Amana Technical Information—Refrigerator

SXD22S2 P1303512W

- Due to a possibility of personal injury or property damage, always contact an authorized technician for servicing or repair of this refrigerator.
- Refer to Service Manual RS1300003 for installation, disassembly, ice maker, safety, testing, and troubleshooting information.

⚠ CAUTION

All safety information must be followed as provided in Service Manual RS1300003.

⚠ WARNING

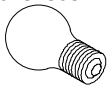
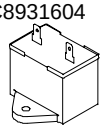
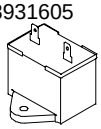
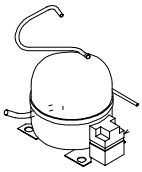
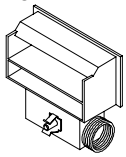
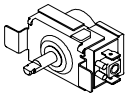
To avoid risk of electrical shock, personal injury, or death, disconnect power to refrigerator before servicing, unless testing requires power. Wires removed during disassembly must be replaced on proper terminals to insure correct grounding and polarization.

Model	SXD22S2
Capacity	22.14 cu ft
Electrical requirements separate circuit	115 VAC 60 Hz 15 amps
Refrigerant type	R134a
Width without side extrusions	35.75"
Depth without handle includes door extrusions	29.75"
Height including top hinge cap	68.5"

No Load Performance Controls in Normal Position															
	Kw/24hr ±0.4			Percent Run Time ±10%			Cycles/24 hr ±25%			Refrigerator Center Compartment Food Average Temperature ±3°F			Freezer Compartment Food Average Temperature ±3°F		
Ambient °F	**65°**	**90°**	**110°**	**65°**	**90°**	**110°**	**65°**	**90°**	**110°**	**65°**	**90°**	**110°**	**65°**	**90°**	**110°**
	1	2	4	37	50	100	37	33	0	38	40	40	1	2	2

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°**
	-10	-11	-13	-12	67	90	161	171	1	1	85	185

Component Specifications

Part Number	Component	Test Procedures	
A0282803 	Bulb	Volt Watt	115/125 VAC 40 watts
M0360001 	Bulb, cavity light	Volt Watt	115/125 VAC 6 watts
C8931604 	Capacitor, compressor run	Volt Capacitance	220 VAC 15 Mfd +10% -5%
C8931605 	Capacitor, auger motor	Volt Capacitance	220 Volt 17 Mfd +10% -5%
12049702 	Compressor	Type BTUH Volt Watt Current Lock rotor Full load Resistance Run Windings Start Windings	Fan Cooled, R134a refrigerant 970 BTUH 115 VAC, 60 Hz 176 watts 21.3 amps 1.6 amps 2.60 ohms 4.35 ohms
D7547412 	Control, damper	Settings #1 #4 #7	Closing temperatures 47°F 40°F 30°F
R0161092 	Control, freezer temperature	Settings #1–in #1–out #4–in #4–out #7–in #7–out	Temperatures 21.0°F 4.5°F 13.3°F -5.9°F 9.8°F -11.0°F
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
10882105	Heater, cavity	Volt Watt Resistance	115 VAC 5 ±7.5% watts 1.89 ±7.5% ohms
12049801	Heater, evaporator	Volt Wattage Resistance	115 VAC 450 ±5% watts 29 ±5% ohms

Component Specifications

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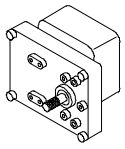
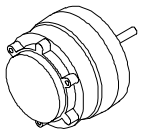
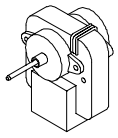
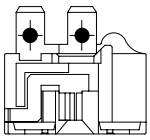
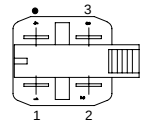
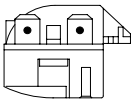
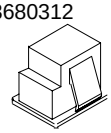
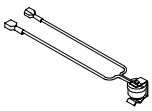
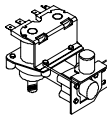
10114804 	Motor, auger	Volt Rotation (facing shaft) RPM Watt Bimetal Cut-out Opens Closes	115 VAC, 60 Hz Power to blue and white leads is clockwise Power to white and orange leads is counterclockwise 13–17 RPM 165–170 watts 266° ±5°F 185° ±5°F
10884501 	Motor, condenser	Volt Rotation (facing end opposite shaft) RPM Watt Current Resistance	115 VAC, 60 Hz Clockwise 1300 RPM 10.0 watts 0.15 amps 220 ±10% ohms
10513803 	Motor, evaporator fan	Volt Rotation (facing end opposite shaft) RPM Watt	115 VAC, 60 Hz Clockwise 2500 RPM 12 ±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 (61°C) ±9° 257°F (125°C) ±5° 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
C3680304 	Switch, refrigerator light	Type Volt Current	DPST, NC 125/250 VAC 5/2.5 amps
C3680312 	Switch, freezer light/auger motor interrupt	Type Volt Current	SPDT 125/250 VAC 5.0/5.0 amps
10533001 10533002 10533003 	Switch, limit, cavity light and dispensing arms	Type Volt Current	SPSP, NO 125/250 VAC 10 amps

Component Specifications

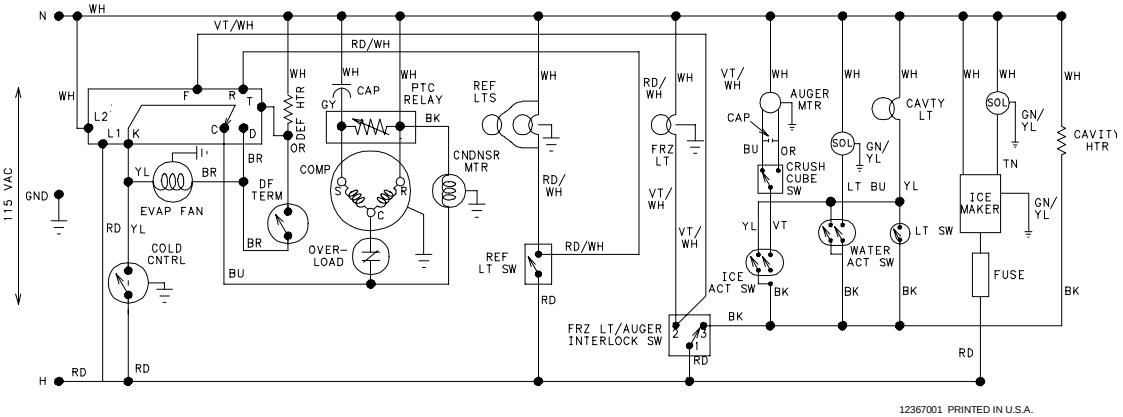
Part Number	Component	Test Procedures	
12017815 	Thermostat	Volt Watt Current Resistance across terminals Above 48° ±5°F Below 15° ±7°F Between 48° ±5°F and 15° ±7°F	120/240 VAC 1000 watts 10/5 amps Open Closed Will stay in current state (either open or closed) until either 48° ±5°F or 15° ±7°F is reached.
12195504 	Valve, water	Volt Watt Water pressure (inlet) Max Min Fill rate	120 VAC, 60 Hz 20 watts per coil 120 PSI 20 PSI 140 ±10 cc's at 7.5 seconds

Component Specifications

12050506	Control, adaptive defrost	Voltage	115 ±10% VAC. 60 Hz

Defrost occurs after predetermined length of compressor run hours. Compressor run time between defrost changes, or adapts, depending upon recent history of defrost lengths (time it takes for defrost terminator to open after defrost heater has been turned on).

- Defrost terminator opens at 48°F and closes at 15°F.
- Compressor run time between defrost (CRTD) will be one of three values under normal operation:
  CRTD 1 (8 hours)
  CRTD 2 (12 hours)
  CRTD 3 (16 hours)
  If defrost length is low (DT-LO defined as 19 minutes) indicating small frost load, CRTD for next defrost cycle is advanced to next level.
  If defrost length is high (DT-HI defined as 21 minutes) indicating large frost load, CRTD for next defrost cycle is lowered to next level.
  If defrost length is between 19 and 21 minutes CRTD for the next defrost cycle remains the same.
  Initial value at power up CRTD 0 is 4 hours.
- Vacation Mode CRTD equals 72 hours. Vacation Mode CRTD is interrupted with door openings. Defrost interval will revert back to interval before Vacation Mode. Three things must occur to reach Vacation Mode CRTD:
  1) Defrost interval must be CRTD 3 (16 hours).
  2) Both refrigerator and freezer doors must have remained closed since last defrost cycle.
  3) Defrost thermostat must have opened in less than 19 minutes during last defrost cycle.
- Six minute dwell time occurs after defrost terminator opens before compressor and condenser fan motor will operate. If defrost thermostat does not open within 29 minutes from start of defrost cycle, adaptive defrost controll will terminate defrost even though defrost thermostat had not opened.
- To force defrost cycle, with compressor running and one compartment door closed, press either door light switch 4 times within 8 seconds with at least ½ second between each cycle.



Input voltage readings and checks

L1 to L2	line voltage should be present when unit is powered.
K to L2	line voltage should be present with cold control contacts closed.
T to L2	line voltage should be present when cold control contacts are closed, defrost terminator is closed and adaptive defrost is in defrost mode.
R to L2	line voltage should be present when refrigerator door open (door light switch is closed).
F to L2	line voltage should be present with freezer door open (door light switch is closed).

Output voltage readings and checks

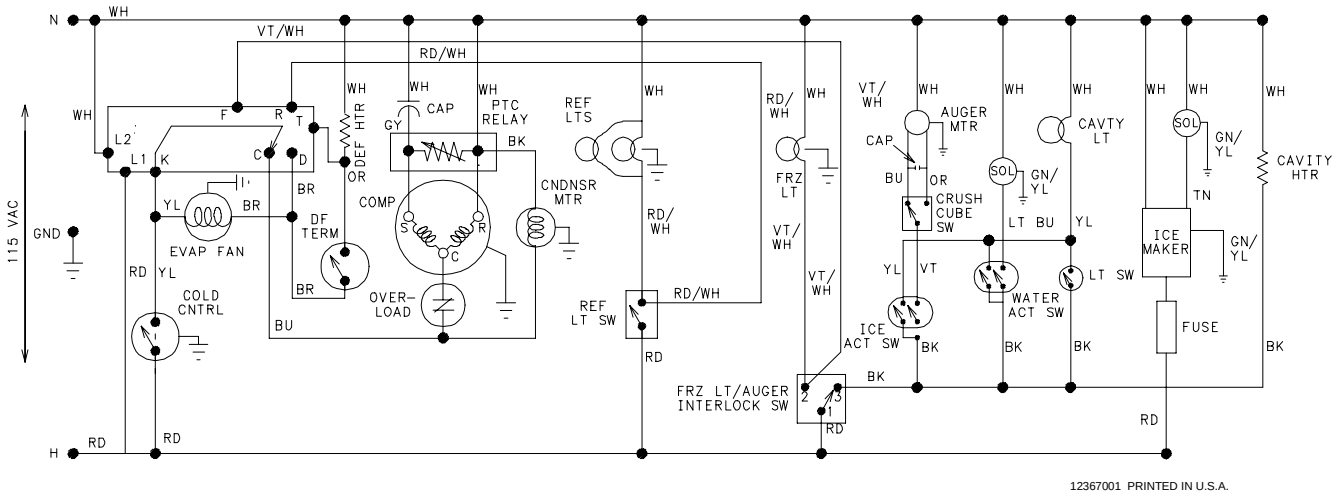
C to L2	line voltage should be present when in refrigeration mode with cold control contacts closed.
D to L2	line voltage present when in defrost mode with cold control contacts closed.

Schematic Diagram

WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect power to refrigerator before servicing, unless testing requires power. Wires removed during disassembly must be replaced on proper terminals to insure correct grounding and polarization.

DANGER
High Voltage



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Wiring Diagram

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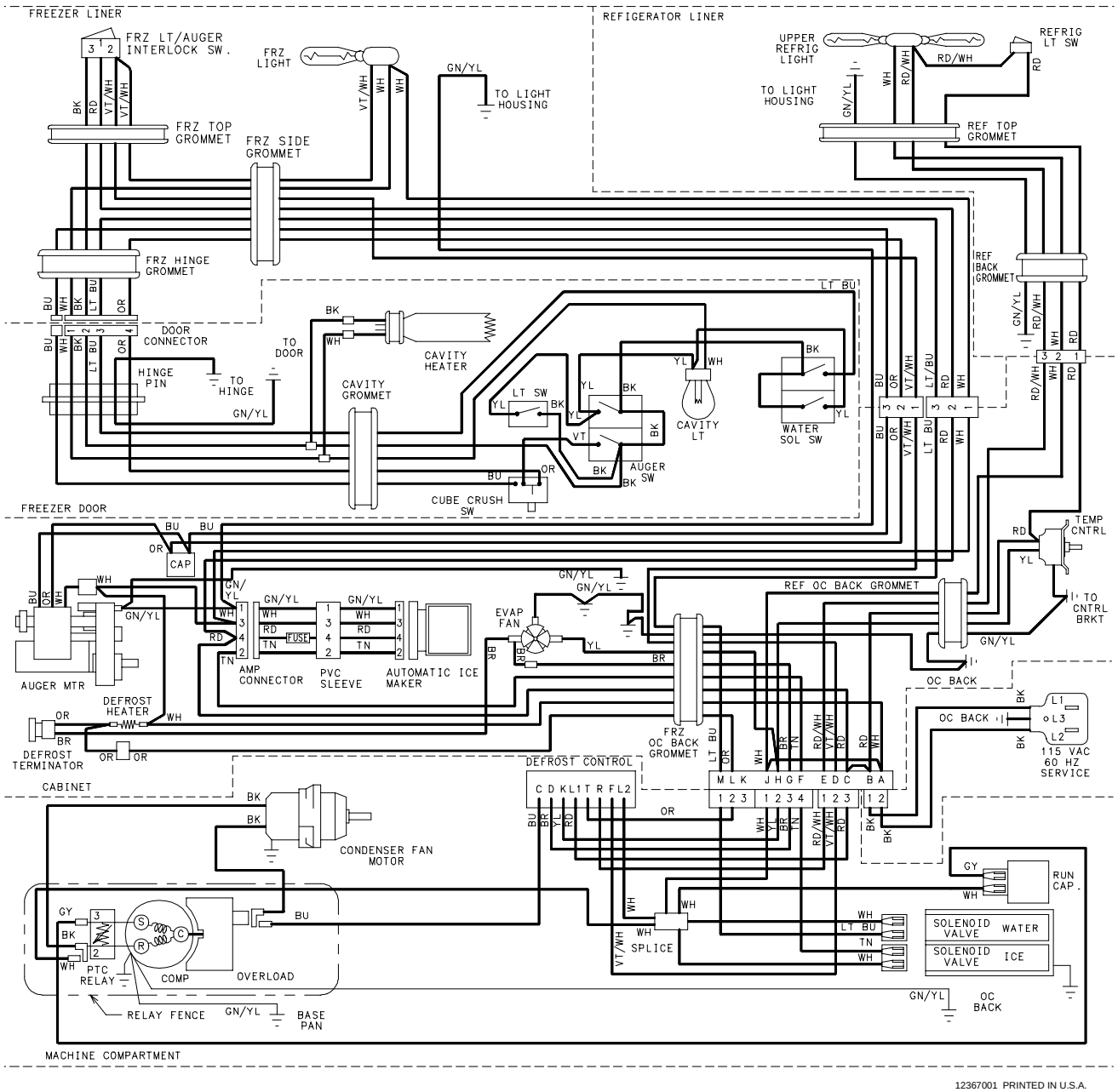

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