PERFORMANCE DATA NO LOAD & NO DOOR OPENINGS AT 37°/0°

CONTROL SETTING

	65°F (18°C) Ambient	90°F (32°C) Ambient
Type A with Run / Start Capacitor		
Operating Time	90 to 100%	100%
Freezer Temperature	-5° to 2°F (-20° to -17°C)	-1° to 3°F (-18° to -16°C)
Refrigerator Temperature	34° to 39°F (1° to 4°C)	34° to 39°F (1° to 4°C)
Low Side Pressure	-2 to 6 psig (-14 to 41 kPa)	-2 to 6 psig (-14 to 41 kPa)
High Side Pressure (last 1/3 cycle)	85 to 105 psig (586 to 724 kPa)	120 to 135 psig (827 to 931 kPa)
Wattage (last 1/3 cycle)	30 to 50	50 to 70
Amps (running)	.4 to .8	.7 to .9
Base Voltage	115 vac (127 vac max)	

DEFROST SPECIFICATIONS

Cabinet Size:	Thermal Cutout		Heater		Defrost Heater Termination
27' & 28' SD, 22' CD	Cut-in	Cut-out	Watts	Ohms	Cut-out
	110°F (43.3°C)	135°F (57.2°C)	500	26.5	48°F (8°C)

CONDENSER FAN MOTOR

Watts	RPM	Amps
3.1	1100 CW Opposite Shaft	0.03 Running

FREEZER ICE MAKER SPECIFICATIONS

Electrical	115 vac (127 vac max)
Thermostat	Opens at 48°F (9°C), Closes at 15° F (-9°C)
Heater Voltage	115 vac

LINE — POWER — NEUTRAL (Wiring diagram: ICE MAKER, THERMAL CUT-OUT, MOTOR, HOLD SWITCH, THERMOSTAT, MOLD HEATER 165 WATTS, WATER VALVE, SHUTOFF SWITCH, WATER FILL SWITCH, MOUNTING PLATE, MOLD)

SERVICE DATA SHEET

A06686901

FREEZER ICE MAKER - AUTOMATIC DEFROST
BOTTOM FREEZER - R134a

➡ **IMPORTANT: PLEASE RETURN THIS SHEET TO ITS ORIGINAL LOCATION.**

ERROR CODES			SPECIAL MODES			
Display		Interpretation	Mode	Display		Activate	Deactivate
FZ	FF			FZ	FF	(press for up to 10 sec. simultaneously)	
--	OP	Open FF Cavity Thermistor	Manual Defrost	d	F	FF ^ and FF v	Same to deactivate
OP	--	Open FZ Cavity Thermistor	Demo / Show-room	77	77	FZ ^ and FF v	Unplug to deactivate
--	SH	Shorted FZ Cavity Thermistor	Sabbath	Sb	Sb	FZ v and FF v	Same to deactivate
SH	--	Shorted FZ Thermistor	System Diagnostic	Blank UI display, no LEDs illuminated		FZ ^ and FZ v	Press and hold FF ^ to deactivate
SY	CF	UI to Main Board communication failure; on start up	Current Air Temps	FZ Temp	FF Temp	Default Settings and C/F Buttons	Automatically after 10 seconds
SY	CE	UI to Main Board communication error; after a period of operation	**Notes:** • Always check for pin back-outs, pinched or damaged wires before replacing components. • Determine whether failure is caused by the component, main control board or wiring. **Contact TID before replacing main control board.** • Refer to Service Manual for additional information.				
SY	EF	Freezer Evaporator Fan Failure					

VCC COMPRESSOR MOTOR RESISTANCE CHECK

Check resistance between terminals 1 and 2, 2 and 3, 3 and 1. If all resistances are equal, compressor is operative.

Test 2 to 3, Test 1 to 2, Test 3 to 1

⚠ **CAUTION**

All electrical parts and wiring must be shielded from torch flame. DO NOT allow torch to touch insulation; it will char at 200°F and flash ignite (burn) at 500°F. Excessive heat will distort the plastic liner.

FREEZER ICE MAKER INFORMATION
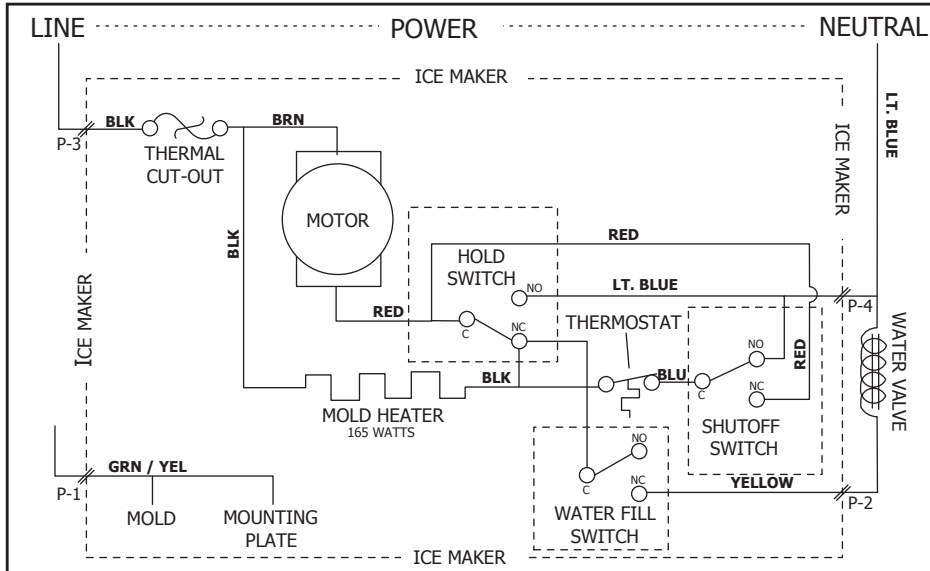#### (Where Applicable)

Test Cycling: Remove cover by inserting screwdriver in notch at bottom and prying cover from housing. Use screwdriver to rotate motor gear counterclockwise until holding switch circuit is completed. All components of ice maker should function to complete the cycle.
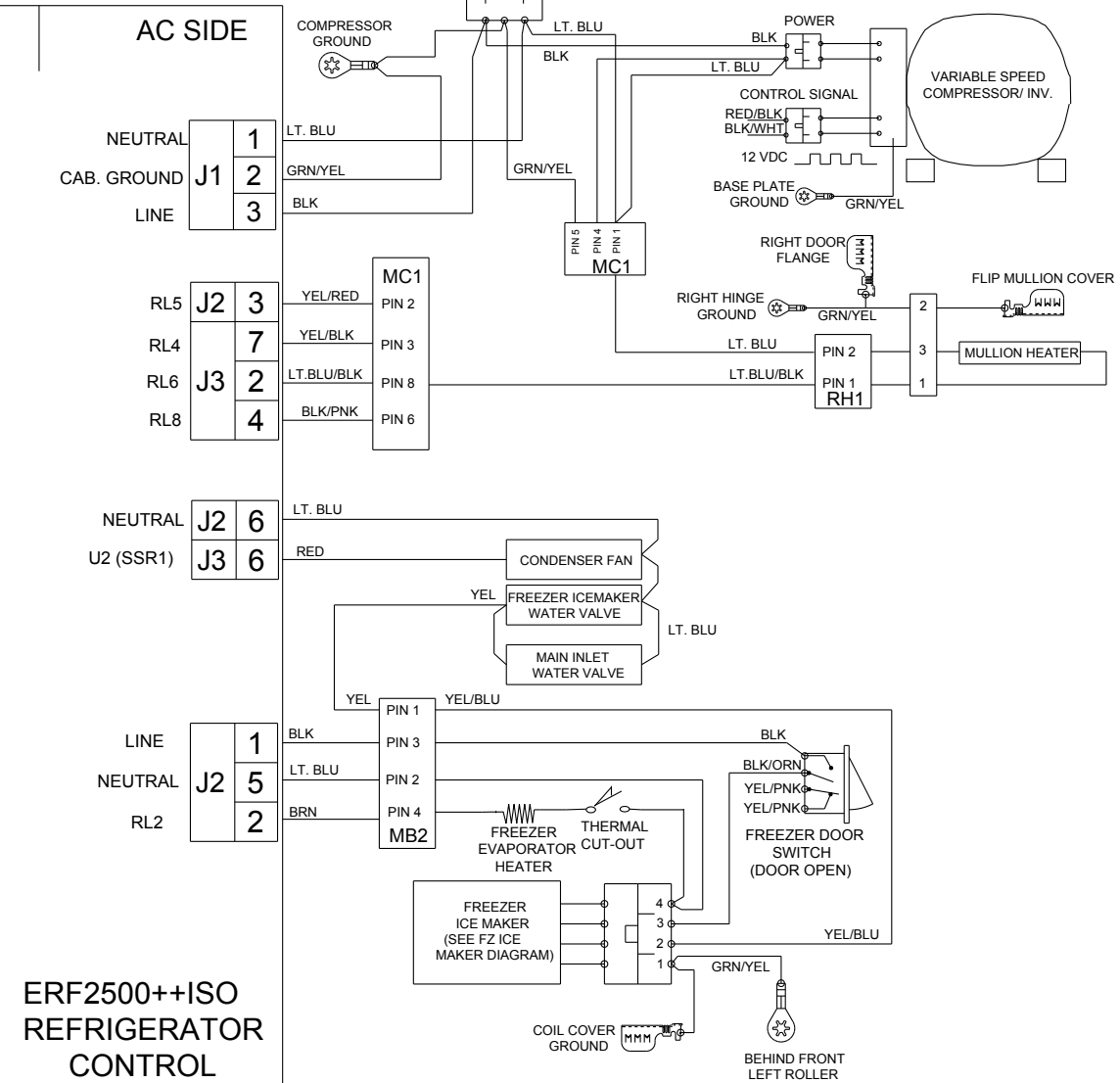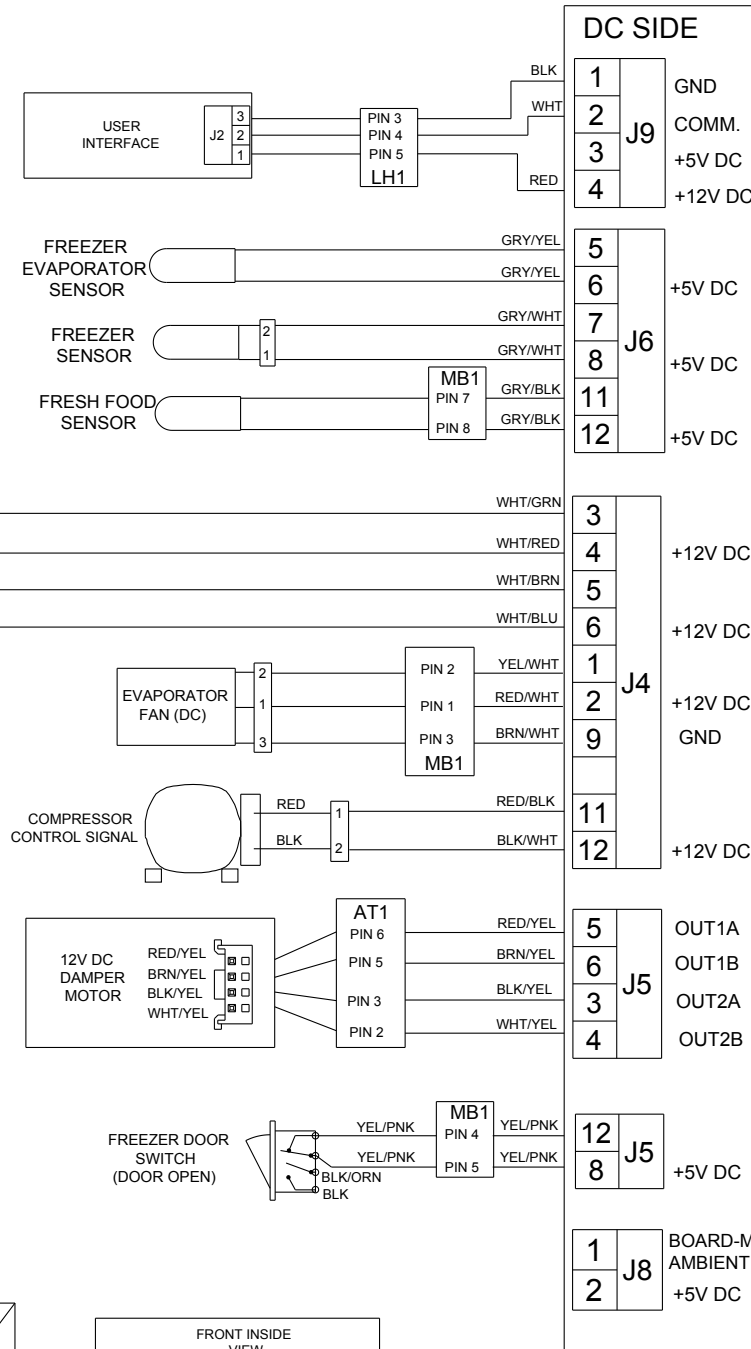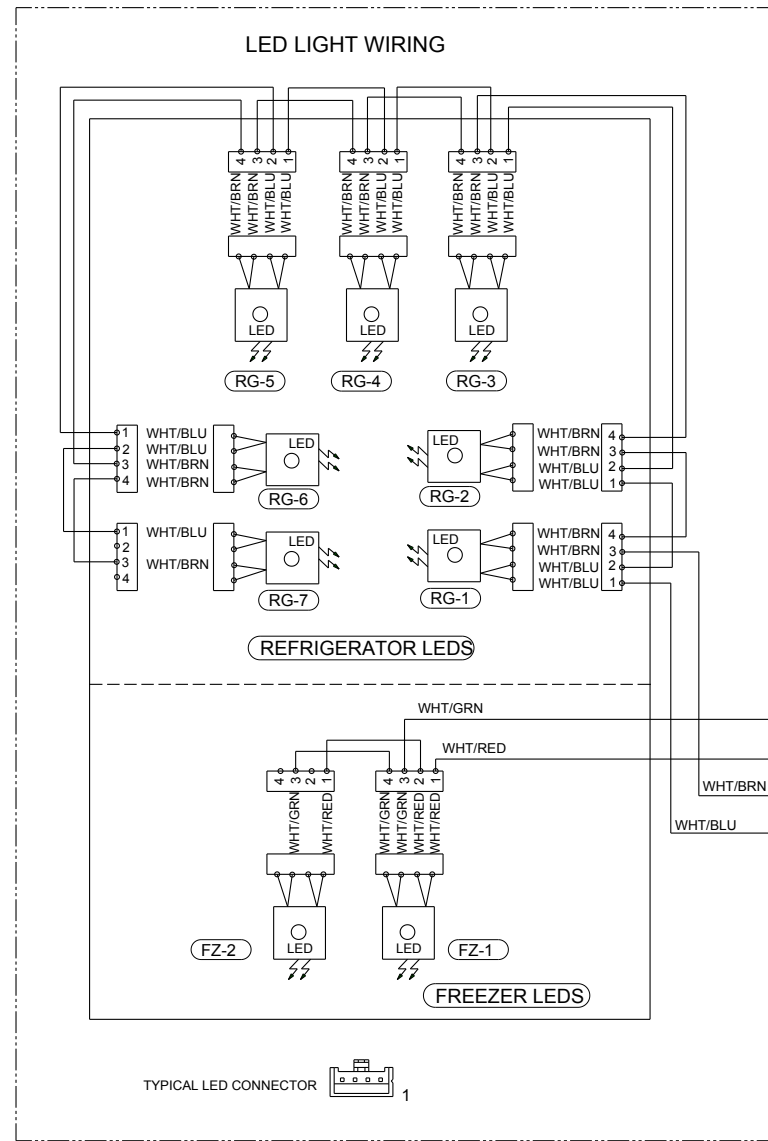
Water Fill Volume: The water fill adjustment screw will change the fill time. One full turn is equal to 20cc (.68 oz.). The correct fill is 102 to 130cc (3.4 to 4.3 oz.). When a water valve is replaced, the fill volume must be checked.

Water Fill Adjustment, Motor Gear, Mounting Plate Screws, Mounting Plate Screw, Timing Gear

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SYSTEM DIAGNOSTIC MODE

Activate:	Press FZ ^ and FZ v for up to 10 sec. simultaneously. Press FF ^ to advance through tests.
Deactivate:	Press FF ^ for up to 10 sec. Diagnostic Mode will automatically deactivate after 5 min. of inactivity. **Note: Silence alarm.**

• Tests marked with "*" may not be applicable to this unit and will not be displayed in System Diagnostic Mode.
• Tests displayed in diagnostic mode but not described below are for internal purposes only; advance through.
• View UI display for "on," "off," "CL," "OP," "SH," "LO," "HI" or numerical results of tests.
• Listen for operating sounds; feel for heat or air flow as appropriate to determine results of tests.

Test		To activate test:	Passing result
--	First Screen	--	Blank UI display, no LEDs illuminated.
--	Second Screen	--	All LED lights on UI illuminated.
--	Third Screen	--	Blank UI display, no LEDs illuminated.
46	Humidity Sensor	Activates automatically	"OP" if open, "SH" if short. AC Heater System: Displays %RH. DC Heater System: "HI" - heater should be on. "Lo" - heater should be off. %RH is displayed when humidity is between "Lo" and "HI" values; heater could be on or off.
2	Freezer Defrost Heater	Press power on-off	Freezer defrost heater on when "on"; off when "off". Evaporator thermistor temperature is flashed. Watch for temp increase with the heater on. It may take a few minutes for the evaporator to heat up.
12	Condenser Fan	Press power on-off	Fan running when "on"; stopped when "off"
43	Mullion Anticondensation Heater	Press power on-off	Flip Mullion Heater on when "on"; off when "off"
38	VCC Compressor	Press power on-off	Compressor on when "on"; off when "off"
13	FF Lights	Press power on-off	FF lights on when "on"; off when "off"
15	Freezer Evaporator Fan	Press power on-off	Press to toggle between "off", "Lo" and "HI". A current sensor reading is flashed (units are not mA). OFF reading should be around 2. "Lo" speed reading should settle down to around 9. "HI" speed reading should settle down above 40.
20	FZ Lights	Press power on-off	FZ lights on when "on"; off when "off"
22	Damper	Press power on-off	Perform test 15 and set fan to "HI". Then, check for air flow when open "OP," and no air leaks when closed "CL".
23	FF Door	Open/close FF door	"CL" on UI when door closed; "OP" when open
24	FZ Door	Open/close FZ door	"CL" on UI when door closed; "OP" when open
29	FF Thermistor	Activates automatically	UI shows temperature sensed by FF thermistor; pass if within 10°F of temperature measured with gauge at FF thermistor location. "OP" if open; "SH" if short
30	FZ Thermistor	Activates automatically	UI shows temperature sensed by FZ thermistor; pass if within 10°F of temperature measured with gauge at FZ thermistor location. "OP" if open; "SH" if short
33	Ambient Thermistor @ Main Board	Activates automatically	UI shows temperature sensed at main board; pass if within +20°F/-10°F of temperature measured with gauge at main board location. "OP" if open; "SH" if short
34	Ambient Thermistor @ UI	Activates automatically	UI shows temperature sensed at UI; pass if within +20°F/-10°F of temperature measured with gauge at UI location. "OP" if open; "SH" if short
39	Freezer Evaporator Thermistor	Activates automatically	UI shows temperature sensed by freezer evaporator thermistor; pass if within 10°F of temperature measured with gauge at evaporator thermistor location. "OP" if open; "SH" if short
0-	Firmware Parameters	Press power on-off	Displays digit sequence; record
1-	Main Board Firmware	Press power on-off	Displays digit sequence; record
3-	UI Firmware	Press power on-off	Displays digit sequence; record

➡ **IMPORTANT SAFETY NOTE**
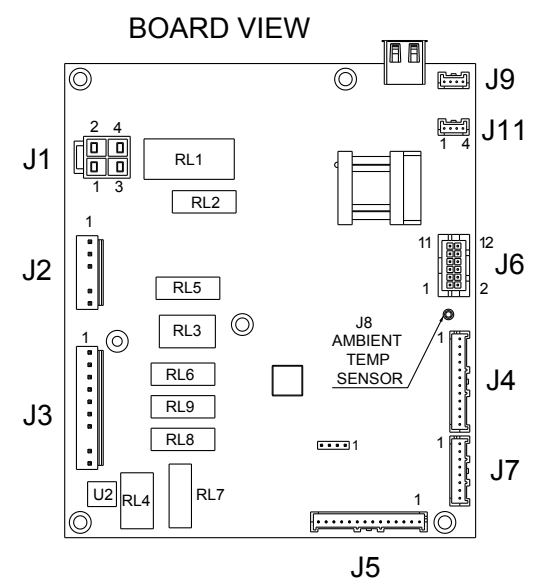
The information provided herein is designed to assist qualified repair personnel only. Untrained persons should not attempt to make repairs due to the possibility of electrical shock. Disconnect power cord before servicing this appliance.

IMPORTANT

If any green grounding wires are removed during servicing, they must be returned to their original position and properly secured.

LED LIGHT WIRING

WHT/BRN WHT/BLU WHT/BLU (RG-5) (RG-4) (RG-3)

LED LED LED

REFRIGERATOR LEDS

WHT/BLU WHT/BLU WHT/BRN WHT/BRN (RG-6) (RG-2)
WHT/BLU WHT/BRN (RG-7) (RG-1)

WHT/GRN WHT/RED
FZ-2 LED LED FZ-1
FREEZER LEDS

TYPICAL LED CONNECTOR 1

POWER CORD
NON-RIBBED (LINE) RIBBED (NEUTRAL)
BASE PLATE GROUND

DC SIDE | AC SIDE

COMPRESSOR GROUND
LT. BLU
BLK
POWER
BLK
LT. BLU
VARIABLE SPEED COMPRESSOR/ INV.
CONTROL SIGNAL
RED/BLK BLK/WHT
12 VDC

USER INTERFACE J2
PIN 3 / PIN 4 / PIN 5
LH1
BLK 1 GND
WHT 2 COMM. J9
3 +5V DC
RED 4 +12V DC

NEUTRAL 1 LT. BLU
CAB. GROUND J1 2 GRN/YEL
LINE 3 BLK

BASE PLATE GROUND GRN/YEL
PIN 5 PIN 4 PIN 1 MC1
RIGHT DOOR FLANGE
RIGHT HINGE GROUND GRN/YEL
FLIP MULLION COVER
MULLION HEATER
PIN 2 / PIN 1 RH1

FREEZER EVAPORATOR SENSOR GRY/YEL / GRY/YEL
5 / 6 +5V DC
FREEZER SENSOR GRY/WHT / GRY/WHT J6
7 / 8 +5V DC
FRESH FOOD SENSOR GRY/BLK / GRY/BLK
MB1 PIN 7 / PIN 8
11 / 12 +5V DC

RL5 J2 3 YEL/RED MC1 PIN 2
RL4 7 YEL/BLK PIN 3
RL6 J3 2 LT.BLU/BLK PIN 8
RL8 4 BLK/PNK PIN 6
LT. BLU
LT.BLU/BLK

NEUTRAL J2 6 LT. BLU
U2 (SSR1) J3 6 RED
CONDENSER FAN
FREEZER ICEMAKER WATER VALVE
MAIN INLET WATER VALVE
LT. BLU

WHT/GRN 3
WHT/RED 4 +12V DC
WHT/BRN 5
WHT/BLU 6 +12V DC

WHT/GRN WHT/RED

EVAPORATOR FAN (DC) MB1
PIN 2 YEL/WHT 1 +12V DC
PIN 1 RED/WHT 2 J4
PIN 3 BRN/WHT 9 GND

COMPRESSOR CONTROL SIGNAL
RED RED/BLK 11 +12V DC
BLK BLK/WHT 12

AT1
PIN 6 RED/YEL 5 OUT1A
PIN 5 BRN/YEL 6 OUT1B J5
PIN 3 BLK/YEL 3 OUT2A
PIN 2 WHT/YEL 4 OUT2B

12V DC DAMPER MOTOR
RED/YEL BRN/YEL BLK/YEL WHT/YEL

ERF2500++ISO REFRIGERATOR CONTROL

LINE 1 BLK YEL/BLU
NEUTRAL J2 5 LT. BLU PIN 1 / PIN 3 / PIN 2 / PIN 4
RL2 2 BRN MB2
FREEZER EVAPORATOR HEATER
THERMAL CUT-OUT
BLK/ORN YEL/PNK YEL/PNK
FREEZER DOOR SWITCH (DOOR OPEN)
FREEZER ICE MAKER (SEE FZ ICE MAKER DIAGRAM)
YEL/BLU

FREEZER DOOR SWITCH (DOOR OPEN)
MB1 PIN 4 YEL/PNK
YEL/PNK
PIN 5 YEL/PNK
BLK/ORN
BLK
12 / 8 J5 +5V DC

COIL COVER GROUND
BEHIND FRONT LEFT ROLLER
GRN/YEL

1 / 2 J8 BOARD-MOUNTED AMBIENT THERMISTOR +5V DC

BOARD VIEW
J9 J11
J1 RL1 RL2
J2 RL5 J6
J3 RL3
RL6 J4
RL9
U2 RL4 RL8 RL7 J7
J8 AMBIENT TEMP SENSOR
J5

INLINE CONNECTOR ABBREVIATION KEY
ABBR.	EXPLANATION
AT1	9 PIN CONNECTION AT AIR TOWER
LH1	5 PIN CONNECTION AT THE LEFT DOOR UPPER HINGE
MB1	9 PIN CONNECTION IN THE MAIN BOARD HOUSING BEHIND THE TOE GRILLE
MB2	4 PIN CONNECTION IN THE MAIN BOARD HOUSING BEHIND THE TOE GRILLE
MC1	9 PIN CONNECTION IN THE MACHINE COMPARTMENT TO THE LEFT OF THE COMPRESSOR
RH1	2 PIN CONNECTION AT THE RIGHT DOOR UPPER HINGE

RH1 LH1 BACK VIEW MC1
FRONT INSIDE VIEW AT1
MB1 MB2

AT1 & MB1 MB2 LH1 CATCH LATCH
MC1 RH1

Wire Diagram A06742201