

Your Ultimate Source for OEM Repair Manuals

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2002 FORD Ranger Regular Cab OEM Service and Repair Workshop Manual

[Go to manual page](#)

Is the resistance greater than 10,000 ohms?

Yes	GO to B11
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No	REPAIR the circuit.
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B11 CHECK THE TEMPERATURE SENSOR AND CIRCUITS FOR AN OPEN

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C3304A-3	Ω	C3304A-12

Is the resistance between 300 and 300K ohms?

Yes	INSTALL a new heated rear seat module. REFER to: Heated Rear Seat Module - SuperCrew (501-10B Rear Seats, Removal and Installation).
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No	GO to B12
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B12 CHECK THE TEMPERATURE SENSOR FOR AN OPEN WITH THE HEATER MAT DISCONNECTED

- Disconnect Left Rear Cushion Heater Mat C3167 .
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C3304A-3	Ω	C3167-2

Positive Lead	Measurement / Action	Negative Lead
C3304A-8	Ω	Ground

Is the resistance less than 3 ohms when the switch is pressed and greater than 10,000 ohms when released?

Yes	GO to C3
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No	GO to C2
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C2 CHECK THE HEATED SEAT SWITCH CIRCUIT FOR AN OPEN OR SHORT TO GROUND

- Disconnect Rear Seat Heated Seat Switch C3182 .
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C3182-3	Ω	C3304A-8
C3182-3	Ω	Ground

Are the resistances less than 3 ohms between C3182-3 and C3304A-8, and greater than 10,000 ohms between C3182-3 and ground?

Yes	INSTALL a new heated rear seat switch. REFER to: Heated Rear Seat Switch - SuperCrew (501-10B Rear Seats, Removal and Installation).
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- Measure:

Positive Lead	Measurement / Action	Negative Lead
C3304B-6	Ω	Ground

Is the resistance between 2.5 and 4.5 ohms?

Yes	GO to C9
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No	GO to C5
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C5 CHECK THE HEATER MAT GROUND CIRCUIT FOR AN OPEN

- Disconnect Right Rear Backrest Heater Mat C3170 .
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C3170-2	Ω	Ground

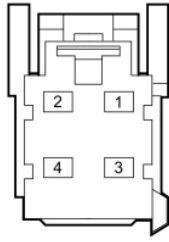
Is the resistance less than 3 ohms?

Yes	GO to C6
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No	REPAIR the circuit.
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C6 CHECK THE HEATER CIRCUIT FOR AN OPEN OR SHORT TO GROUND

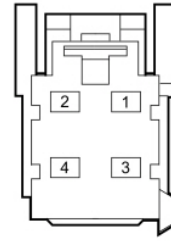
- Disconnect Right Rear Cushion Heater Mat C3169 .
- Measure:



E190244

C3169-1, Component Side

Ω



E190244

C3169-4, Component Side

Is the resistance between 1.5 and 2.5 ohms?

Yes GO to [C8](#)

No INSTALL a new cushion heater mat.
REFER to: [Seat Heater Mat Removal](#)
(501-10A Front Seats, General Procedures).

C8 CHECK FOR AN OPEN OR A SHORT TO GROUND BETWEEN THE HEATER MATS

• Measure:

Positive Lead	Measurement / Action	Negative Lead
C3169-4	Ω	C3170-1

• Measure:

Positive Lead	Measurement / Action	Negative Lead
C3169-4	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes	GO to C11
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No	REPAIR the circuit.
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C11 CHECK THE TEMPERATURE SENSOR AND CIRCUITS FOR AN OPEN

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C3304A-9	Ω	C3304A-12

Is the resistance between 300 and 300K ohms?

Yes	INSTALL a new heated rear seat module. REFER to: Heated Rear Seat Module - SuperCrew (501-10B Rear Seats, Removal and Installation).
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No	GO to C12
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C12 CHECK THE TEMPERATURE SENSOR FOR AN OPEN WITH THE HEATER MAT DISCONNECTED

- Disconnect Right Rear Cushion Heater Mat C3169 .
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C3304A-9	Ω	C3169-2

C3304A-4	Ω	Ground
C3304A-5	Ω	Ground

Are the resistances greater than 10,000 ohms?

Yes	GO to D2
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No	REPAIR the circuit in question.
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D2 CHECK THE HEATED SEAT INDICATOR CIRCUITS FOR AN OPEN

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C3304A-4	Ω	C3182-6
C3304A-5	Ω	C3182-7

Are the resistances less than 3 ohms?

Yes	GO to D3
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No	REPAIR the circuit in question.
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D3 CHECK THE HIGH HEAT INDICATOR

PINPOINT TEST E : THE RIGHT HEATED REAR SEAT HEATS CORRECTLY BUT THE INDICATOR DOES NOT ILLUMINATE WHEN ACTIVATED

Refer to Wiring Diagrams Cell 119 for schematic and connector information.

Normal Operation and Fault Conditions With the ignition and heated seat on, the heated seat module supplies voltage to the indicator circuit(s) to illuminate the appropriate switch indicator. The first button press puts the seat heater on low. A second button press operates the seat heater on high. The heated seat and indicator deactivates with a third button press. REFER to: [Rear Seats - System Operation and Component Description](#) (501-10B Rear Seats, Description and Operation).

Possible Sources

- Wiring, terminals or connectors
- Heated rear seat switch
- Heated rear seat module

Visual Inspection and Pre-checks

- Inspect for a damaged heated rear seat switch.

E1 CHECK THE HEATED SEAT INDICATOR CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect Heated Rear Seat Module C3304A .
- Disconnect Heated Rear Seat Switch C3182 .
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C3304A-10	Ω	Ground
C3304A-11	Ω	Ground

Are the resistances greater than 10,000 ohms?


Does the indicator illuminate?

Yes	Remove the fused jumper wire. GO to E4
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No	Remove the fused jumper wire. INSTALL a new heated rear seat switch. REFER to: Heated Rear Seat Switch - SuperCrew (501-10B Rear Seats, Removal and Installation).
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E4 CHECK THE LOW HEAT INDICATOR

- Connect:

Positive Lead	Measurement / Action	Negative Lead
C3304A-10		C3304B-3

Does the indicator illuminate?

Yes	Remove the fused jumper wire. INSTALL a new heated rear seat module. REFER to: Heated Rear Seat Module - SuperCrew (501-10B Rear Seats, Removal and Installation).
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No	Remove the fused jumper wire. INSTALL a new heated rear seat switch. REFER to: Heated Rear Seat Switch - SuperCrew (501-10B Rear Seats, Removal and Installation).
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PINPOINT TEST F : THE LH (LEFT-HAND) HEATED REAR SEAT INDICATOR IS ALWAYS ON

Refer to Wiring Diagrams Cell 120 for schematic and connector information.

Normal Operation and Fault Conditions REFER to: [Rear Seats - System Operation and Component Description](#)

(501-10B Rear Seats, Description and Operation).

No

INSTALL a new heated rear seat module.
REFER to: [Heated Rear Seat Module - SuperCrew](#)
(501-10B Rear Seats, Removal and Installation).

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