

SERVICE AND WIRING SHEET

2198632REL



WARNING

ELECTRICAL SHOCK HAZARD

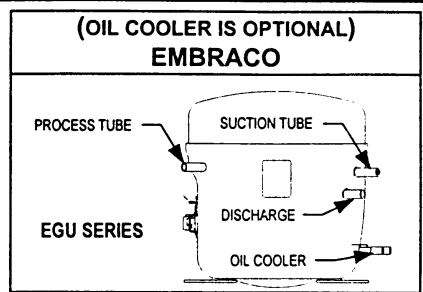
Disconnect electrical power before servicing

Failure to do so can result in death or electrical shock

PERFORMANCE DATA (NORMAL OPERATING CONDITIONS)			
AMB	WATTS	SYSTEM PRESSURE (PSIG)	
		HIGH SIDE	LOW SIDE
70°	160 ± 20	95 ± 20	-7 TO 3
90°	170 ± 20	135 ± 20	-4 TO 3
110°	190 ± 20	185 ± 20	-2 TO 4

* Normal operating conditions are viewed when the air and temperature controls are at mid-setting, freezer section 0 to -5°F and unit is cycling.

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 (2204174 A)

1. COMPRESSOR SUCTION AND PROCESS STUBS MAY NOT BE INTERCHANGED UNLESS INDICATED BY **.
2. REFRIGERANT CHARGE MUST BE APPLIED TO HIGH SIDE ONLY.
3. ICE MAKER AND WATER VALVE MUST BE ORIGINAL EQUIPMENT ON ALL MODELS.
4. CAUTION: ICE MAKER CYCLE MUST BE INITIATED ELECTRICALLY. DO NOT TRY TO MANUALLY START CYCLE.
5. SERVICE DEFROST BIMETALS - 50°F OPEN.
6. DEFROST TIMER MAY CONTAIN A CAPACITOR IN SERIES WITH MOTOR. DO NOT CONTINUITY TEST WHEN CHECKING FOR FAILED TIMER MOTOR. INSTEAD, ENERGIZE TIMER AND LISTEN FOR GEAR MOVEMENT.
7. PART NUMBER CAN BE FOUND ON THE COMPONENT.

SERVICEABLE PARTS	SERVICEABLE ELECTRICAL PARTS MATRIX (COMPONENTS BY CUBIC FOOT SIZE)							
	20 AND 22 CUBIC FOOT		25 AND 27 CUBIC FOOT		WATTAGE		RESISTANCE	
	120V	220-240V	120V	220-240V	120V	220-240V	120v	220-240V
COMPRESSOR		2187162	2208178	2187153				
RUN WINDINGS	*	*	*	*			1-5	5-15
START WINDINGS	*	*	*	*			3-11	10-30
PTC RELAY		2154755	2183454	2154755				
OVERLOAD		2176790	2187145	2187200				
RUN CAPACITOR (OPT)	2169137	2154718	2169137	2154718				
THERMOSTAT	see note 7	see note 7	see note 7	see note 7				
BAFFLE MODULE (OPT)	2161467	2175156	2161467	2175156				
DEFROST TIMER ** (OPT)	see note 7	see note 7	see note 7	see note 7				
ADAPTIVE DEFROST ** (OPT)	2188159	N/A	2188159	N/A				
DEFROST HEATER	2188174	2188176	2188175	2188177	550-650	450-690	27-21	70-100
DEFROST BI-METAL	2196155	2196155	2196155	2196155				
EVAPORATOR FAN	see note 7	see note 7	see note 7	see note 7	5-10	6-12		
CONDENSER FAN	see note 7	see note 7	see note 7	see note 7	3-13	10-20		

** PRIMARY SOURCE PART NUMBER

STEPS TO ENTER ELECTRONIC DEFROST CONTROL TEST MODE (IF APPLICABLE)

OPTION #1 (BI-METAL CLOSED)

STEPS

- #1 - POWER OFF TO REFRIGERATOR FOR AT LEAST 30 SECONDS
- #2 - THERMOSTAT OFF
- #3 - POWER ON TO REFRIGERATOR

OPTION #2 (BI-METAL CLOSED)

STEPS

- #1 - THERMOSTAT OFF 15 SECONDS
- #2 - THERMOSTAT ON 5 SECONDS
(REPEAT STEPS 1 & 2 TWO MORE TIMES)
- #3 - THERMOSTAT OFF

ENTER TEST MODE

IN 3 - 8 SECONDS, CONTROL WILL TURN ON DEFROST HEATER. DEFROST HEATER WILL TURN ON FOR 21 MINUTES OR UNTIL BI-METAL OPENS. TO TERMINATE TEST EARLY, REMOVE POWER FROM REFRIGERATOR.

NOTE: IF OPTION #2 DOES NOT WORK, TRY OPTION #1 BEFORE REPLACING CONTROL. ALWAYS CHECK CONNECTIONS BEFORE REPLACING CONTROL.

HELPFUL HINT: UPON ENTERING TEST MODE, A RELAY TURNS OFF THE COMPRESSOR AND TURNS ON THE DEFROST TIMER. LISTEN FOR THE RELAY TO CLICK. IF RELAY CLICKS ONCE UPON ENTERING TEST MODE, CHECK FOR DEFROST HEAT. IF RELAY CLICKS TWICE, CHECK FOR BI-METAL OPEN.

WARNING IF BI-METAL IS BY-PASSED FOR TESTING (IF APPLICABLE), DO NOT OVERHEAT EVAPORATOR AREA.

BAFFLE MODULE DIAGNOSTIC TEST (IF APPLICABLE)

The diagnostic steps given below are for evaluating the Baffle Module. Steps 4 and 5 include the settings and results. If the results listed do not occur after putting the controls in the given settings, then further in-depth diagnosis of the product is required. Possible areas to evaluate include wiring connections to all electrical components, freezer thermostat, defrost timer, baffle module, evaporator fan, condenser fan, and compressor.

STEP

1. VERIFY THAT THE PRODUCT IS NOT IN DEFROST.
2. OPEN THE REFRIGERATOR AND FREEZER DOORS SO THAT THE PRODUCT WARMS UP ENOUGH TO TRIP THE THERMOSTATS.
3. NOTE THE THERMOSTAT SETTINGS AND REMOVE THE CONTROL BOX FRONT COVER.
4. SET BOTH CONTROLS IN THE FOLLOWING MANNER, THEN CHECK FOR THE GIVEN RESULTS:

CONTROL	SETTING
FREEZER THERMOSTAT.....	COLDER (FAR RIGHT)
REFRIGERATOR THERMOSTAT.....	OFF (FAR LEFT)

COMPONENT	RESULTS
BAFFLE DOOR.....	10 SECONDS - CLOSED
COMPRESSOR.....	ON
CONDENSER FAN.....	ON
EVAPORATOR FAN.....	ON

5. SET BOTH CONTROLS IN THE FOLLOWING MANNER, THEN CHECK FOR THE GIVEN RESULTS:

CONTROL	SETTING
FREEZER THERMOSTAT.....	COLDER (FAR RIGHT)
REFRIGERATOR THERMOSTAT.....	COLDER (FAR RIGHT)

COMPONENT	RESULTS
BAFFLE DOOR.....	10 SECONDS - OPEN
COMPRESSOR.....	ON
CONDENSER FAN.....	ON
EVAPORATOR FAN.....	ON

6. TEST COMPLETE - BAFFLE MODULE GOOD. SET CONTROLS AT MID SETTINGS AND REPLACE CONTROL BOX FRONT COVER.

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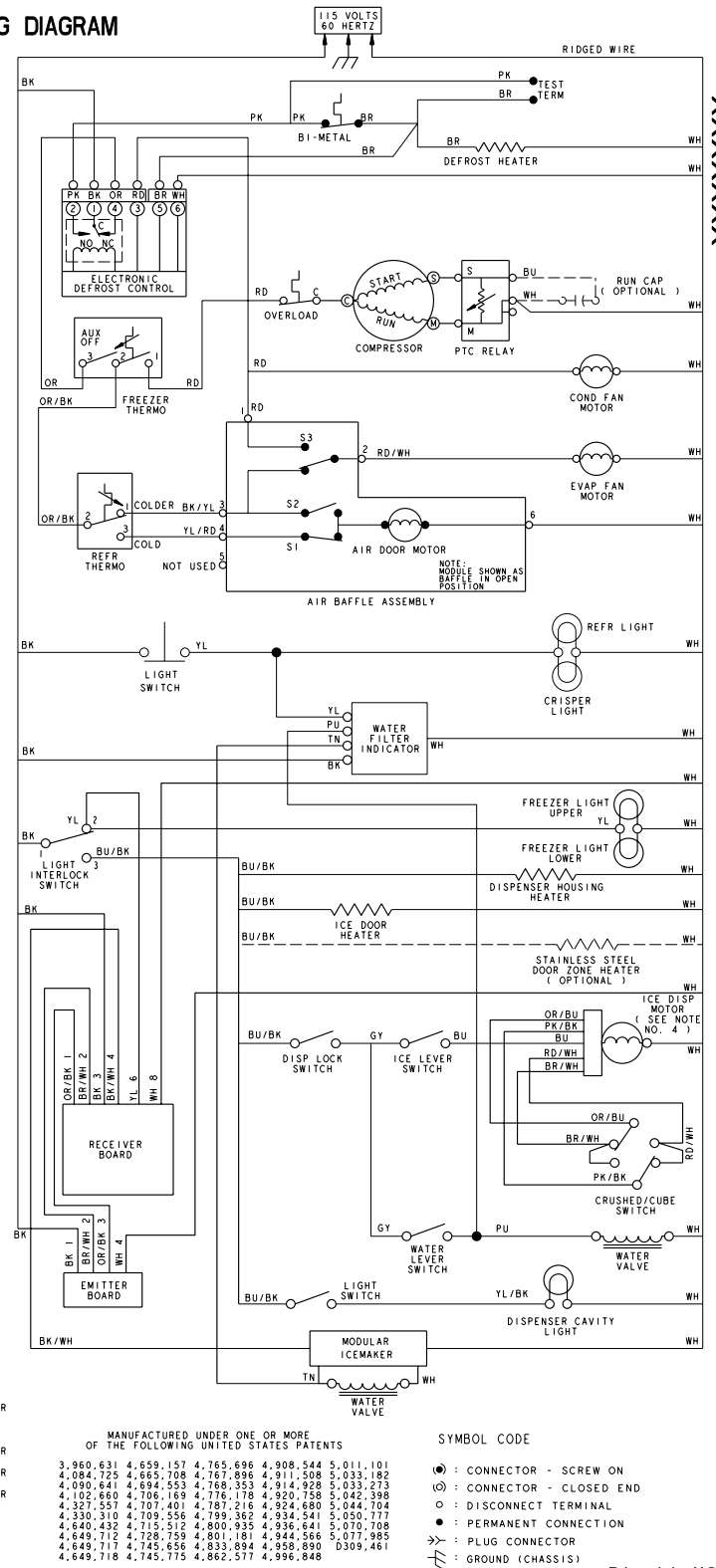
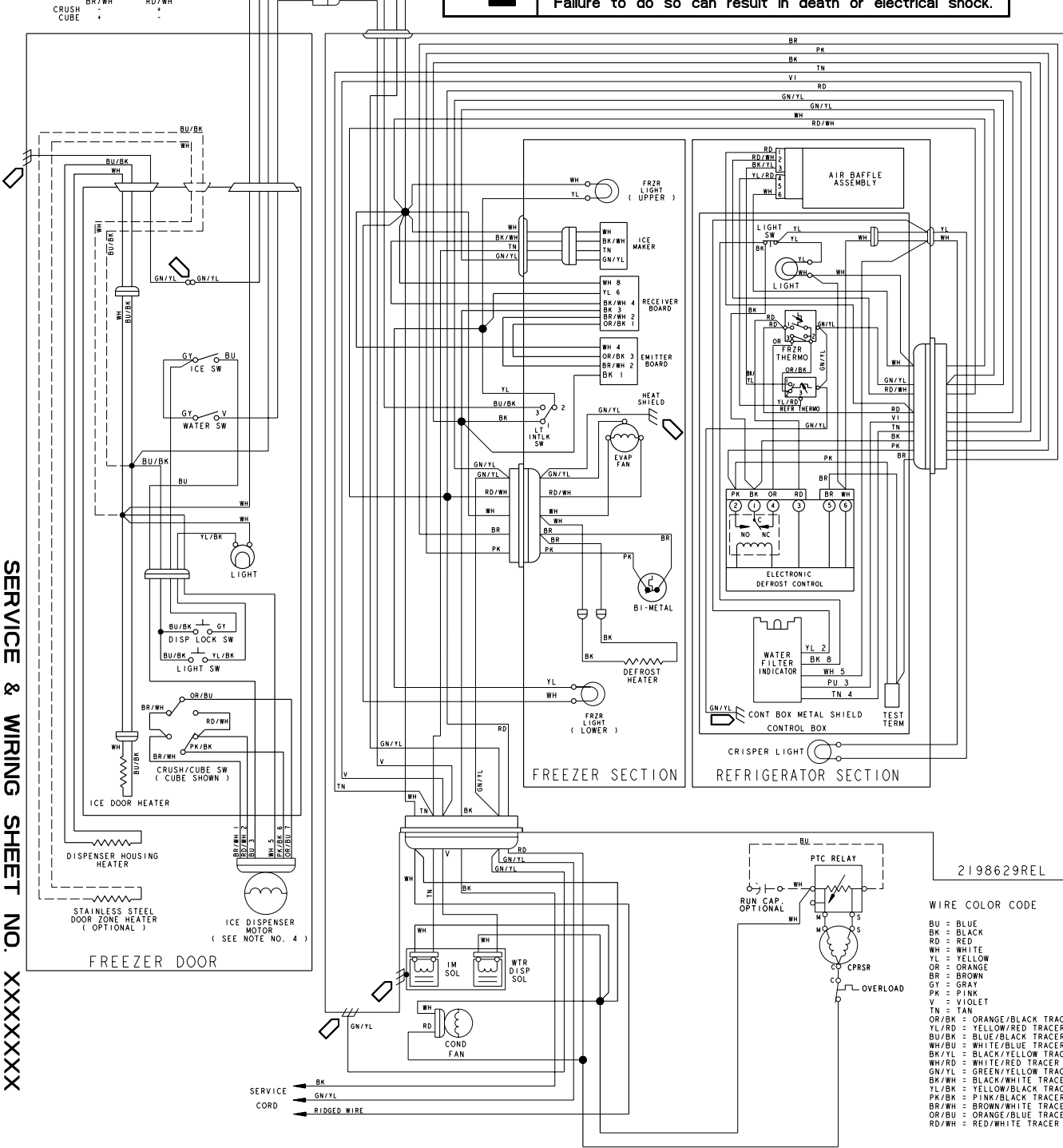
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- NOTES:
 1. GROUND COMPRESSOR THROUGH CONDENSER.
 2. IM SOLENOID GROUNDED THROUGH MOUNTING.
 3. EVAP COVER GROUNDED HEAT SHIELD.
 4. THE DISPENSER HAS A BUILT IN INVERTER BOARD WHICH CONVERTS THE AC VOLTAGE TO 120V DC. THE OR/BU WIRE IS THE POSITIVE SIDE OF THE DC SIGNAL AND AND THE PK/BK WIRE IS THE NEGATIVE SIDE. THE BR/WH AND RD/WH WIRES SWITCH POLARITY DEPENDING ON CRUSH/CUBE POSITION. SEE TABLE BELOW:

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

WIRING DIAGRAM



- WIRE COLOR CODE**
- BU = BLUE
 - BK = BLACK
 - RD = RED
 - WH = WHITE
 - YL = YELLOW
 - OR = ORANGE
 - BR = BROWN
 - GY = GRAY
 - PK = PINK
 - V = VIOLET
 - TN = TAN
 - OR/BK = ORANGE/BLACK TRACER
 - YL/RD = YELLOW/RED TRACER
 - BU/BK = BLUE/BLACK TRACER
 - WH/BU = WHITE/BLUE TRACER
 - BK/YL = BLACK/YELLOW TRACER
 - WH/RD = WHITE/RED TRACER
 - GN/YL = GREEN/YELLOW TRACER
 - BK/WH = BLACK/WHITE TRACER
 - YL/BK = YELLOW/BLACK TRACER
 - PK/BK = PINK/BLACK TRACER
 - BR/WH = BROWN/WHITE TRACER
 - OR/BU = ORANGE/BLUE TRACER
 - RD/WH = RED/WHITE TRACER
- SYMBOL CODE**
- ⊙ : CONNECTOR - SCREW ON
 - ⊕ : CONNECTOR - CLOSED END
 - : DISCONNECT TERMINAL
 - : PERMANENT CONNECTION
 - ⊚ : PLUG CONNECTOR
 - ⊥ : GROUND (CHASSIS)

MANUFACTURED UNDER ONE OR MORE OF THE FOLLOWING UNITED STATES PATENTS

3,960,631	4,659,157	4,765,696	4,908,544	5,011,101
4,084,725	4,665,708	4,767,936	4,911,508	5,033,182
4,090,641	4,694,593	4,766,353	4,914,925	5,033,273
4,102,660	4,706,169	4,776,178	4,920,758	5,042,398
4,327,557	4,707,401	4,787,216	4,924,680	5,044,704
4,330,310	4,709,556	4,799,362	4,934,541	5,050,777
4,640,432	4,715,512	4,800,935	4,936,641	5,070,708
4,649,712	4,726,759	4,801,181	4,944,566	5,077,285
4,649,717	4,745,656	4,833,894	4,958,890	D309,461
4,649,718	4,745,775	4,862,577	4,996,848	

OTHER PATENTS PENDING

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