

FOR SERVICE TECHNICIAN'S USE ONLY

NOTE: This sheet contains important Technical Service Data

Tech Sheet

Do Not Remove Or Destroy

DANGER



Electrical Shock Hazard

Only authorized technicians should perform diagnostic voltage measurements.

After performing voltage measurements, disconnect power before servicing.

Failure to follow these instructions can result in death or electrical shock.

WARNING



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.

Voltage Measurement Safety Information

When performing live voltage measurements, you must do the following:

- Verify the controls are in the off position so that the appliance does not start when energized.
- Allow enough space to perform the voltage measurements without obstructions.
- Keep other people a safe distance away from the appliance to prevent potential injury.
- Always use the proper testing equipment.
- After voltage measurements, always disconnect power before servicing.

No-Load Performance, Controls in Normal Position - 0/38

Kw/24 hr ± 0.4	Percent Run Time ± 10%	Cycles/24 hr ± 10%	Refrigerator/Pantry Compartment Average Food Temperature ± 4°F	Freezer Compartment Average Food Temperature ± 4°F	Ice Maker Compartment Average Temperature ± 5°F
Ambient °F	70° 90° 110°	70° 90° 110°	70° 90° 110°	70° 90° 110°	70° 90° 110°
25 cu. ft.	1.2 2.0 2.6	40 55 75	17 17 14	38 38 38	0 0 0 15 15 15

Temperature Relationship Test Chart

Evaporator Outlet ± 3°F	Evaporator Inlet ± 3°F	Suction Line ± 7°F	Average Total Wattage ± 10%	Suction Pressure ± 2 PSIG	Head Pressure ± 5 PSIG
Ambient °F	70° 90°	70° 90°	70° 90°	70° 90°	70° 90°
25 cu. ft.	-20 -17	-20 -17	85 105	145 150	0 0 85 135

Check for proper voltage by completing the following steps:

1. Unplug refrigerator or disconnect power.
2. Connect voltage measurement equipment.
3. Plug in refrigerator or reconnect power and confirm voltage reading.
4. Unplug refrigerator or disconnect power.

Component Specifications

Specifications all parts 115 VAC/60Hz unless noted	
Compressor	BTUH 717 BTUH NC1116HZ Watt 60 Hz / 101 watts Current lock rotor 20.1 amps ± 15% Current full load 1.0 amps ± 15% Resistance run windings 4.8 ohms ± 10% Resistance start windings 4.6 ohms ± 10%
Relay	5SP
Compressor Run Capacitor	Volt 180 VAC Capacitance 12 µfd ± 10%
Electric Damper Control	Maximum closing time 16 seconds Temperature rating -11°F - 110°F RPM 3
Thermistor	Temperature Resistance 77°F 2700 ohms ± 5.0% 36°F 7964 ohms ± 1.0% 0°F 23345 ohms ± 2.0%
Condenser Motor	Rotation (facing end opposite shaft) Clockwise RPM 1090 RPM Watt 3.4 ± 15% watts @ 115 VAC Current 0.085 amps ± 15% @ 115 VAC
Evaporator Fan Motor	Rotation (facing end opposite shaft) Clockwise RPM 3000 RPM Watt 5.5 ± 15% watts @ 12 VDC Note: Fan blade must be fully seated on shaft to achieve proper airflow.
Overload/Relay	Ult. trip amps @ 158°F (70°C) 3.06 amps ± 15% Close temperature 142°F ± 16°F Open temperature 221°F ± 9°F Short time trip (seconds) 10 seconds ± 5 Short time trip (amps @ 77°F (25°C)) 14.3 amps ± 2 amps
Thermostat (Defrost)	Volt 120/240 VAC Watt 495 watts Current 3.75/1.87 amps Resistance across terminals: Above 42°F ± 5° 56k ohms Below 12°F ± 7° Open Closed
Evaporator Heater	Volt 115 VAC Wattage 470 ± 5% watts @ 115 VAC Resistance 28.1 ± 5% ohms
Control Board	Volt 120 VAC, 60Hz See control board for diagnostics.
Dual Water Valve	Wattage 35 watts (Yellow side) 20 watts (Green side)
Isolation Valve	Wattage 20 watts (Brown)
Ice Box Fan	Rotation (facing end opposite shaft) Clockwise RPM 3000 RPM Watt 5.5 ± 15% watts @ 12 VDC
Light Switch	Type SPDT NO/NC Volt 125/250 VAC Current 8/4 amps
Vertical Mullion Heater	Wattage 7 watts @ 14 VDC Resistance 28 ± 8% ohms
Smart Valve	Wattage 20 watts

Control Board Troubleshooting

Press any key to activate

Service Tip: If the control does not respond, remove power from the entire appliance for 10 seconds. Re-apply power, wait 10 seconds, and perform the service diagnostics routine.

NOTE: The ice door motor cycles 1 minute after on ice dispensing.

To ENTER SERVICE DIAGNOSTICS Mode:

Press SW1 and SW2 simultaneously for 3 seconds. Release both buttons when you hear the CHIME indicator.

Unit must not be in Lockout prior to entering SERVICE DIAGNOSTIC MODE.

The display will show 01 to indicate the control is in step 1 of the diagnostics routine.

To EXIT SERVICE DIAGNOSTICS Mode:

Do one of the following 3 options:

- Press SW1 and SW2 simultaneously for 3 seconds.
- Disconnect the product from power.
- Allow 20 minutes to pass.

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

Cooling diagnostics are steps 1-7 and 32-38. Dispensing diagnostics are steps 8-31.

Each step must be manually advanced. Press SW5 to move to the next step in the sequence. Press SW4 to back up to the sequence to the previous step. Diagnostics will begin at Step 1. Each step is displayed in the two digits of the dispenser user interface display. The step results are displayed in the two digits on dispenser user interface display 2 seconds after the step number is displayed. An amber order filter light will be shown to designate that the step number is being displayed and a red replace filter light will be shown to designate that the status of the step is being displayed. All button and pad inputs shall be ignored and all inputs shall be off except as described in the actions for each step.



Digit 1	0=Icemaker fill OFF, 1=Icemaker fill ON
Digit 2	0=Water valve OFF, 1=Water valve ON

Service Test - 26 Main Control Software Version

NOTE: Not normally used.

Displays in three sequential flashes the Main Control software version on the UI display.

NOTE: This is repeatedly displayed during all time in this step. 00/00/00 to 99/99/99

Service Test - 27 Dispenser UI Control Software Version

Displays in three sequential flashes the Dispenser UI Control software version on the UI display.

NOTE: This is repeatedly displayed during all time in this step. 00/00/00 to 99/99/99

Service Test - 31 Touch Input Module Software

Displays in three sequential flashes the Dispenser UI Control software version on the UI display.

NOTE: This is repeatedly displayed during all time in this step. 00/00/00 to 99/99/99

Service Test - 32 Ambient Thermistor UI Control

This is an internal board test. The board will check the resistance value of the thermistor and display the results.

NOTE: (01 = Pass, 02 = Open, 03 = Short)

Service Test - 33 Humidity Sensor UI Control

Relative Humidity Test: Humidity % Value 0-99 = pass or Er = Fail

Service Test - 34 Vertical Mullion Heater Mode

Set the Vertical Mullion Heater Sensor Mode by selecting SW3.

NOTE: (01 = Sensor Operation On, 02 = Sensor Operation Off) (Heater on 100%)

Service Test - 35 Vertical Mullion Heater Status

Control the Vertical Mullion Heater selecting SW3 (toggle between On and Off) (01 = ON, 02 = OFF)

Service Test - 36 Ice Box Fan

Check for fan operation.

Service Test - 37 Ice Box Thermistor

The board will check the resistance value of the thermistor and display the results on the RC Temp display.

NOTE: (01 = Pass, 02 = Open, 03 = Short)

Service Test - 38 Forced Defrost mode

Set the Forced Defrost Mode by selecting SW3. OF = No Forced Defrost, Sh = Short Defrost, Lo = Long Defrost

Service Test - 40 Horizontal Mullion Heater Mode

Set the Horizontal Mullion Heater Sensor Mode by selecting SW3.

NOTE: (01 = Sensor Operation On, 02 = Sensor Operation Off) Heater on 100%

Service Test - 41 Horizontal Mullion Heater Status

Control the Horizontal Mullion Heater selecting SW3 (toggle between On and Off) (01 = ON, 02 = OFF)

Service Test - 42 EEPROM Control Software Version

NOTE: Not normally used.

Displays in three sequential flashes the Dispenser UI Control software version on the UI display.

NOTE: This is repeatedly displayed during all time in this step. 00/00/00 to 99/99/99

Service Test - 43 UI FLASH Control Software Version

NOTE: Not normally used.

Displays in three sequential flashes the Dispenser UI Control software version on the UI display.

NOTE: This is repeatedly displayed during all time in this step. 00/00/00 to 99/99/99

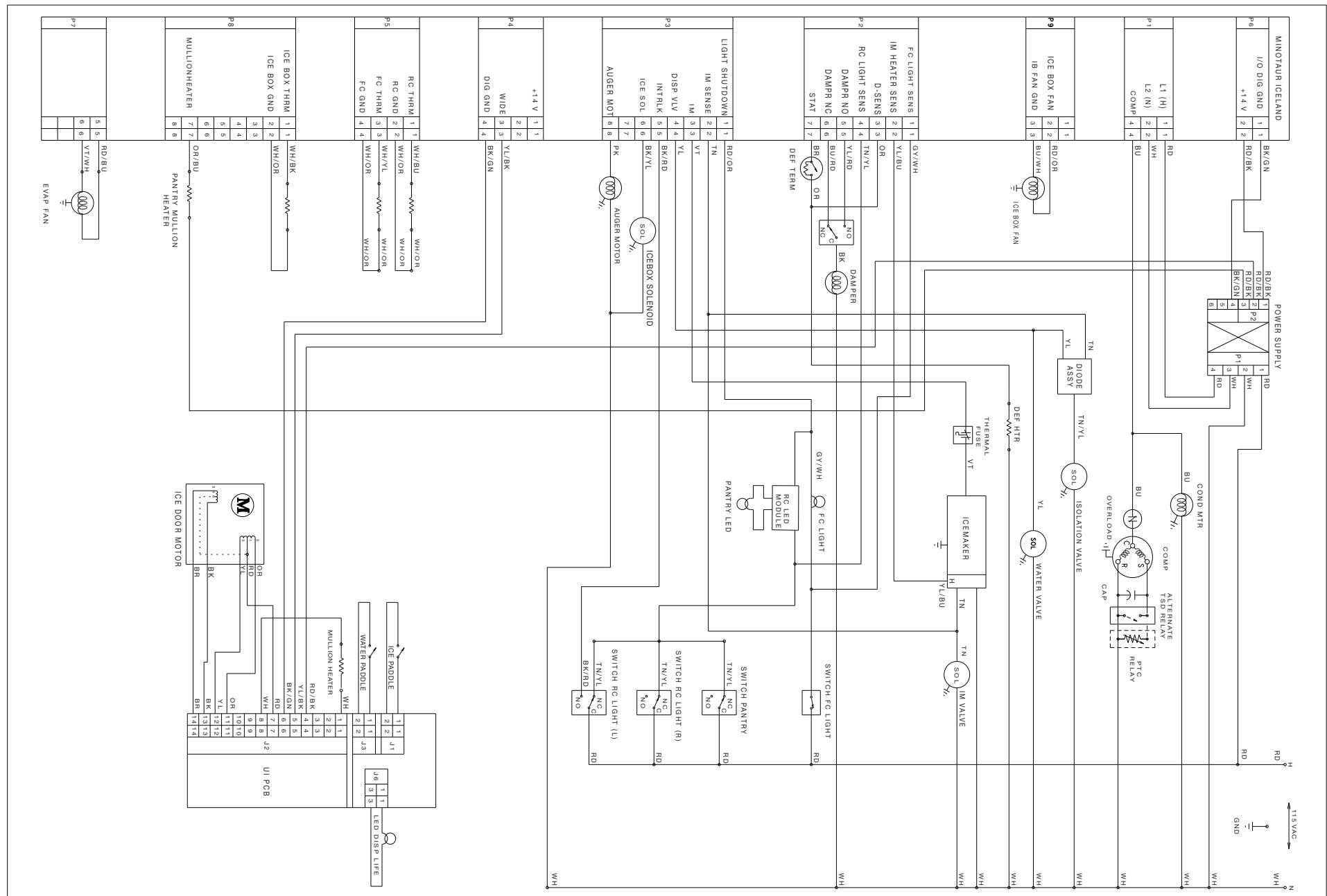
NOTE: See the user guide for details on how to calibrate water flow from the dispenser.

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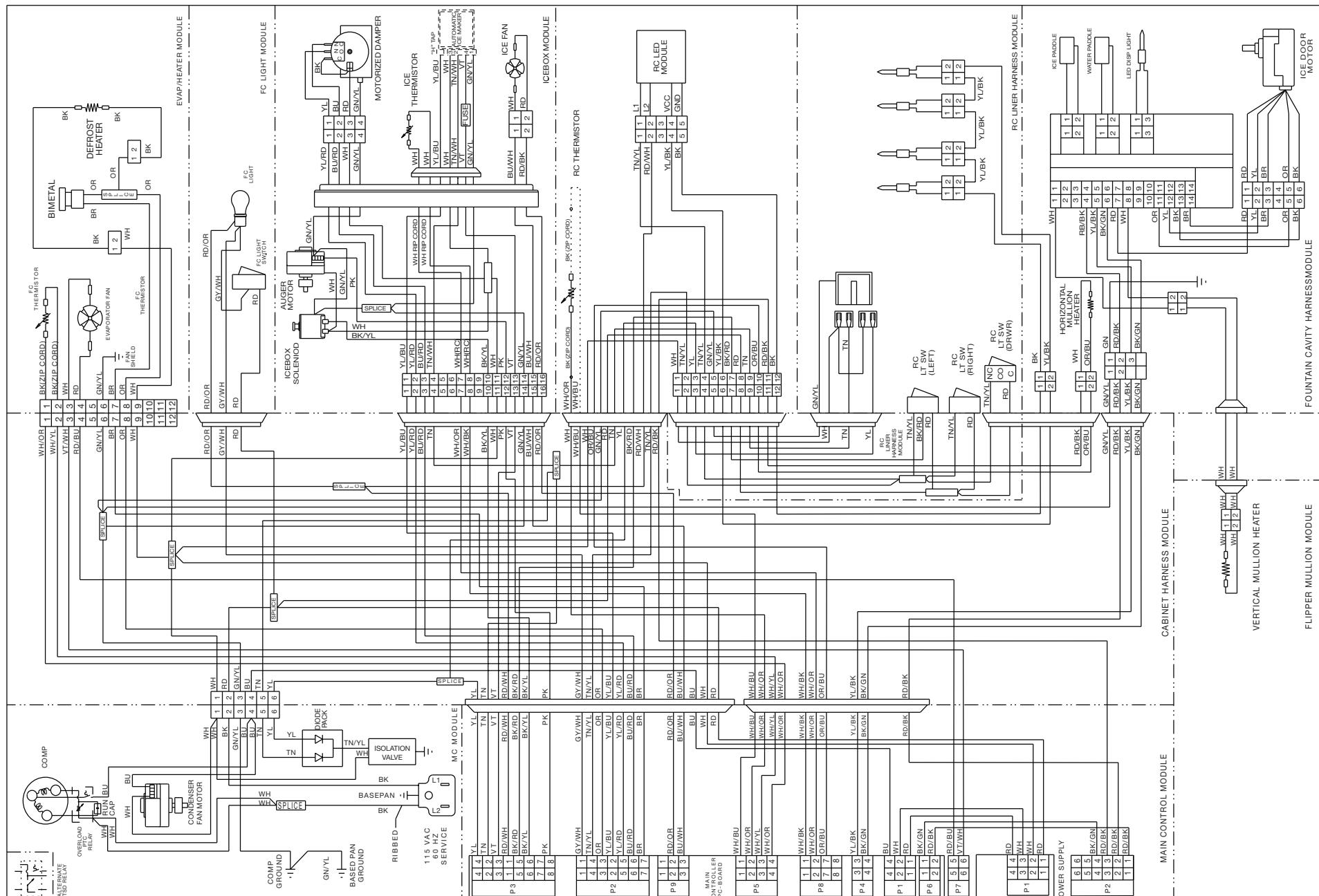
Schematic

Rev: A



Wiring Diagram

Rev: A



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