

DIAGNOSIS AND TESTING > ROOF OPENING PANEL > PINPOINT TESTS > PINPOINT TEST E : THE ROOF OPENING PANEL DOES NOT OPEN, CLOSE OR VENT > PINPOINT TEST E : THE ROOF OPENING PANEL DOES NOT OPEN, CLOSE OR VENT

E1 CHECK THE POWER WINDOW OPERATION

Ignition ON.

Attempt to operate the power windows.

Do the power windows operate properly?

Yes	GO to E2
No	Diagnose the accessory delay relay circuit. REFER to: Glass, Frames and Mechanisms .

E2 CHECK THE ROOF OPENING PANEL GLASS OPERATION

Check the roof opening panel glass operation.

Press and release the glass open switch. The glass should fully open in the one-touch open mode. If not, press and hold the glass open switch to fully open the glass.

Press and release the glass close switch. The glass should close fully in the one-touch close mode. If not, press and hold the glass close switch to fully close the glass.

Press and hold the vent switch. The glass should move to the vent position.

Does the glass operate as expected?

Yes	The roof opening panel is operating correctly at this time.
No	* If the glass does not open or close with one-touch operation, but does open and close with press and hold, REFER to: Power Roof Opening Panel Initialization . * If the glass does not open, close or vent with a switch pressed and held, GO to E3

E3 CHECK THE ROOF OPENING PANEL MOTOR VOLTAGE CIRCUITS

Ignition OFF.

Disconnect Roof Opening Panel Motor C921 .

Ignition ON.

Measure:

Positive Lead	Measurement / Action	Negative Lead
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C921-6		Ground
C921-7		Ground

Are the voltages greater than 11 volts?

Yes	GO to E4
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No	VERIFY BCM fuses F23 (10A) and F27 (30A) are OK. If the fuses are OK, REPAIR the affected circuit for high resistance or an open. If the fuses are not OK, REFER to the SYSTEM WIRING DIAGRAMS article to identify the cause of the circuit short.
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E4 CHECK THE ROOF OPENING PANEL MOTOR GROUND CIRCUIT

Ignition OFF.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C921-1	Ω	Ground

Is the resistance less than 3 ohms?

Yes	GO to E5
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No	REPAIR the circuit.
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E5 CHECK THE ROOF OPENING PANEL SWITCH GROUND CIRCUIT

Disconnect Roof Opening Panel Control Switch C912 .

Measure:

Positive Lead	Measurement / Action	Negative Lead
C930-1	Ω	Ground

Is the resistance less than 3 ohms?

Yes	GO to E6
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No	REPAIR the affected circuit for high resistance or an open.
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E6 CHECK THE SUNROOF CONTROL CIRCUITS FOR A SHORT TO VOLTAGE

Ignition ON.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C921-4		Ground
C921-2		Ground
C921-8		Ground

Is any voltage present?

Yes	REPAIR the circuit.
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No	GO to E7
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E7 CHECK THE SUNROOF CONTROL CIRCUITS FOR A SHORT TO GROUND

Ignition OFF.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C921-4	Ω	Ground
C921-2	Ω	Ground
C921-8	Ω	Ground

Are the resistances greater than 10,000 ohms?

Yes	GO to E8
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No	REPAIR the circuit.
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E8 CHECK THE SUNROOF CONTROL CIRCUITS FOR AN OPEN

Measure:

Positive Lead	Measurement / Action	Negative Lead
C921-4	Ω	C930-20
C921-2	Ω	C930-18
C921-8	Ω	C930-19

Is the resistance less than 3 ohms?

Yes	GO to E9
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No	REPAIR the circuit.
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E9 CHECK THE SUNROOF CONTROL CIRCUITS FOR A SHORT TOGETHER

Measure:

Positive Lead	Measurement / Action	Negative Lead
C921-4	Ω	C921-2
C921-4	Ω	C921-8
C921-4	Ω	C921-6
C921-4	Ω	C921-7
C921-4	Ω	C921-1
C921-2	Ω	C921-8
C921-2	Ω	C921-6
C921-2	Ω	C921-7
C921-2	Ω	C921-1
C921-8	Ω	C921-6
C921-8	Ω	C921-7
C921-8	Ω	C921-1

Are the resistances greater than 10,000 ohms?

Yes	GO to E10
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No	REPAIR the circuit.
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E10 CHECK THE ROOF OPENING PANEL MOTOR/MODULE FOR CORRECT OPERATION

Ignition OFF.

Disconnect All sunroof system and related in-line connectors.

Check for:

corrosion - install new connector or terminals and clean module pins

damaged or bent pins - install new terminals or pins

pushed-out pins - install new pins as necessary