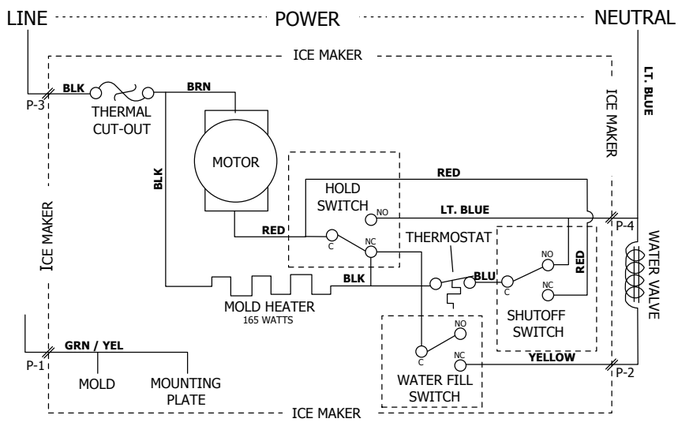
PERFORMANCE DATA NO LOAD & NO DOOR OPENINGS AT 37°/0° CONTROL SETTING		
Type A with Run / Start Capacitor	65°F (18°C) Ambient	90°F (32°C) Ambient
Operating Time	90 to 100%	100%
Freezer Temperature	-5° to 2°F (-20° to -17°C)	-1° to 3°F (-18° to -16°C)
Refrigerator Temperature	34° to 39°F (1° to 4°C)	34° 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 Thermistor 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	39°F (4°C)
Electronic Timer - (ADC) Defrost 24 minutes every 6-96 hours of compressor run time.					

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



⚠ 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.

SERVICE DATA SHEET

A01544602

ICE & WATER - AUTOMATIC DEFROST

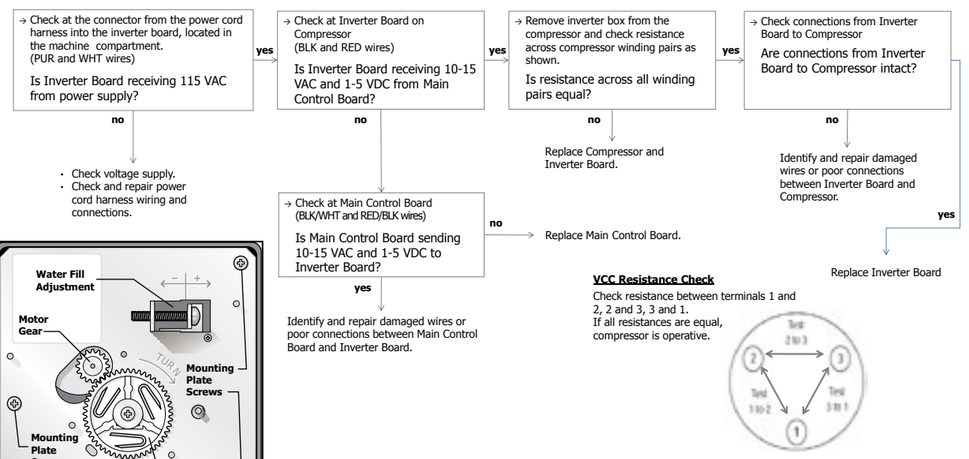
BOTTOM FREEZER - R134a

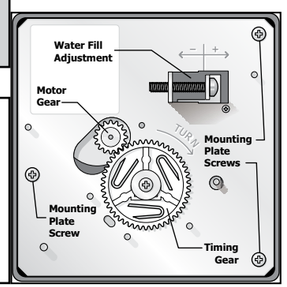
IMPORTANT: PLEASE RETURN THIS SHEET TO ITS ORIGINAL LOCATION.

ERROR CODES			SPECIAL MODES			
Display		Interpretation	Mode	Display		Activate/Deactivate (press for up to 10 sec. simultaneously)
FZ	FF			FZ	FF	
--	OP	Open FF Thermistor	Manual Defrost	d	F	+ and - / same to deactivate
OP	--	Open FZ Thermistor	Display / Showroom	77	77	Λ and - / Power-on-Reset (POR)
--	SH	Shorted FF Thermistor	Sabbath	Sb	Sb	V and - / same to deactivate
SH	--	Shorted FZ Thermistor	System Diagnostic	No FF or FZ display, all UI LEDs on.		Λ and V/ + to deactivate
SY	CF	UI to Main Control Board communication failure; on start up	FFIM Diagnostic	Numerical display of first test		Λ and + together to activate / press and hold + to deactivate
SY	CE	UI to Main Control Board communication error; after a period in 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	Evaporator Fan Failure				

FRESH FOOD ICE MAKER DIAGNOSTIC MODE			
Activate:	Press Λ and + temperature pads for up to 10 sec. simultaneously. Press + or - to move forward or backward through tests.		
Deactivate:	Press + for up to 10 sec. FFIM Diagnostic Mode will automatically deactivate after 5 min. of inactivity. NOTE: Silence alarm.		
Test		To activate test	**Passing Result**
52C	Ice Maker Thermistor	Activates automatically	FZ display shows temperature sensed by Ice Maker Thermistor. "OP" if open; "SH" if short
55C	Water Valve	Press Set	Remove ice tray to collect water into a measuring container to measure water fill. If collecting water into ice tray, first perform test 63C to empty ice tray.
57C	Evaporator Fan (FFIM)	Press Set	"On" on FZ display when fan activated, "OFF" when deactivated.
58C	Ice Level Sensor	Activates automatically	Remove ice bucket. Allow bail arm to drop freely. Pass if no alarm when tray returns to "home" position. Hold bail arm up. Pass if alarm sounds when tray returns to "home" position. This test runs continuously until another test is selected.
63C	Twist Tray	Press Set	Remove ice bucket. FZ display shows "1" and "GOOD".

Variable Capacity Compressor (VCC) Diagnostics (select models)
If test 38 fails, diagnose as follows:





SYSTEM DIAGNOSTIC MODE	
Activate:	Press Λ and V for up to 10 sec. simultaneously. Press + to advance through tests.
Deactivate:	Press + 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.

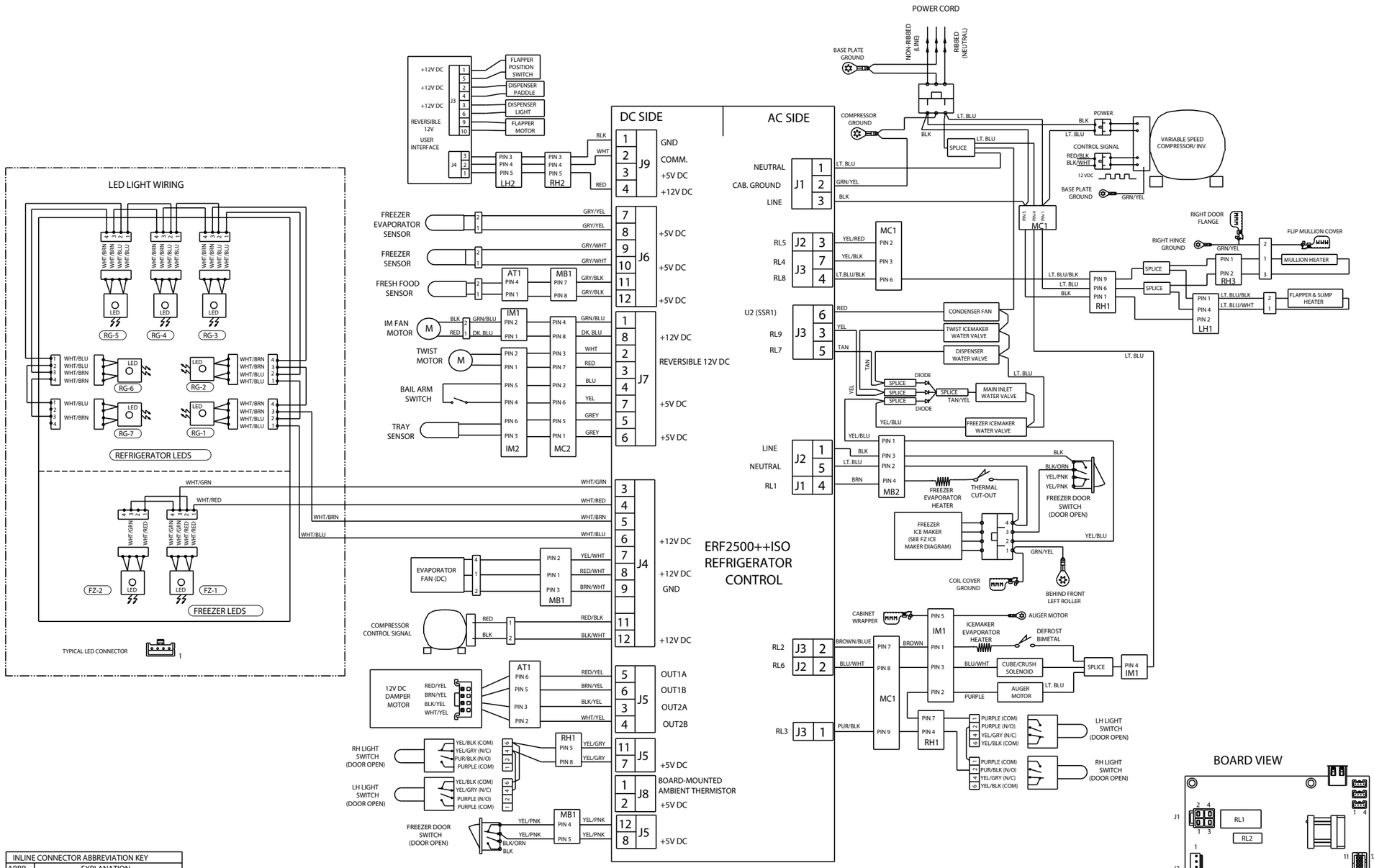
	Test	To activate test:	Passing result
--	First Screen	--	All LED lights on UI illuminated.
--	Second Screen	--	All segments on UI temperature displays illuminated.
--	Third Screen	--	Blank UI display, no lights illuminated.
28	Dispenser Paddle	Press disp. paddle	"on" on UI when depressed; "off" when released.
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.
47	Dispenser Pocket Heater	Press set	AC Heater System: "--" ; test not available. DC Heater System: heater on when "on", off when "off".
2	Freezer Defrost Heater	Press set	Freezer defrost heater on when "on"; off when "off".
3*	FF Light (Incandescent Models)	Press set	FF lights on when "on"; off when "off"
8	Water Valve (Dispenser)	Press set	FF doors must be closed. **Be prepared to collect water at dispenser.** Water dispenses when "on"; stops when "off".
9*	FZ Light (Incandescent Models)	Press set	FZ lights on when "on", off when "off".
10	Auger Motor	Press set	FF door must be closed. Motor running when "on"; motor stopped when "off".
11	Cube/Crush Solenoid	Press set	FF door must be closed. **Do not leave solenoid in activated state.** Solenoid activated when "on"; deactivated when "off".
12	VCC Condenser Fan	Press set	Fan running when "on"; stopped when "off".
43	Anticondensation Heater	Press set	Flip mullion heater and dispenser pocket heater on when "on"; off when "off"
38*	VCC Compressor	Press set	Compressor running when "on"; stopped when "off".
13*	FF Light (LED Models)	Press set	FF lights on when "on"; off when "off".
15	Evaporator Fan	Press set	Stopped when "off". Listen for speed change from "LO" to "HI".
20*	FZ Light (LED Models)	Press set	FZ lights on when "on", off when "off".
22	Damper	Press set	With inspection mirror, observe damper open when "OP"; closed when "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.
26	Ice Maker Defrost Heater	Activates automatically	Relay is activated automatically. If "CL" is shown, defrost limit switch is closed and heater should be heating up. If "OP" is shown, defrost limit switch is open and heater will not activate.
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	Evaporator Thermistor	Activates automatically	UI shows temperature sensed by evaporator thermistor; pass if within 10°F of temperature measured with gauge at evaporator thermistor location. "OP" if open; "SH" if short.
45	Ice Maker Mold Thermistor	Activates automatically	UI shows temperature sensed at ice maker; pass if within +20°F/-10°F of temperature measured with gauge at ice maker mold. "OP" if open; "SH" if short.
0-	Firmware Parameters	Press set	Displays digit sequence; record.
2-	Main Board Firmware	Press set	Displays digit sequence; record.
4-	UI Firmware	Press set	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.



INLINE CONNECTOR ABBREVIATION KEY	
ABBR.	EXPLANATION
AT1	9 PIN CONNECTION AT AIR TOWER
IM1	9 PIN CONNECTION IN FRESH FOOD ICEMAKER COMPARTMENT
IM2	6 PIN CONNECTION IN FRESH FOOD ICEMAKER COMPARTMENT
LH1	6 PIN CONNECTION AT THE LEFT DOOR UPPER HINGE
LH2	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
MC2	8 PIN CONNECTION IN THE MACHINE COMPARTMENT TO THE LEFT OF THE COMPRESSOR
RH1	9 PIN CONNECTION AT THE RIGHT DOOR UPPER HINGE
RH2	5 PIN CONNECTION AT THE RIGHT DOOR UPPER HINGE
RH3	2 PIN CONNECTION AT THE RIGHT DOOR UPPER HINGE

Wire Diagram A01536801