SERVICE AND WIRING SHEET



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-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.

PERFORMANCE DATA								
<pre>*(NORMAL OPERATING CONDITIONS)</pre>								
	SYSTEM PRESSURE							
		(PSIG)						
АМВ	WATTS	HIGH	SIDE	LOW	SΙ	DE		
70°	120±20	120 :	± 20	- 6 "	ΤO	3#		
90°	130 ± 20	160 :	± 20	- 4 "	ΤO	3#		
110°	140±20	220 :	± 20	- 2 "	ΤO	4#		

W11040771

SERVICE INFORMATION (W11040771 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 NOT ORIGINAL EQUIPMENT ON ALL MODELS.
- 4. CAUTION: ICE MAKER CYCLE MUST BE INITIATED ELECTRICALLY. DO NOT TRY TO MANUALLY START CYCLE.
- 5. THE PART NUMBER CAN BE FOUND ON THE COMPONENT. USE A REPLACEMENT PART OF SIMILAR PERFORMANCE.

GENERAL COMPONENT INFORMATION FOR ALL REFRIGERATOR/FREEZER MODELS											
BE SURE TO USE CORRECT REPLACEMENT PARTS											
COMPONENT	EMBRACO										OHMS
(IF APPLICABLE)	EM3C60	WATTS • 120V	EM3D60	WATTS • 120V	EM3Z60	WATTS • 120V	EMY260	WATTS	EMYS60	WATTS	RESISTANCE
COMPRESSOR	W10798720		W10575980		W10445423		W10187125		W10237272		
RELAY-STARTING, EMB	NOTE #5		NOTE #5		NOTE #5		NOTE #5		NOTE #5		
OVERLOAD PROTECTOR-T.I.	NOTE #5		NOTE #5		NOTE #5		NOTE #5		NOTE #5		
COVER-TERMINAL	-		-		-		-		-		
RUN WINDINGS	-		-		-		-		-		-
START WINDINGS	-		-		-		-		-		-
COMPRESSOR ELECTRICAL	-		-		-		-		-		
RUN CAPACITOR	NOTE #5		NOTE #5		NOTE #5		NOTE #5		NOTE #5		-
ADAPTIVE DEFROST	NOTE #5		NOTE #5		NOTE #5		NOTE #5		NOTE #5		
DEFROST HEATER	NOTE #5	350-480	NOTE #5	350-480	NOTE #5	350-480	NOTE #5	350-480	NOTE #5	350-480	42-30
DEFROST BI-METAL	NOTE #5		NOTE #5		NOTE #5		NOTE #5		NOTE #5		-
EVAPORATOR FAN	NOTE #5	1.5-2.5	NOTE #5	1.5-2.5	NOTE #5	1.5-2.5	NOTE #5	3.6-4.8	NOTE #5	3.6-4.8	-
CONDENSER FAN	NOTE #5	3.1-5.1	NOTE #5	3.1-5.1	NOTE #5	3.1-5.1	NOTE #5	3.1-5.1	NOTE #5	3.1-5.1	-

COMPRESSOR OPTIONS - REFER TO APPLICABLE DESIGN

(OIL COOLER NOT PRESENT ON ALL COMPRESSORS)



ELECTRONIC CONTROL FEATURES

The user interface in this appliance controls the product cooling system. The product cooling diagnostics is in the bag of this page. The cooling portion of the electronic control in this appliance controls the temperatures in the refrigerator compartment and activates defrost heater. The continuous defrost feature is controlled in the following manner:

 Defrost Heat - During the defrost cycle the heater is energized continuously for the required time. This on/off cycle is mainteined turned on until the Refrigerator thermistor reach the cut-in temperature or the maximum defrost time (25 minutes) is reached.

SERVICE DIAGNOSTICS MODE

SWITCH AND LED DIAGRAM

SW1 D9 D8 D7 D6

To ENTER SERVICE DIAGNOSTICS Mode:

Unit must be in the minimum temperature setting (D9 on) prior to entering SERVICE DIAGNOSTIC MODE. Press SW1 and hold door switch for 5 seconds. Release the button when all LED's are turned on. All LED's turn ON and turn OFF after 10 sec. The display will show D9 on to indicate the control is in step 1 of the diagnostics routine. Each step must be manually advanced. Press SW1 to move to the next step in the sequence. Diagnostics will begin at Step 1 following the sequence shown in Table 1. To guarantee good voltage comparison to indicate load failure, a minimum of 2 seconds is needed in each step for system stabilization. All thermistors will be tested without action required from Service Technician. This check is done after Heater Off (Step 4).

To EXIT SERVICE DIAGNOSTICS Mode, do one of the following 3 options: 1) After last step press SW1 2) Disconnect the product from power. 3) Allow 20 minutes to pass.

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

PASS CONDITION: Pressing SW1 while in Step 7 the system returns to normal mode. FAIL CONDITION: Pressing SW1 while Step 7 fail message status is display by blinking all 4 LED's . Press again SW1, the LED's will show for the specific failure as shown in Table 2

TARIE 1

Step No.	Component Tested			DIS	PLAY	INFORMATION	
1	COOLING ON	SW1	⊐ O 1 D9	• D8	O D7	O D6	
2	COOLING OFF	SW1	⊐ O 1 D9	O D8	O D7	O D6	
3	HEATER ON	SW1	- O 1 D9	O D8	• D 7	O D6	
4	HEATER OFF	SW1	⊐ O 1 D9	O D8	O D 7	O D6	
5	NO LOAD	SW1	□ O 1 D9	O D8	O D7	● D6	
6	NO LOAD	SW1	⊐ O 1 D9	O D8	O D7	O D6	
7	SERVICE CHECK COMPLETED	SW1	- O 1 D9	O D8	• D 7	O D6	
		Т	ABLE	2			
	LOAD FAILURE			DIS	PLAY	INFORMATION	
	MAIN BOARD	SW	□ O 1 D §	• D8	O D7	O D6	
	RC SENSOR	SW	□ O 1 D9	O D8	• D 7	O D6	
	DEFROST SENSOR	SW1	□ O 1 D9	O D8	O D7	• D6	
RC	& DEFROST SENSOR	SW	□ O 11 D§	O 0 D8	• D 7	● D6	
MAIN BOARD + RC SENSOR				۲	۲	0	
		SW	1 D S) D8	D 7	D6	
MAIN BOARD + DEFROST SENSOR			⊐ O	•	0	•	
		SW	1 D9) D8	D 7	D6	
MULTIPLE FAILURES		C.W.			• D 7		
NOTE : WHEN	WHEN MORE THAN ONE FAILURE SERVICE MODE IS ENTERED, AL	I ST IS DETECTED, THE MAJO LL MAIN CONTROL BOARD L NG A DIAGNOSTIC STEP I	R FAIL OADS: [S ENER(IS SHO DEFROST	DWED HEAT	ER, COMPRESSOR, FANS, ETC. ARE TURN	ED OFF.
ONLY	THE LOAD BEING CHECKED DURI	NG A DIAGNOSTIC STEP I.	S ENERG	σΙΖΕD.			

29-Nov-2016 12:28:48 EST | RELEASED

LEASED replaced by the number "4000" (e.g. "W12345678" becomes "400012345678")



SER VICE ∞ WIRING SHE Π \neg 7 0 W110-4 Ο J 71 \triangleright

NOTES:

1. GROUND COMPRESSOR THROUGH CHASSIS.

3. THERMAL FUSE CUTOUT $84\pm2^{\circ}$

2. IM SOLENOID VALVE GROUNDED THROUGH MOUNTING.

29-Nov-2016 12:28:48 EST | RELEASED



A WARNING

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



FROM COLOR TO COLOR	R CONDITIONS
CN1 CN1-4 BK CN1-1 WH	120 VAC INPUT - CONSTANT WHEN UNIT PLUGGED IN
CN1-1 WH CN1-3 RD	120 VAC OUTOUT TO COMPRESSOR /EVAP FAN OR CONDENSER FAN WHEN COOLING
CN1-6 YL CN1-4 BK	120 VAC INPUT LIGHT SWITCH FEEDBACK
CN1-5 BR CN1-1 WH	120 VAC OUTPUT TO DEFROST HEATER WHEN ENERGIZED
K CN2 CN2-1 PK CN2-2 GY	5 VDC INPUT RC/FC THERMISTOR
CN2-3 OR CN2-4 BU	5 VDC INPUT EVAP THERMISTOR
<pre>> = RED + = WHITE _ = YELLOW R = ORANGE R = BROWN Y = GRAY K = PINK J = PURPLE N = TAN R/BK = ORANGE/BLACK TRACE J/BK = BLUE/BLACK TRACE H/BU = WHITE/BLUE TRACE K/YL = BLACK/YELLOW TRACE N/YL = GREEN/YELLOW TRACE N/YL = BLACK/WHITE TRACE</pre>	ACER R ACER ACER ACER

RD/WH = RED/WHITE TRACER

	OF	MAN The	UFA) FOL
3,96 4,09 4,09 4,10 4,32 4,33 4,64 4,64 4,64	0,67 40,,66 270,,47 99,7 99,7	31 25 40 570 312 18	4, 6 4, 6 4, 7 4, 7 4, 7 4, 7 4, 7 4, 7 4, 7 7 7 7
			0

A W11040771

In some European factories the letter "W" of the part code mentioned herein will be automatically

replaced by the number "4000" (e.g. "W12345678" becomes "400012345678")