

SERVICE AND WIRING SHEET

17-Apr-2007 09:21:47

2316566 B

⚠ WARNING

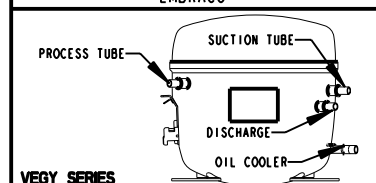
Electrical Shock Hazard
Disconnect power before servicing.
Replace all parts and panels before operating.
Failure to do so can result in death or electrical shock.

• Normal operating conditions are viewed when the air and temperature controls are at mid-sitting, 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.

PERFORMANCE DATA * (NORMAL OPERATION CONDITIONS)			
AMB	WATTS	SYSTEM PRESSURE (PSIG)	
		HIGH SIDE	LOW SIDE
70°	140±20	95±20	-7 TO 3
90°	150±20	135±20	-4 TO 3
110°	170±20	185±20	-2 TO 4

(OIL COOLER IS OPTIONAL)
 EMBRACO



SERVICE INFORMATION (2316567 A)

1. COMPRESSOR SUCTION AND PROCESS STUBS CAN NOT BE INTERCHANGED.
2. REFRIGERANT CHARGE MUST BE APPLIED TO HIGH SIDE ONLY.
3. NOTE: ICE MAKER CYCLE MUST BE INITIATED ELECTRICALLY. DO NOT TRY TO MANUALLY START CYCLE.
4. SERVICE DEFROST BIMETALS - 50° F OPEN.
5. PART NUMBER CAN BE FOUND ON THE COMPONENT.

SERVICEABLE ELECTRICAL PARTS MATRIX COMPONENTS BY CABINET WIDTH

SERVICEABLE PARTS	36" WIDE (20 CU/FT)		42" WIDE (25 CU/FT)		48" WIDE (29 CU/FT)	
	Part Number	Watt/Res.	Part Number	Watt/Res.	Part Number	Watt/Res.
		120V		120V		120V
COMPRESSOR	2223393	70-130	2223393	70-130	2223393	70-130
RUN WINDINGS	*	6.4Ω	*	6.4Ω	*	6.4Ω
START WINDINGS	*	6.4Ω	*	6.4Ω	*	6.4Ω
INVERTER ASSY	2304175		2304175		2304175	
THERMISTOR (Refrig. & Frz)	2188820	2.7Ω@25°C	2188820	2.7Ω@25°C	2188820	2.7Ω@25°C
BAFFLE MODULE	2220377		2220377		2220377	
ELECTRONIC CTL (CONTROL)	2304135		2304135		2304135	
ELECTRONIC CTL (DISPLAY)	2316544		2316545		2316546	
BOARD - POWER SUPPLY (ICC)	2259350		2259350		2259350	
UI ASSY - CONTROL, ICC	2306086		2306086		2306086	
THERMISTOR (ICC)	2302937		2302937		2302937	
THERMISTOR (ICC)	2306010		2306010		2306010	
BAFFLE ASSY - AIR (ICC)	2315511		2315511		2315511	
CIRCUIT BOARD - EMITTER	2220398		2220398		2220398	
CIRCUIT BOARD - RECEIVER	2255114		2255114		2255114	
DEFROST HEATER	2306387	600W/24Ω	2306388	700W/21Ω	2306389	750W/19Ω
DEFROST BI-METAL	2317087		2317087		2317087	
EVAPORATOR FAN	2259385	2-5W	2259385	2-5W	2259385	2-5W
CONDENSER FAN	2206036	3-5.3W	2206036	3-5.3W	2206036	3-5.3W

ELECTRONIC CONTROL FEATURES

The electronic control in this appliance controls the temperatures in the refrigerator and freezer compartments independently, delays the operation of the evaporator fan (optional), pulses the defrost heater and monitors the water filter usage. The fan delay and pulsed defrost features are controlled in the following manner:

1. Pulsed Defrost Heat - During the defrost cycle the heater is energized continuously for the first 2 minutes. It is then cycled off for 60 seconds and on for 120 seconds. The on/off cycle is repeated until the bi-metal opens or the maximum defrost time (25 minutes) is reached.

SERVICE DIAGNOSTICS MODE

As a requirement to run the Service Diagnostics routine, the product must be turned ON. Service Diagnostics is entered through a 2 key sequence. To place the control into the Service Diagnostics routine, the Service Technician must press and hold the RC Temp Increase key first then the Power key and hold both for 3 seconds. Once the Service Technician is satisfied the component has passed the "Component Evaluation Mode", the user can step to the next sequence by pressing the RC Temp Up key once or by pressing the Up Arrow. The routine ends automatically after all steps have been completed or after 20 minutes (whichever comes first). The control will then resume normal cooling mode.

Service Tip: If the control does not respond it may be necessary to remove power from the entire appliance for a few seconds. Re-apply power and perform the service diagnostics routine to verify that the control is working correctly.

Component Description	FC Sequence No.	RC Code	RC Code Description
FC Thermistor	01	01	Freezer Thermistor within Operating Region
		02	Freezer Thermistor within "Open Region"
		03	Freezer Thermistor within "Short Region"
RC Thermistor	02	01	Refrigerator Thermistor within Operating Region
		02	Refrigerator Thermistor within "Open Region"
		03	Refrigerator Thermistor within "Short Region"
Evaporator Fan Motor	03	- -	Evaporator Fan Motor ON
Condenser Fan Motor	04	- -	Condenser Fan Motor ON
VC Compressor	05	01	VC Compressor ON at 4500 RPM
		02	VC Compressor OFF, waiting for min off delay
Air Door	06	- -	Air Door opens to full position then closes and stops
Defrost Heater/Bi-metal	07	01	Defrost Heater energized / Bi-Metal Closed
		02	Defrost Heater energized / Bi-Metal Open
End Routine			Resume normal cooling

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

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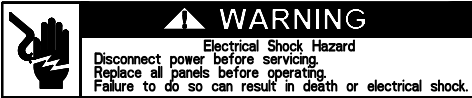
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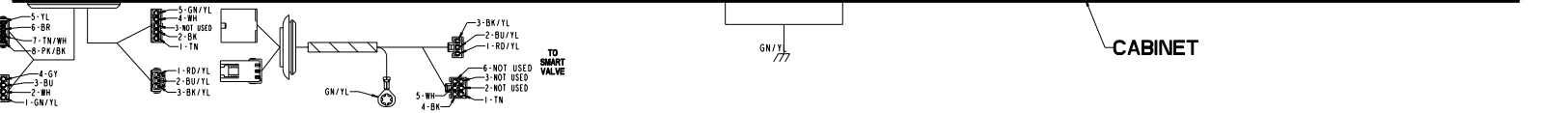
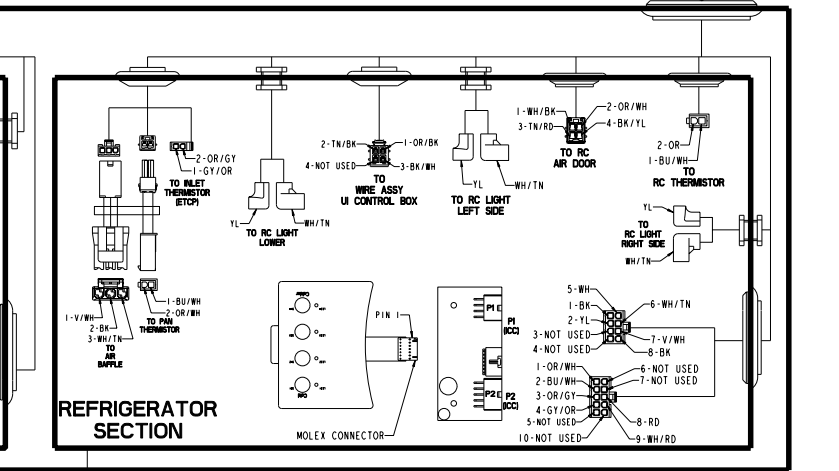
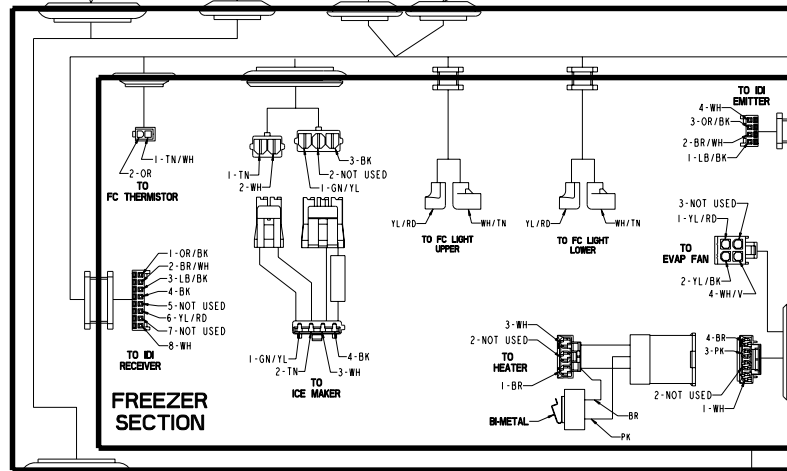
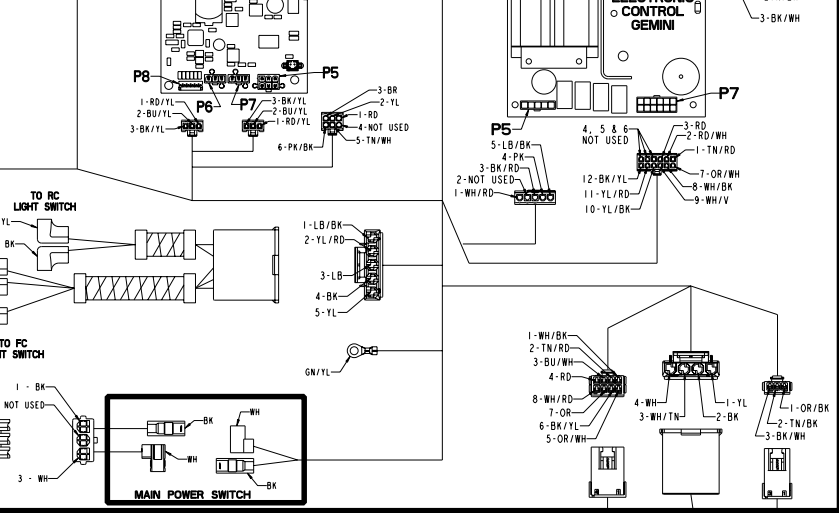
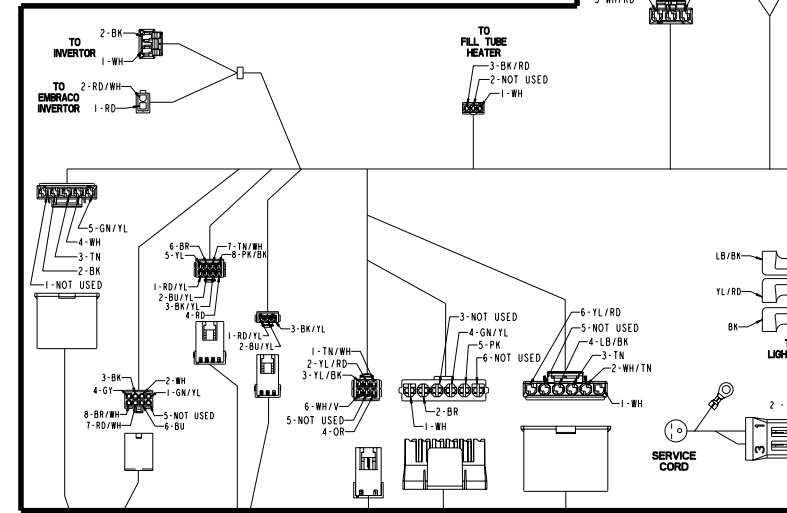
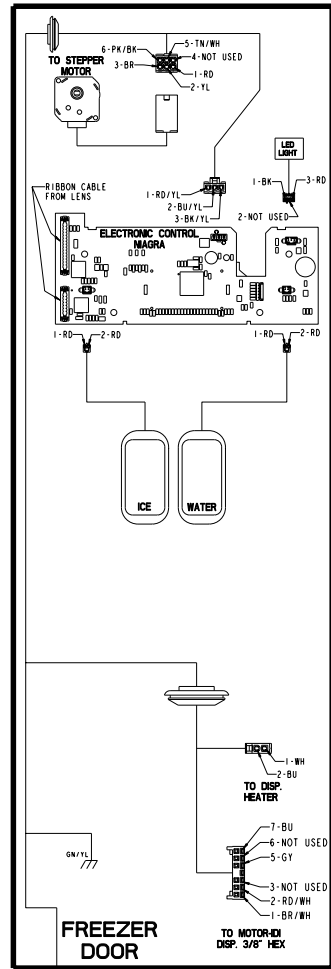
WIRE COLOR CODE

BK = BLACK	BU/OR = BLUE/ORANGE TRACER
BU = BLUE	BU/WH = WHITE/BLUE TRACER
BR = BROWN	BR/BK = WHITE/BROWN TRACER
GY = GRAY	YL/OR = YELLOW/ORANGE TRACER
OR = ORANGE	OR/WH = BROWN/WHITE TRACER
PK = PINK	OR/BK = ORANGE/BLACK TRACER
PURP = PURPLE	BR/WH = RED/WHITE TRACER
RD = RED	GN/YL = GREEN/YELLOW TRACER
TAN = TAN	RD/WH = RED/WHITE TRACER
WH = WHITE	GN/BK = BLUE/BLACK TRACER
YL = YELLOW	BK/YL = BLACK/YELLOW TRACER
V = VIOLET	BU/WH = BLUE/WHITE TRACER
	BR/BK = BLACK/WHITE TRACER
	BR/WH = WHITE/BLACK TRACER
	TN/RD = TAN/RED TRACER
	WH/BK = WHITE/BLACK TRACER
	WH/TN = WHITE/TAN TRACER
	LB/BK = LIGHT BLUE/BLACK TRACER



NOTES:

1. IM SOLENOID VALVE GROUNDED THROUGH MOUNTING.
2. EVAP COVER GROUNDED THROUGH MOUNTING.



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 4,767,896 4,911,508 5,033,182
 4,090,841 4,694,553 4,768,553 4,914,928 5,033,273
 4,102,660 4,706,169 4,776,178 4,920,758 5,042,598
 4,371,557 4,707,401 4,787,216 4,924,680 5,044,104
 4,330,310 4,709,596 4,799,362 4,934,541 5,050,777
 4,640,432 4,715,512 4,800,335 4,936,641 5,071,008
 4,649,712 4,726,759 4,801,181 4,944,566 5,077,985
 4,649,717 4,745,656 4,833,894 4,958,890 5,099,461
 4,649,718 4,745,775 4,862,577 4,996,848

OTHER PATENTS PENDING



⚠ 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.

REFRIGERANT SYSTEM DIAGRAM
(2318065 A)

99.5% OF ALL LEAKS ARE AT JOINTS.

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