Amana Technical Information—Refrigerator

BC21V P1325004W; P1325016W
BCI21V P1325005W; P1325017W
BX21V P1325002W; P1325014W
BR22V P1325003W; P1325015W
BG21V P1325001W

- Due to a possibility of personal injury or property damage, always contact an authorized technician for service or repair of this refrigerator.
- Refer to Service Manual RS1200003 for installation, operating, disassembly, icemaker, testing, and troubleshooting information.

⚠ CAUTION

All safety information must be followed as provided in Service Manual RS1200003.

⚠ WARNING

To avoid risk of electrical shock that can cause death or severe personal injury, disconnect unit from power before servicing unless tests require power. Discharge capacitors through a 10,000-ohm resistor before handling. Wires removed during disassembly must be replaced on correct terminals to ensure proper grounding and polarization.

Model	**BG21V BX21V**	**BC21V BCI21V**	**BR22V**
Capacity	20.5 cu ft		21.7 cu ft
Electrical Requirements (separate circuit)	115 VAC, 60 Hz, 15 amps		115 VAC, 60 Hz, 15 amps
Refrigerant Type	R134a		R134a
Width (without side extrusions)	32.6"		32.6"
Depth (without handle)	33.5"		34.9"
Height (including top hinge cap)	68.3"		68.3"

No-Load Performance, Controls in Normal Position															
	Kw/24 hr ±0.4			**Percent Run Time ±10%**			**Cycles/24 hr ±25%**			**Refrigerator Compartment Average Food Temperature ±3°F**			**Freezer Compartment Average Food Temperature ±3°F**		
Ambient °F	65°	90°	110°	65°	90°	110°	65°	90°	110°	65°	90°	110°	65°	90°	110°
21 cu ft	0.9	1.7	2.7	20	37	59	27	22	15	36	40	42	1	1	1
22 cu ft	0.9	1.7	2.7	22	39	61	27	22	15	36	40	42	1	1	1

Temperature Relationship Test Chart												
	T-1 Outlet ±3°F		**T-2 Inlet ±3°F**		**T-3 Suction Line ±7°F**		**Average Total Wattage ±10%**		**Suction Pressure ±2 PSIG**		**Head Pressure ±5 PSIG**	
Ambient °F	65°	90°	65°	90°	65°	90°	65°	90°	65°	90°	65°	110°
21 cu ft	-15	-14	-15	-14	72	95	160	165	0	1	83	135
22 cu ft	-15	-14	-15	-14	72	95	160	169	0	1	86	135

Component Specifications

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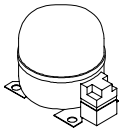
Illustration	Component Name	Test Procedures	
A0282803 	Bulb	Volt Watt	115/125 VAC 40 watts
A0282807 	Bulb	Volt Watt	115/125 VAC 60 watts
C8931608 	Capacitor, compressor run	Volt Capacitance	210/220 VAC 15 Mfd +10% -5%
R9900019 	Compressor (TPD1380YXA)	Type BTUH Volt Watt Current Lock rotor Full load Resistance Run windings Start windings	Fan Cooled, R134a refrigerant 850 BTUH 115 VAC, 60 Hz 149 watts 21.3 amps 1.5 amps 2.60 ohms 4.35 ohms
R0161050 	Control, damper (BX21V; BR22V)	Settings #1 #4 #7	Closing temperatures 38°F 31°F 24°F
R0161049 	Control, damper (BC21V; BCI21V; BG21V)	Settings #1 #4 #7	Closing Temperatures 34°F 27°F 20°F
C8946703 	Control, freezer temperature	Settings #1 – in #1 – out #4 – in #4 – out #7 – in #7 – out	Temperatures 10.0°F ±3° 1.0°F ±3° 4.5°F ±1.5° -6.5°F ±1.5° 0.0°F ±3° -12.0°F ±3°
B2150504 	Drier	Drier must be changed every time the system is opened for testing or compressor replacement. Desiccant	(20) 8 x 12 4AXH - 7 M>S> -Grams

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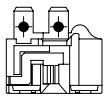
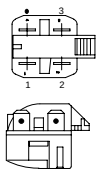
Illustration	Component	Test Procedure	
10428409 	Heater, evaporator	Volt Wattage Resistance	115 VAC 450 ±5% watts 29 ±5% ohms
10624901	Heater, return air duct (Spare heater foamed in place)	Volt Wattage Resistance	115 VAC 1 watt 13.500 ±5% ohms
10884504 	Motor, condenser	Volt Rotation (facing end opposite shaft) RPM Watt Current Resistance	115 VAC, 60 Hz Clockwise 1300 RPM 10.0 watts 0.15 amps 220 ±10% ohms
12442201 	Motor, evaporator fan (Used on all bottom-mount units before 05/17/00. Diameter of fan blade on these units is 4.34”)	Volt Rotation (facing end opposite shaft) RPM Watt	115 VAC, 60 Hz Clockwise 3000 RPM 10.9 ±15% watts
12442204 	Motor, evaporator fan (Used on all bottom-mount units after 05/17/00. Diameter of fan blade on these units is 3.85”)	Volt Rotation (facing end opposite shaft) RPM Watt	115 VAC, 60 Hz Clockwise 3100 RPM 8.3 ±15% watts
10377015 	Overload, 4TM	Volt Ult. trip amps @ 158°F (70°C) Close temperature Open temperature Short time trip (seconds) Short time trip (amps @77°F 25°C)	115 VAC 3.51 amps 142°F ±6° 257°F ±3° 10 seconds ±5 14 amps
10097202 	Relay, ptc	Resistance With power off check: Across terminals 2 & 3 Shorted Open	 3–12 ohms 0 ohms Very high or infinite ohms
C3680310 	Switch, light	Type Volt Current	DPST NC 125/250 VAC 5.0/5.0 amps

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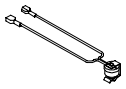
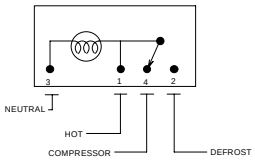
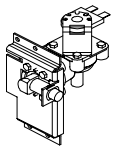
Illustration	Component	Test Procedure	
10442407 	Thermostat	Volt Watt Current Resistance across terminal Above 55°F ±6° Below 20°F ±8° Between 55°F ±6 and 20°F ±8°	120 VAC 1000 watts 10 amps Open Closed Will stay in current state (open or closed) until either 55°F ±6 or 20°F ±8° is reached.
10530703 	Timer, defrost	Volt Defrost period (minutes) Defrost cycle (hours)	120 VAC, 60 Hz 33 ±3.6 8 
R0000214 	Valve, water (Used on models equipped with icemaker)	Volt Watt Water pressure (inlet) Max Min Fill Rate	120 VAC, 60 Hz 20 watts 120 PSIG 20 PSIG 137 +15/-24 cc's at 7.5 seconds

Schematic Drawing

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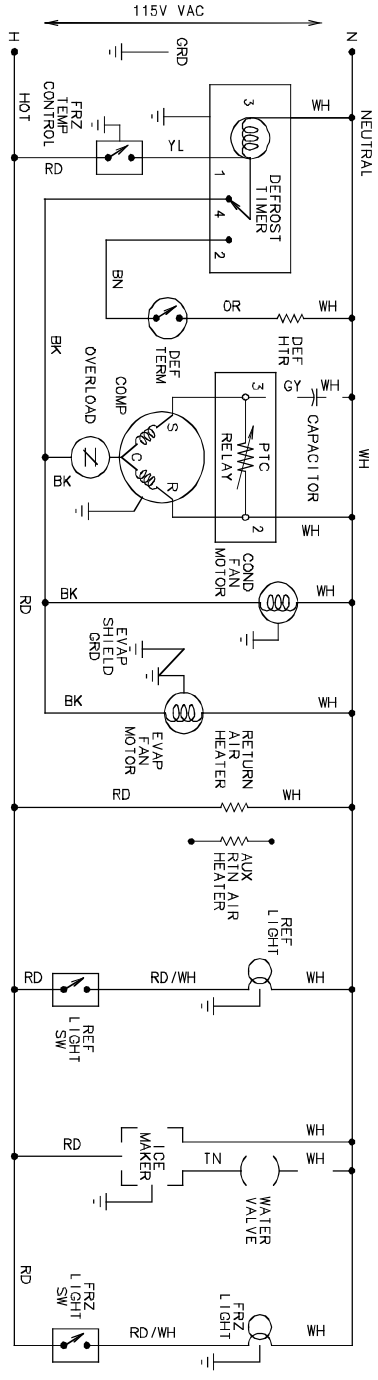

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Wiring Diagram

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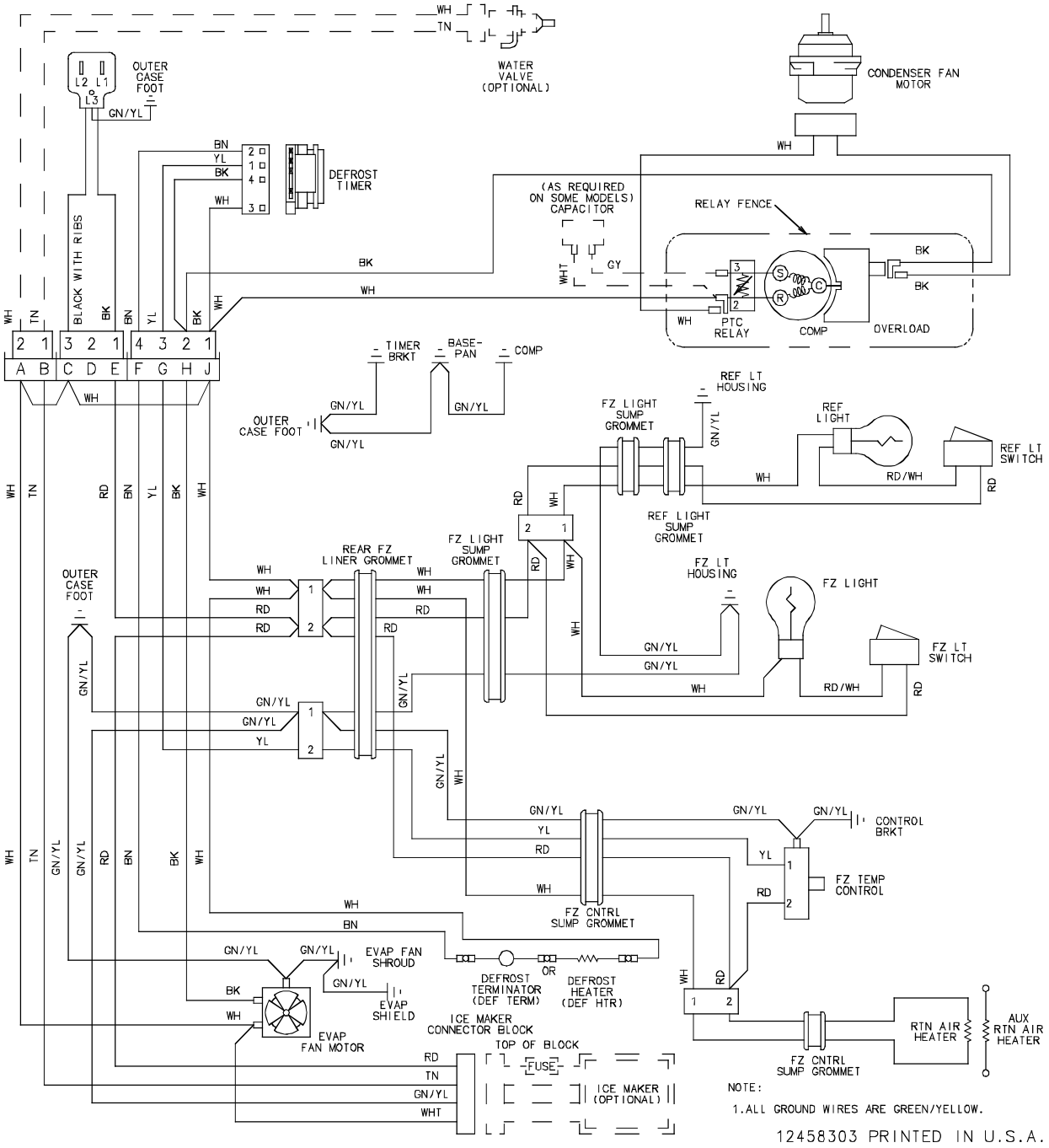

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