed system tubing and for a functioning hot gas valve.

TROUBLESHOOTING TESTS

Test #1 - Ice Bin Thermistor 10kΩ @ 25°C (77°F)

Bin	CUT-IN		CUT-OUT	
	TEMPERATURE	RESISTANCE	TEMPERATURE	RESISTANCE
Bin	40°F ± 1°F	25.9kΩ ± 3%	35°F ± 1°F	29.8kΩ ± 3%

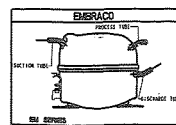
Test #2 - Evaporator Thermistor 10kΩ @ 25°C (77°F)

ICE THICKNESS	END HARVEST MODE	
	TEMPERATURE	RESISTANCE
NORMAL	52°F ± 0.3°F	18.7kΩ ± 1%
THICK	52°F ± 0.3°F	18.7kΩ ± 1%
THIN	52°F ± 0.3°F	18.7kΩ ± 1%

If the evaporator thermistor is not present or open then the electronic control will continue to make ice based on time instead of temperature. The timed cycle is 25 minutes for ice making and 4 minutes for harvest.

SERVICABLE ELECTRICAL PARTS MATRIX

COMPONENT	PART NUMBER	WATTAGE @ 120V	RESISTANCE
COMPRESSOR	W10136195	244	#
RUN WINDINGS	#	#	1-5
START WINDINGS	#	#	3-11
RELAY	W10136197	#	#
OVERLOAD	#	#	#
CIRCULATING PUMP	2313628	7.5W @ 12V AC	3.6
RESERVOIR DRAIN PUMP	2313705	4.5W @ 12V AC	3.6
WATER VALVE	2313741	20 Nominal	#
SOLENOID COIL (HGV)	W10206473	7 - 9	385
BIN THERMISTOR	2313633	#	10k @ 25°C (77°F)
EVAP THERMISTOR	2313635	#	10k @ 25°C (77°F)
PC BOARD	2321730	#	#
TRANSFORMER	2304127	73	3.5 - 4.5 amp Primary Windings White to Black 0.1k - 0.1k amp 8.4 VAC Secondary Yellow to Yellow 0.1k - 0.1k amp 12.8 VAC Secondary Red to Red
CONDENSER FAN MOTOR & MTG PLATE ASSY	2315558	5.1-7.1	185
WATER FILL SENSOR	2313643	#	Check with service diagnostics only
CUTTER GRID	2313637	#	20
DOOR SWITCH	2149705	#	#



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WIRE COLOR CODE

- OF MANUFACTURED UNDER ONE OR MORE PATENTS
- OTHER PATENTS PENDING
- BU : BLUE
- BLK : BLACK
- BRN : BROWN
- GRY : GRAY
- LG : LIGHT GREEN
- OR : ORANGE
- PK : PINK
- RD : RED
- TR : TRACER
- YL : YELLOW

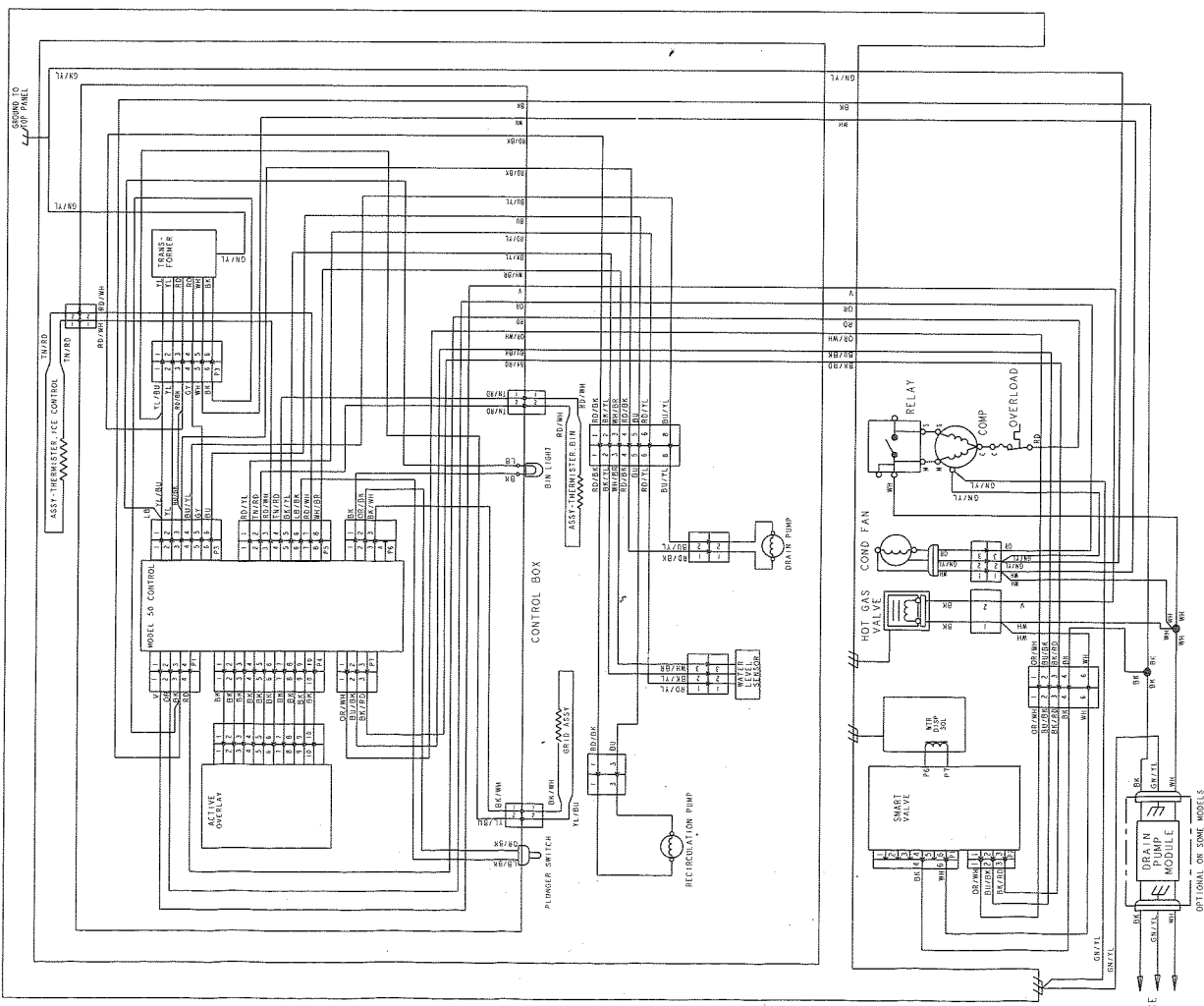
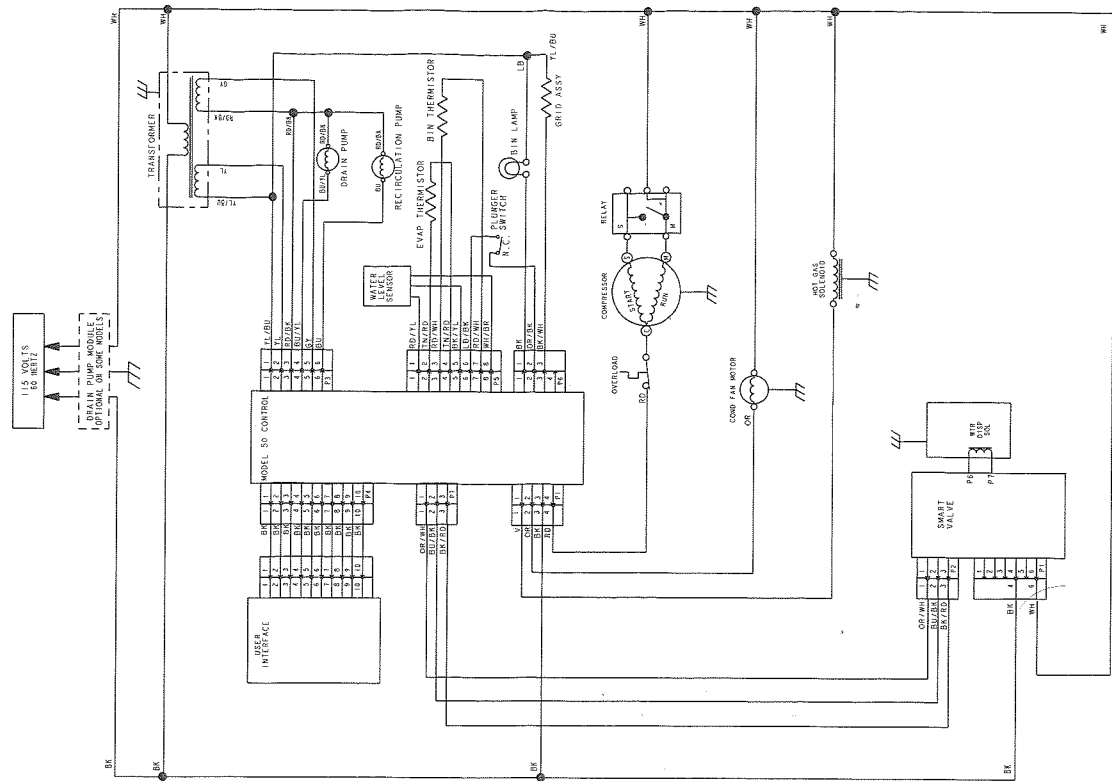
- CONNECTOR - SCREW ON
- CONNECTOR - CLOSED END
- DISCONNECT TERMINAL
- PERMANENT CONNECTION
- PUG CONNECTOR
- GROUND (CHASSIS)

- INVERTER
- TRANSFORMER
- RELAY
- CONDENSER
- RESISTOR
- INDUCTOR
- DIODE
- TRIP
- SWITCH
- VALVE
- MOTOR
- LAMP
- SENSOR
- SOLENOID
- RELAY
- CONDENSER
- RESISTOR
- INDUCTOR
- DIODE
- TRIP
- SWITCH
- VALVE
- MOTOR
- LAMP
- SENSOR
- SOLENOID

WARNING
 Electrical Shock Hazard
 Disconnect power before servicing.
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WIRING DIAGRAM

NOTE:
 1. SMART VALVE AND HOT GAS SOLENOID ARE GROUNDED THROUGH MOUNTING.



SERVICE & WIRING SHEET NO. W1021794-7A

SERVICE CLOUD
DRAIN PUMP MODULE
OPTIONAL ON SOME MODELS