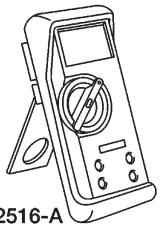
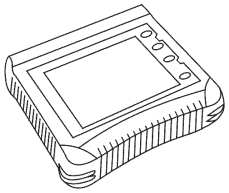
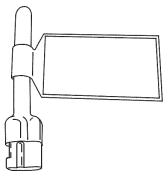
DIAGNOSIS AND TESTING

Seats

Refer to Wiring Diagrams Cell 119 for schematic and connector information.
Refer to Wiring Diagrams Cell 120, Power Seats for schematic and connector information.
Refer to Wiring Diagrams Cell 122 for schematic and connector information.
Refer to Wiring Diagrams Cell 123, Memory Seats for schematic and connector information.
Refer to Wiring Diagrams Cell 149 for component testing.

Special Tool(s)

 ST2516-A	78 Automotive Meter 105-R0054 or equivalent
 ST2332-A	Worldwide Diagnostic System (WDS) 418-FS317 New Generation STAR (Scan Tool) Tester 418-F052, or equivalent scan tool
 ST2507-A	Diagnostic Tool, Restraint System (2 Req'd) 418-133 (014-R1076)

Principles of Operation

Climate Controlled Seat System

NOTE: When installing a new climate control seat module (CCSM), it is necessary to carry out programmable module installation (PMI). For additional information, refer to Section 418-01.

NOTE: Faults that cause the climate controlled seat to shut OFF after more than 40 seconds are usually mechanical in nature, such as incorrect foam installation, duct blockages or misaligned TED.

The climate controlled seat system is able to heat and cool the front seats. Each climate controlled front seat is controlled by a switch located on the center console.

Both the driver and front passenger seat has an independent climate controlled seat system installed. A climate controlled seat module mounted to the bottom of the seat cushion electronically controls the climate controlled seat system. The climate controlled seat system receives power from both the battery power and vehicle run circuits. The vehicle must have ignition ON, engine running and the switch set to HEAT or COOL 1, 2, 3, 4 or 5, for the climate controlled seat system to activate. The switch will illuminate to indicate the desired operating mode.

Cabin air is drawn through the seat fan motor and distributed to each of the thermo-electric device (TED) modules located in the seat cushion and backrest. The TEDs then heat or cool the air. The air is then directed into the foam pad B-surface. Channels in the A-surface of the foam pad are used to distribute the air along the surface of the seat. Once the system is activated, the climate controlled seat module uses a set of flexible algorithms to control the heating/cooling modes, and the fan motor speed based on the climate controlled seat switch settings.

The TED uses a ''Peltier'' circuit of P-type and N-type semiconductors connected in series using copper electrical conductors. The semiconductors are sandwiched between two insulating ceramic plates. When current is applied to the TED, one side releases energy as heat, while the opposite side absorbs energy and gets cold. By reversing the current flow, the hot and cold sides reverse.

The temperature differences between the individual HEAT and COOL settings is minimal. For example, it is difficult to distinguish between LOW COOL and MEDIUM COOL settings. Monitoring the seat temperature at different HEAT or COOL settings should not be done as it is ineffective in confirming climate controlled seat system operation.

DIAGNOSIS AND TESTING (Continued)

Heating Characteristics

NOTE: The presence of overtemp faults (DTCs B2729 and B2730) can be induced by incorrect operation of the climate controlled seat system after an initial HEAT setting has been attained. If a HEAT setting is repeatedly turned OFF and ON in an attempt to increase the seat temperature, an overtemp condition can result and the DTC(s) will be set.

- The climate controlled seat system draws approximately 7.5 amps until reaching the set point, and then the system operates at a reduced amperage to maintain the climate setting.
- In HEAT mode, the TED can add up to 40-60°C (72-108°F) to the ambient air temperature entering the system.
- There are five manual settings based on the position of the climate controlled seat switch on the center console. Position one is the LOW setting and position five is the HIGH setting.
- In the LOW setting, the climate controlled seat module is set to maintain TED temperature at 37°C (99°F).
- In the HIGH setting, the climate controlled seat module is set to maintain TED temperature at 65°C (149°F).
- If the temperature at one of the TEDs rises above 90°C (194°F) in the HEAT mode or 70°C (149°F) in the COOL mode for more than four seconds, the CCSM will record an overtemp DTC, remove power from the TEDs and go into ''Blower Only'' mode in an attempt to cool down the TEDs. If the TEDs temperature has not dropped to 85°C (185°F) in the HEAT mode or 65°C (140°F) in the COOL mode after 30 seconds, the CCSM will shut down and remain off until the ignition is cycled. Also if the CCSM detects an overtemp twice during the same ignition cycle, it will also shut down.
- In HEAT mode, there is no linear correlation between the seat fan motor speed and the TED supply voltage. The CCSM will independently vary the fan speed and the TED supply voltage in order to reach and maintain the temperature determined by the switch setting.

Cooling Characteristics

- The climate controlled seat system draws approximately 4.5 amps for the first twelve (12) minutes and will operate at 2 amps thereafter.
- In COOL mode, the TED can remove up to 8°C (14°F) from the ambient air temperature entering the system.
- There are five manual settings based on the position of the climate controlled seat switch on the center console. Position one is the LOW setting and position five is the HIGH setting.
- If the temperature at one of the TEDs falls below 18°C (64°F), the climate controlled seat module will shut down the TEDs. If the temperature continues to drop below 12°C (54°F), the climate controlled seat module will shut down the fan motor.
- In COOL mode, there is a correlation between the seat fan motor speed and the TED supply voltage.

Climate Controlled Seat Switch Thumbwheel Position	Seat Fan Motor Supply Voltage	Thermo-Electric Device Supply Duty Cycle
1	7 volts	0%
2	7 volts	49%
3	7 volts	77%
4	7.7 volts	100%
5	8 volts	100%

The climate controlled seat system is deactivated by one of the following actions:

- Depressing the momentary HEAT or COOL switch on the center the center console.
- Turning the vehicle off.

Inspection and Verification

1. Verify the customer concern by operating the power seat, memory seat or climate controlled seat functions.
2. Visually inspect for obvious signs of mechanical and electrical damage.

DIAGNOSIS AND TESTING (Continued)

Visual Inspection Chart

Mechanical	Electrical
• Seat track • Climate controlled seat ducts	• Fuse(s) • Circuitry • Driver seat module (DSM) • Lumbar control switch • Memory set switch • Power seat motor • Seat control switch • Seat fan motor • Climate controlled seat module • Climate controlled seat switch

3. If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step.
4. If the concern is with the power seat (non-memory seat) or the power lumbar and the cause is not visually evident, verify the symptom and GO to Symptom Chart.
5. If the concern is with the memory seat or climate controlled seat and the cause is not visually evident, connect the scan tool to the data link connector (DLC) and select the vehicle to be tested from the scan tool menu. If the scan tool does not communicate with the vehicle:
   - check that the program card is correctly installed.
   - check the connections to the vehicle.
   - check the ignition switch position.
6. If the scan tool still does not communicate with the vehicle, refer to the scan tool manual.
7. Carry out the DATA LINK DIAGNOSTICS test. If the scan tool responds with:
   - CKT914, CKT915, or CKT70=ALL ECUS NO RESP/NOT EQUIP, refer to Section 418-00.
   - NO RESPONSE/NOT EQUIPPED for driver DSM, refer to Section 418-00.
   - NO RESPONSE/NOT EQUIPPED for climate controlled seat module. GO to Symptom Chart
   - SYSTEM PASSED for the DSM, retrieve and record the continuous diagnostic trouble codes (DTCs), clear the continuous DTCs and carry out self-test diagnostics for the DSM.
   - SYSTEM PASSED for the climate controlled seat module, retrieve and record the continuous diagnostic trouble codes (DTCs), clear the continuous DTCs and carry out self-test diagnostics for the climate controlled seat module.
8. If the DTCs retrieved are related to the concern, go to DSM Diagnostic Trouble Code (DTC) Index or the Climate Controlled Seat Module (CCSM) Diagnostic Trouble Code (DTC) Index.
9. If no DTCs related to the concern are retrieved, GO to Symptom Chart.

DSM Diagnostic Trouble Code (DTC) Index

DSM Diagnostic Trouble Code (DTC) Index

DTC	Description	Source	Action
B1342	ECU Is Faulted	DSM	INSTALL a new DSM. REFER to Section 419-10.
B1530	Memory Set Switch Circuit Short to Ground	DSM	GO to Pinpoint Test J.
B1534	Memory 1 Switch Circuit Short to Ground	DSM	GO to Pinpoint Test J.
B1538	Memory 2 Switch Circuit Short to Ground	DSM	GO to Pinpoint Test J.

DIAGNOSIS AND TESTING (Continued)

DSM Diagnostic Trouble Code (DTC) Index (Continued)

DTC	Description	Source	Action
B1663	Seat Driver Front Up/Down Motor Stalled	DSM	If the motor does not operate, GO to Pinpoint Test H (Navigator) or GO to Pinpoint Test I (Expedition). If motor operates, GO to Pinpoint Test J.
B1664	Seat Driver Rear Up/Down Motor Stalled	DSM	If the motor does not operate, GO to Pinpoint Test H (Navigator) or GO to Pinpoint Test I (Expedition). If motor operates, GO to Pinpoint Test J.
B1665	Seat Driver Forward/Backward Motor Stalled	DSM	If the motor does not operate, GO to Pinpoint Test H (Navigator) or GO to Pinpoint Test I (Expedition). If motor operates, GO to Pinpoint Test J.
B1666	Seat Recline Forward/Rearward Motor Stalled	DSM	If the motor does not operate, GO to Pinpoint Test H (Navigator). If motor operates, GO to Pinpoint Test J.
B1667	Mirror Driver Up/Down Motor Stalled	DSM	REFER to Section 501-09.
B1668	Mirror Driver Right/Left Motor Stalled	DSM	REFER to Section 501-09.
B1669	Mirror Passenger Up/Down Motor Stalled	DSM	REFER to Section 501-09.
B1670	Mirror Passenger Right/Left Motor Stalled	DSM	REFER to Section 501-09.
B1676	Battery Voltage Out of Range	DSM	REFER to Section 414-00.
B1703	Seat Driver Recline Forward Switch Circuit Short to Battery	DSM	GO to Pinpoint Test H (Navigator).
B1707	Seat Driver Recline Rearward Switch Circuit Short to Battery	DSM	GO to Pinpoint Test H (Navigator).
B1711	Seat Driver Front Up Switch Circuit Short to Battery	DSM	GO to Pinpoint Test H (Navigator) or GO to Pinpoint Test I (Expedition).
B1715	Seat Driver Front Down Switch Circuit Short to Battery	DSM	GO to Pinpoint Test H (Navigator) or GO to Pinpoint Test I (Expedition).

DIAGNOSIS AND TESTING (Continued)

DSM Diagnostic Trouble Code (DTC) Index (Continued)

DTC	Description	Source	Action
B1719	Seat Driver Forward Switch Circuit Short to Battery	DSM	GO to Pinpoint Test H (Navigator) or GO to Pinpoint Test I (Expedition).
B1723	Seat Driver Rearward Switch Circuit Short to Battery	DSM	GO to Pinpoint Test H (Navigator) or GO to Pinpoint Test I (Expedition).
B1727	Seat Driver Rear Up Switch Circuit Short to Battery	DSM	GO to Pinpoint Test H (Navigator) or GO to Pinpoint Test I (Expedition).
B1731	Seat Driver Rear Down Switch Circuit Short to Battery	DSM	GO to Pinpoint Test H (Navigator) or GO to Pinpoint Test I (Expedition).
B1735	Mirror Driver Vertical Switch Circuit Short to Battery	DSM	REFER to Section 501-09.
B1739	Mirror Driver Horizontal Switch Circuit Short to Battery	DSM	REFER to Section 501-09.
B1743	Mirror Passenger Vertical Switch Circuit Short to Battery	DSM	REFER to Section 501-09.
B1747	Mirror Passenger Horizontal Switch Circuit Short to Battery	DSM	REFER to Section 501-09.
B1950	Seat Rear Up/Down Feedback Potentiometer Circuit Failure	DSM	GO to Pinpoint Test J.
B1952	Seat Rear Up/Down Feedback Potentiometer Circuit Short to Battery	DSM	GO to Pinpoint Test J.
B1954	Seat Front Up/Down Feedback Potentiometer Circuit Failure	DSM	GO to Pinpoint Test J.
B1956	Seat Front Up/Down Feedback Potentiometer Circuit Short to Battery	DSM	GO to Pinpoint Test J.
B1958	Seat Recline Fwd/Backward Feedback Potentiometer Circuit Failure	DSM	GO to Pinpoint Test J.
B1961	Seat Recline Fwd/Backward Feedback Potentiometer Circuit Short to Ground	DSM	GO to Pinpoint Test J.

DIAGNOSIS AND TESTING (Continued)

DSM Diagnostic Trouble Code (DTC) Index (Continued)

DTC	Description	Source	Action
B1962	Seat Horizontal Forward/Rearward Feedback Potentiometer Circuit Failure	DSM	GO to Pinpoint Test J.
B1964	Seat Horizontal Forward/Rearward Feedback Potentiometer Circuit Short to Battery	DSM	GO to Pinpoint Test J.
B1987	Pedal Forward / Rearward Motor Stalled	DSM	REFER to Section 206-00.
B1988	Pedal Position Forward Switch Circuit Short to Battery	DSM	REFER to Section 206-00.
B1989	Pedal Position Rearward Switch Circuit Short to Battery	DSM	REFER to Section 206-00.
B1990	Pedal Forward/Rearward Feedback Potentiometer Circuit Failure	DSM	REFER to Section 206-00.
B1991	Pedal Forward/Rearward Feedback Potentiometer Circuit Short to Battery	DSM	REFER to Section 206-00.
B2312	Mirror Passenger Horizontal Feedback Potentiometer Circuit Failure	DSM	REFER to Section 501-09.
B2314	Mirror Passenger Horizontal Feedback Potentiometer Short to Battery	DSM	REFER to Section 501-09.
B2316	Mirror Passenger Vertical Feedback Potentiometer Circuit Failure	DSM	REFER to Section 501-09.
B2318	Mirror Passenger Vertical Feedback Potentiometer Short to Battery	DSM	REFER to Section 501-09.
B2320	Mirror Driver Horizontal Feedback Potentiometer Circuit Failure	DSM	REFER to Section 501-09.
B2322	Mirror Driver Horizontal Feedback Potentiometer Short to Battery	DSM	REFER to Section 501-09.
B2324	Mirror Driver Vertical Feedback Potentiometer Circuit Failure	DSM	REFER to Section 501-09.
B2326	Mirror Driver Vertical Feedback Potentiometer Short to Battery	DSM	REFER to Section 501-09.
B2477	Module Configuration Failure	DSM	INSTALL a new DSM.

DIAGNOSIS AND TESTING (Continued)

Climate Controlled Seat Module (CCSM) Diagnostic Trouble Code (DTC) Index

Climate Controlled Seat Module (CCSM) Diagnostic Trouble Code (DTC) Index

DTC	Description	Source	Action
B1342	ECU Is Faulted	CCSM	INSTALL a new CCSM and CARRY OUT programmable module installation (PMI). REFER to Climate Controlled Seat Module.
B1358	Ignition Switch or Blower Electronics Circuit Short to Ground	CCSM	GO to Pinpoint Test R.
B2477	Module Configuration Error	CCSM	This DTC indicates programmable module installation (PMI) has not been done to a newly installed module. CARRY OUT PMI. REFER to Section 418-01. CLEAR the DTC. CARRY OUT the self-test.
B2486	Climate Controlled Seat Module Voltage Out of Range	CCSM	DEPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. DISCONNECT driver safety belt buckle pretensioner C3201 or passenger safety belt buckle pretensioner C3202 of the affected seat and CONNECT restraint system diagnostic tool 418-133 to the safety belt buckle pretensioner harness connector. CONNECT the battery ground cable. CHECK circuit 294 (WH/LB) for a fault. REPAIR as needed. If okay, REFER to Section 414-01. Once the repair is complete, DISCONNECT the restraint system diagnostic tool from the safety belt buckle pretensioner harness connector and CONNECT the safety belt buckle pretensioner connector of the affected seat. REPOWER the SRS. REFER to Section 501-20B.
B2488	Thumb-Wheel Switch Voltage Out of Range High	CCSM	GO to Pinpoint Test S.
B2521	Tach Circuit Failure	CCSM	GO to Pinpoint Test R.
B2729	Cushion Overtemp Detected	CCSM	GO to Pinpoint Test T.
B2730	Back Overtemp Detected	CCSM	GO to Pinpoint Test T.
B2731	Differential Temperature Fault	CCSM	GO to Pinpoint Test T.

DIAGNOSIS AND TESTING (Continued)

Climate Controlled Seat Module (CCSM) Diagnostic Trouble Code (DTC) Index (Continued)

DTC	Description	Source	Action
B2792	Heat Switch Short to Ground	CCSM	**NOTE:** If HEAT is pressed for greater than 20 seconds on the climate controlled seat switch, DTC B2792 will set in the CCSM. CLEAR the DTC. If the DTC does not clear, DEPOWER the supplemental restraint system (SRS). REFER toSection 501-20B. DISCONNECT driver safety belt buckle pretensioner C3201 or passenger safety belt buckle pretensioner C3202 of the affected seat and CONNECT restraint system diagnostic tool 418-133 to the safety belt buckle pretensioner harness connector. CONNECT the battery ground cable. CHECK circuit 1551 (VT/WH) for a short to ground. REPAIR as needed. If okay, INSTALL a new climate controlled seat switch. Once the repair is complete, DISCONNECT the restraint system diagnostic tool from the safety belt buckle pretensioner harness connector and CONNECT the safety belt buckle pretensioner connector of the affected seat. REPOWER the SRS. REFER to Section 501-20B.

DIAGNOSIS AND TESTING (Continued)

Climate Controlled Seat Module (CCSM) Diagnostic Trouble Code (DTC) Index (Continued)

DTC	Description	Source	Action
B2793	Cool Switch Short to Ground	CCSM	**NOTE:** If COOL is pressed for greater than 20 seconds on the climate controlled seat switch, DTC B2793 will set in the CCSM. CLEAR the DTC. If the DTC does not clear, DEPOWER the supplemental restraint system (SRS). REFER toSection 501-20B. DISCONNECT driver safety belt buckle pretensioner C3201 or passenger safety belt buckle pretensioner C3202 of the affected seat and CONNECT restraint system diagnostic tool 418-133 to the safety belt buckle pretensioner harness connector. CONNECT the battery ground cable. CHECK circuit 1550 (WH/OG) for a short to ground. REPAIR as needed. If okay, INSTALL a new climate controlled seat switch. Once the repair is complete, DISCONNECT the restraint system diagnostic tool from the safety belt buckle pretensioner harness connector and CONNECT the safety belt buckle pretensioner connector of the affected seat. REPOWER the SRS. REFER to Section 501-20B.
U2362	UBP Invalid Data Node ID	CCSM	**NOTE:** DTC U2362 indicates a network concern, the CCSM is not the source of the fault. CONFIGURE the CCSM. CLEAR the DTC. If the DTC does not clear, CONFIGURE the CCSM once again. CLEAR the DTC. If the DTC does not clear, REFER Section 418-00.

Symptom Chart

Symptom Chart

Condition	Possible Sources	Action
• The power seat is inoperative — Expedition	• PDJB Fuse 109 (30A) (driver). • PDJB Fuse 108 (30A) (passenger). • Seat control switch (14A701). • Circuitry.	• GO to Pinpoint Test A.
• The power seat is inoperative — Navigator — Passenger	• PDJB Fuse 108 (30A) (passenger). • Seat control switch (14A701). • Circuitry.	• GO to Pinpoint Test B.
• The power seat moves but is noisy	• Seat tracks. • Fwd/Rwd drive cables. • Power seat motors.	• GO to Pinpoint Test C.

DIAGNOSIS AND TESTING (Continued)

Symptom Chart (Continued)

Condition	Possible Sources	Action
• The power seat moves but is loose	• Fastening hardware. • Seat tracks. • Power seat motors.	• GO to Pinpoint Test D.
• The power seat does not make full travel	• Track obstruction. • Seat tracks. • Fwd/Rwd drive cables. • Power seat motors.	• GO to Pinpoint Test E.
• The power seat does not move horizontally/vertically — Expedition	• Seat tracks. • Circuitry. • Seat control switch. • Power seat motors. • Fwd/Rwd drive cables.	• GO to Pinpoint Test F.
• The power seat does not move horizontally/vertically/recline — Navigator — Passenger	• Seat tracks. • Circuitry. • Seat control switch. • Power seat motors. • Fwd/Rwd drive cables.	• GO to Pinpoint Test G
• The memory seat is inoperative	• Circuitry. • Seat control switch. • Seat track. • DSM. • PDJB Fuse 109 (30A). • Power seat motor.	• GO to Pinpoint Test H (Navigator) or GO to Pinpoint Test I (Expedition).
• The memory seat does not operate correctly — does not operate using the memory set switch	• Memory set switch. • DSM. • Circuitry.	• GO to Pinpoint Test J.
• The memory seat does not operate correctly — does not operate using the remote transmitter	• Circuitry. • DSM. • Keyless entry transmitter. • RAP module.	• REFER to the DTC Index.
• No communication with the module — DSM	• Circuitry. • DSM. • Fuse(s).	• REFER to Section 419-10.
• No communication with the module — unable to carry out on-demand self-test with the DSM	• DSM. • Circuitry. • Fuse(s).	• REFER to Section 419-10.
• The power lumbar is inoperative	• Circuitry. • Lumbar control switch. • Power lumbar assembly. • Power lumbar motor.	• GO to Pinpoint Test K (driver) or GO to Pinpoint Test L (passenger).
• The third row power fold seat is inoperative — Left and Right	• Fuse(s). • Circuitry. • Body Security Module (BSM).	• GO to Pinpoint Test M.
• The third row power fold seat is inoperative/does not operate correctly — Left	• Fuse(s). • Circuitry. • Seat control switch(es). • Power seat motor. • Power seat relay. • Power seat motor drive cable.	• For vehicles built up to 02/2003, GO to Pinpoint Test N. For vehicles built 02/2003 onward, GO to Pinpoint Test P.

DIAGNOSIS AND TESTING (Continued)

Symptom Chart (Continued)

Condition	Possible Sources	Action
• The third row power fold seat is inoperative/does not operate correctly — Right	• Fuse(s). • Circuitry. • Seat control switch(es). • Power seat motor. • Power seat relay. • Power seat motor drive cable.	• For vehicles built up to 02/2003,GO to Pinpoint Test O. For vehicles built 02/2003 onward, GO to Pinpoint Test Q.
• All climate controlled seats are inoperative	• CJB Fuse F1.118 (30A). • Circuitry.	• DEPOWER the supplemental restraint system (SRS). REFER toSection 501-20B. DISCONNECT driver safety belt buckle pretensioner C3201 or passenger safety belt buckle pretensioner C3202 of the affected seat and CONNECT restraint system diagnostic tool 418-133 to the safety belt buckle pretensioner harness connector. CONNECT the battery ground cable. CHECK driver CCSM C3031b-4 (or passenger CCSM C3036b-4), circuit 1153 (RD/BK) for battery voltage. REPAIR as needed. If okay, REPAIR ground to driver CCSM C3036b-3 (or passenger CCSM C3036b-3 and C3036a-9), circuit 57 (BK). Once the repair is complete, DISCONNECT the restraint system diagnostic tool from the safety belt buckle pretensioner harness connector and CONNECT the safety belt buckle pretensioner connector of the affected seat. REPOWER the SRS. REFER to Section 501-20B.
• A single climate controlled seat does not operate/does not operate correctly	• Wiring, terminals, or connectors. • Climate controlled seat switch. • CCSM.	• GO to Pinpoint Test U.

DIAGNOSIS AND TESTING (Continued)

Symptom Chart (Continued)

Condition	Possible Sources	Action
• The passenger climate controlled seat does not operate, the driver climate controlled seat does operate	• Wiring, terminals, or connectors. • CCSM.	• DEPOWER the supplemental restraint system (SRS). REFER toSection 501-20B. DISCONNECT passenger safety belt buckle pretensioner C3202 and CONNECT restraint system diagnostic tool 418-133 to the passenger safety belt buckle pretensioner C3202. CONNECT the battery ground cable. CHECK passenger CCSM C3036a-9, circuit 57 (BK) for ground. REPAIR as needed. If okay, GO to Pinpoint Test U. Once the repair is complete, DISCONNECT the restraint system diagnostic tool from the safety belt buckle pretensioner harness connector and CONNECT the safety belt buckle pretensioner connector of the affected seat. REPOWER the SRS. REFER to Section 501-20B.
• A single climate controlled seat does not operate correctly — one or more climate controlled seat switch LEDs are inoperative	• Wiring, terminals, or connectors. • Climate controlled seat switch. • CCSM.	• GO to Pinpoint Test V.
• Easy exit/easy entry is inoperative/not operating correctly	• Ignition switch. • ICM. • DSM. • Circuitry.	• GO to Pinpoint Test W.

DIAGNOSIS AND TESTING (Continued)

Symptom Chart (Continued)

Condition	Possible Sources	Action
• No communication with the CCSM	• Wiring, terminals, or connectors • CCSM	• DEPOWER the supplemental restraint system (SRS). REFER toSection 501-20B. DISCONNECT driver safety belt buckle pretensioner C3201 or passenger safety belt buckle pretensioner C3202 of the affected seat and CONNECT restraint system diagnostic tool 418-133 to the safety belt buckle pretensioner harness connector. CONNECT the battery ground cable. CHECK driver CCSM C3031b-2 (or passenger CCSM C3036b-2), circuit 294 (WH/LB) for ignition voltage and driver CCSM C3031b-3 (or passenger CCSM C3036b-3 and C3031a-9), circuit 57 (BK) for ground. REPAIR as needed. If okay, REFER to Section 418-00. Once the repair is complete, DISCONNECT the restraint system diagnostic tool from the safety belt buckle pretensioner harness connector and CONNECT the safety belt buckle pretensioner connector of the affected seat. REPOWER the SRS. REFER to Section 501-20B.

Pinpoint Tests

⚠ CAUTION: Electronic modules are sensitive to electrostatic discharge. If exposed to these charges, damage may result.

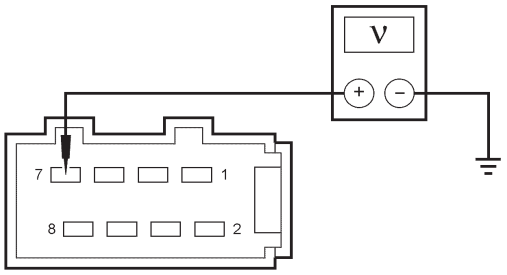
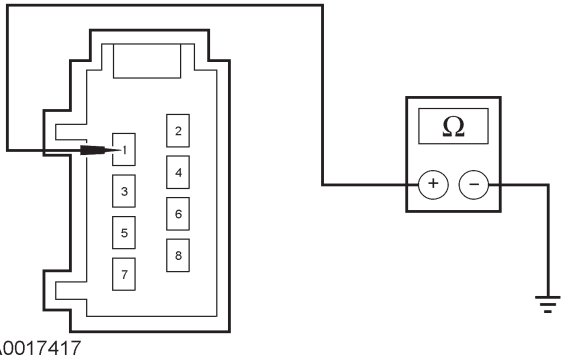
PINPOINT TEST A: THE POWER SEAT IS INOPERATIVE — EXPEDITION

Test Step		Result / Action to Take
A1	**CHECK THE VOLTAGE TO THE SEAT SWITCH — CIRCUIT 566 (DG) OR (PASSENGER 1462)**	
	⚠ WARNING: The restraint system diagnostic tool is for restraint system service only. Remove from vehicle prior to road use. Failure to remove could result in injury and possible violation of vehicle safety standards. **NOTE:** If a seat equipped with a seat mounted side air bag and/or a safety belt pretensioner (if equipped) system is being serviced, **the supplemental restraint system (SRS) must be depowered.** Refer to Section 501-20B. **NOTE:** The SRS must be fully operational and free of faults before releasing the vehicle to the customer.	

(Continued)

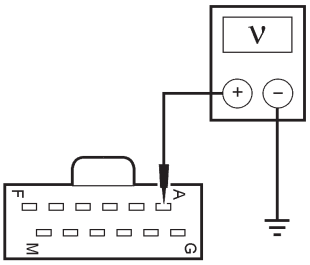
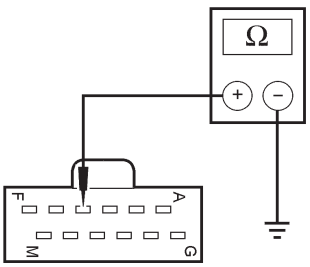
DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST A: THE POWER SEAT IS INOPERATIVE — EXPEDITION (Continued)

Test Step		Result / Action to Take
A1	**CHECK THE VOLTAGE TO THE SEAT SWITCH — CIRCUIT 566 (DG) OR (PASSENGER 1462) (Continued)**	
	• Depower the SRS. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in the General Procedures portion of Section 501-20B. • Disconnect the affected seat safety belt buckle pretensioner C3201 (driver) or C3202 (passenger). • Connect restraint system diagnostic tool 418-133 to the affected seat safety belt buckle pretensioner C3201 (driver) or C3202 (passenger). • ⚠ **WARNING: Be sure that nobody is in the vehicle and that there is nothing blocking or set in front of any air bag module when the battery ground cable is connected.** Connect the battery ground cable. • Disconnect: Seat Control Switch (C352 Driver) or (C355 Passenger). • Measure the voltage between driver seat control switch C352-7, circuit 566 (DG) (or passenger seat control switch C355-7, circuit 1462), harness side and ground.  A0033450 • **Is the voltage greater than 10 volts?**	**Yes** GO to **A2**. **No** REPAIR driver circuit 566 (DG) (or passenger circuit 1462). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
A2	**CHECK CIRCUIT 57 (BK) FOR OPEN**	
	• Measure the resistance between driver seat control switch C352-1, circuit 57 (BK) (or passenger seat control switch C355-1, circuit 57), harness side and ground.  A0017417 • **Is the resistance less than 5 ohms?**	**Yes** INSTALL a new seat control switch. REFER to Seat Control Switch — 6-Way in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR circuit 57 (BK). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST B: THE POWER SEAT IS INOPERATIVE — NAVIGATOR — PASSENGER

Test Step		Result / Action to Take
B1	CHECK THE VOLTAGE TO THE SEAT SWITCH	
	WARNING: The restraint system diagnostic tool is for restraint system service only. Remove from vehicle prior to road use. Failure to remove could result in injury and possible violation of vehicle safety standards. **NOTE:** If a seat equipped with a seat mounted side air bag and/or a safety belt pretensioner (if equipped) system is being serviced, **the supplemental restraint system (SRS) must be depowered.** Refer to Section 501-20B. **NOTE:** The SRS must be fully operational and free of faults before releasing the vehicle to the customer. • Depower the SRS. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in the General Procedures portion of Section 501-20B. • Disconnect the passenger seat safety belt buckle pretensioner C3202. • Connect restraint system diagnostic tool 418-133 to the passenger seat safety belt buckle pretensioner C3202. • **WARNING: Be sure that nobody is in the vehicle and that there is nothing blocking or set in front of any air bag module when the battery ground cable is connected.** Connect the battery ground cable. • Disconnect: Seat Control Switch C3026. • Measure the voltage between seat control switch C3026-A, circuit 1462 (RD/WH), harness side and ground.  A0049730 • **Is the voltage greater than 10 volts?**	**Yes** GO to **B2**. **No** REPAIR circuit 1462 (RD/WH). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
B2	CHECK GROUND CIRCUIT FOR OPEN	
	• Measure the resistance between seat control switch C3026-D, circuit 57 (BK), harness side and ground.  A0049731 • **Is the resistance less than 5 ohms?**	**Yes** INSTALL a new seat control switch. REFER to Seat Control Switch — 8-Way in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR circuit 57 (BK). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST C: THE POWER SEAT MOVES BUT IS NOISY

Test Step		Result / Action to Take
C1	CHECK THE TRACK ALIGNMENT	
	WARNING: The restraint system diagnostic tool is for restraint system service only. Remove from vehicle prior to road use. Failure to remove could result in injury and possible violation of vehicle safety standards. **NOTE:** If a seat equipped with a seat mounted side air bag and/or a safety belt pretensioner (if equipped) system is being serviced, **the supplemental restraint system (SRS) must be depowered.** Refer to Section 501-20B. **NOTE:** The SRS must be fully operational and free of faults before releasing the vehicle to the customer. • Depower the SRS. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in the General Procedures portion of Section 501-20B. • Disconnect the affected seat safety belt buckle pretensioner C3201 (driver) or C3202 (passenger). • Connect restraint system diagnostic tool 418-133 to the affected seat safety belt buckle pretensioner C3201 (driver) or C3202 (passenger). • **WARNING: Be sure that nobody is in the vehicle and that there is nothing blocking or set in front of any air bag module when the battery ground cable is connected.** Connect the battery ground cable. • Check the alignment of the track to the floor and the track to the seat. • **Is the track out of alignment?**	**Yes** ALIGN the track to the seat and the floor. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** INSTALL a new seat track part. REFER to Seat Track — Power or Front Seat Track Motor in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

PINPOINT TEST D: THE POWER SEAT MOVES BUT IS LOOSE

Test Step		Result / Action to Take
D1	CHECK THE FASTENING HARDWARE	
	WARNING: The restraint system diagnostic tool is for restraint system service only. Remove from vehicle prior to road use. Failure to remove could result in injury and possible violation of vehicle safety standards. **NOTE:** If a seat equipped with a seat mounted side air bag and/or a safety belt pretensioner (if equipped) system is being serviced, **the supplemental restraint system (SRS) must be depowered.** Refer to Section 501-20B. **NOTE:** The SRS must be fully operational and free of faults before releasing the vehicle to the customer. • Depower the SRS. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in the General Procedures portion of Section 501-20B. • Disconnect the affected seat safety belt buckle pretensioner C3201 (driver) or C3202 (passenger). • Connect restraint system diagnostic tool 418-133 to the affected seat safety belt buckle pretensioner C3201 (driver) or C3202 (passenger). • **WARNING: Be sure that nobody is in the vehicle and that there is nothing blocking or set in front of any air bag module when the battery ground cable is connected.** Connect the battery ground cable. • **Is the fastening hardware loose?**	**Yes** TIGHTEN all fastening hardware to specifications. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** IDENTIFY the cause and INSTALL a new seat track component. REFER to Seat Track — Power or Front Seat Track Motor in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST E: THE POWER SEAT DOES NOT MAKE FULL TRAVEL

Test Step		Result / Action to Take
E1	CHECK FOR OBSTRUCTION IN THE SEAT TRACK	
	WARNING: The restraint system diagnostic tool is for restraint system service only. Remove from vehicle prior to road use. Failure to remove could result in injury and possible violation of vehicle safety standards. **NOTE:** If a seat equipped with a seat mounted side air bag and/or a safety belt pretensioner (if equipped) system is being serviced, **the supplemental restraint system (SRS) must be depowered.** Refer to Section 501-20B. **NOTE:** The SRS must be fully operational and free of faults before releasing the vehicle to the customer. • Depower the SRS. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in the General Procedures portion of Section 501-20B. • Disconnect the affected seat safety belt buckle pretensioner C3201 (driver) or C3202 (passenger). • Connect restraint system diagnostic tool 418-133 to the affected seat safety belt buckle pretensioner C3201 (driver) or C3202 (passenger). • **WARNING: Be sure that nobody is in the vehicle and that there is nothing blocking or set in front of any air bag module when the battery ground cable is connected.** Connect the battery ground cable. • Remove the seat. For additional information, refer to Front Seat — 40 Percent in this section. • **Are there any obstructions in the track?**	**Yes** REMOVE the obstruction(s) and GREASE the track(s). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** IDENTIFY the cause and INSTALL a new seat track component. REFER to Seat Track — Power or Front Seat Track Motor in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

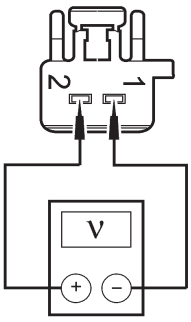
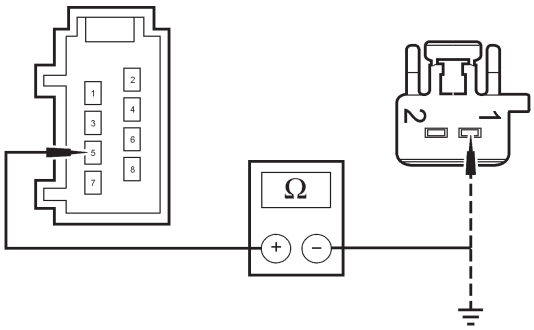
PINPOINT TEST F: THE POWER SEAT DOES NOT MOVE HORIZONTALLY/VERTICALLY — EXPEDITION

Test Step		Result / Action to Take
F1	DETERMINE WHICH POWER SEAT HAS FAILED	
	WARNING: The restraint system diagnostic tool is for restraint system service only. Remove from vehicle prior to road use. Failure to remove could result in injury and possible violation of vehicle safety standards. **NOTE:** If a seat equipped with a seat mounted side air bag and/or a safety belt pretensioner (if equipped) system is being serviced, **the supplemental restraint system (SRS) must be depowered.** Refer to Section 501-20B. **NOTE:** The SRS must be fully operational and free of faults before releasing the vehicle to the customer. • Operate the driver seat in all directions. • **Does the driver power seat operate correctly?**	**Yes** GO to **F13**. **No** GO to **F2**.
F2	DETERMINE WHICH DIRECTION HAS FAILED	
	• Depower the SRS. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in the General Procedures portion of Section 501-20B. • Disconnect the driver seat safety belt buckle pretensioner C3201. • Connect restraint system diagnostic tool 418-133 to the driver seat safety belt buckle pretensioner C3201. • **WARNING: Be sure that nobody is in the vehicle and that there is nothing blocking or set in front of any air bag module when the battery ground cable is connected.** Connect the battery ground cable. • Operate the power seat forward and rearward. • **Will the track move horizontally?**	**Yes** GO to **F6**. **No** GO to **F3**.
F3	CHECK THE VOLTAGE TO FORWARD/REVERSE SEAT MOTOR	
	• Disconnect: Power Seat Motor C362.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST F: THE POWER SEAT DOES NOT MOVE HORIZONTALLY/VERTICALLY — EXPEDITION (Continued)

Test Step		Result / Action to Take
F3	**CHECK THE VOLTAGE TO FORWARD/REVERSE SEAT MOTOR (Continued)**	
	• Measure the voltage between power seat motor assembly C362-1, circuit 980 (YE/WH), harness side and C362-2, circuit 981 (RD/WH), harness side while pushing the forward/reverse switch forward and backward.  A0049753 • **Is the voltage greater than -10 volts when the forward/reverse switch is pressed forward, greater than +10 volts with the forward reverse switch is pressed backward and 0 volts when the switch is in the rest position?**	**Yes** INSTALL a new forward/reverse power seat motor. REFER to Front Seat Track Motor in this section. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **F4**.
F4	**CHECK CIRCUIT 980 (YE/WH) FOR AN OPEN AND A SHORT TO GROUND**	
	• Disconnect: Seat Control Switch C352. • Measure the resistance between seat control switch C352-5, circuit 980 (YE/WH), harness side and power seat motor C362-1, circuit 980 (YE/WH), harness side; and between seat control switch C352-5, circuit 980 (YE/WH), harness side and ground.  A0049754 • **Is the resistance less than 5 ohms between the power seat motor and the seat control switch, and greater than 10,000 ohms between the seat control switch and ground?**	**Yes** GO to **F5**. **No** REPAIR circuit 980 (YE/WH). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

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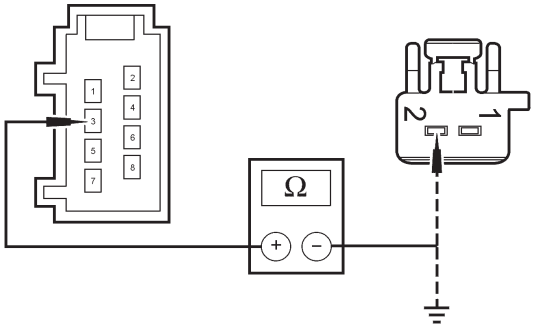
DIAGNOSIS AND TESTING (Continued)

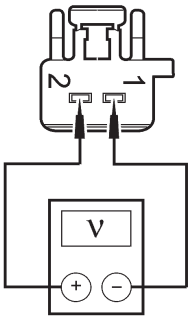
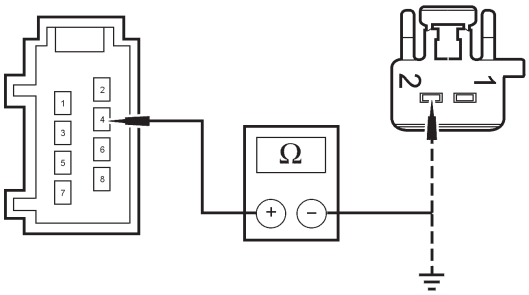
PINPOINT TEST F: THE POWER SEAT DOES NOT MOVE HORIZONTALLY/VERTICALLY — EXPEDITION (Continued)

Test Step		Result / Action to Take
F5	**CHECK CIRCUIT 981 (RD/WH) FOR AN OPEN AND A SHORT TO GROUND**	
	• Measure the resistance between seat control switch C352-3, circuit 981 (RD/WH), harness side and power seat motor C362-2, circuit 981 (RD/WH), harness side; and between seat control switch C352-3, circuit 981 (RD/WH), harness side and ground.  A0049755 • **Is the resistance less than 5 ohms between the power seat motor and the seat control switch, and greater than 10,000 ohms between the seat control switch and ground?**	**Yes** INSTALL a new seat control switch. REFER to Seat Control Switch — 6-Way in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR circuit 981 (RD/WH). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
F6	**DETERMINE SEAT TILTING FAILURE**	
	• Determine seat tilting failure. • **Can the seat be tilted forward or backward?**	**Yes** If only the forward tilting operates, GO to **F7**. If only the rear tilting operates, GO to **F10**. **No** INSTALL a new seat control switch. REFER to Seat Control Switch — 6-Way in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
F7	**CHECK THE VOLTAGE TO THE REAR HEIGHT MOTOR**	
	• Disconnect: Power Seat Motor C363.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

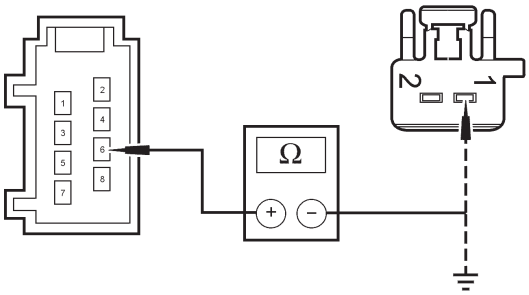
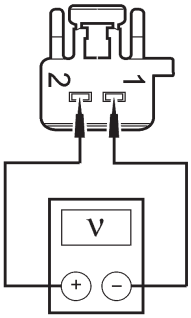
PINPOINT TEST F: THE POWER SEAT DOES NOT MOVE HORIZONTALLY/VERTICALLY — EXPEDITION (Continued)

Test Step		Result / Action to Take
F7	**CHECK THE VOLTAGE TO THE REAR HEIGHT MOTOR (Continued)**	
	• Measure the voltage between power seat motor C363-2, circuit 983 (RD/LG), harness side and C363-1, circuit 982 (YE/LG), harness side while depressing the rear tilt switch up and down.  A0049753 • **Is the voltage greater than +10 volts when the rear tilt switch is pressed up, greater than -10 volts when the rear tilt switch is pressed down and 0 volts when the switch is in the rest position?**	**Yes** INSTALL a new rear height power seat motor. REFER to Front Seat Track Motor in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **F8**.
F8	**CHECK CIRCUIT 983 (RD/LG) FOR AN OPEN AND A SHORT TO GROUND**	
	• Disconnect: Seat Control Switch C352. • Measure the resistance between seat control switch C352-4, circuit 983 (RD/LG), harness side and power seat motor C363-2, circuit 983 (RD/LG), harness side; and between seat control switch C352-4, circuit 983 (RD/LG), harness side and ground.  A0049756 • **Is the resistance less than 5 ohms between the power seat motor and the seat control switch, and greater than 10,000 ohms between the seat control switch and ground?**	**Yes** GO to **F9**. **No** REPAIR circuit 983 (RD/LG). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

(Continued)

DIAGNOSIS AND TESTING (Continued)

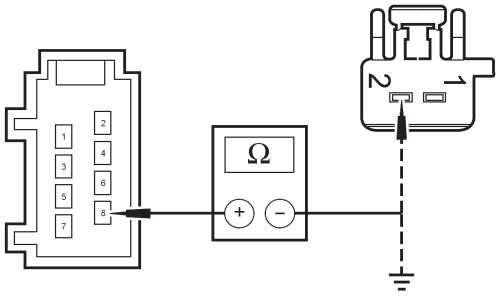
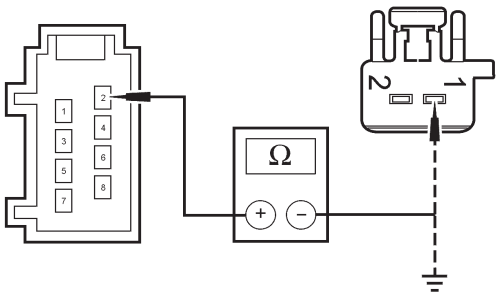
PINPOINT TEST F: THE POWER SEAT DOES NOT MOVE HORIZONTALLY/VERTICALLY — EXPEDITION (Continued)

Test Step		Result / Action to Take
F9	**CHECK CIRCUIT 982 (YE/LG) FOR AN OPEN AND A SHORT TO GROUND**	
	• Measure the resistance between seat control switch C352-6, circuit 982 (YE/LG), harness side and power seat motor assembly C363-1, circuit 982 (YE/LG), harness side; and between seat control switch C352-6, circuit 982 (YE/LG), harness side and ground.  A0049757 • **Is the resistance less than 5 ohms between the power seat motor and the seat control switch, and greater than 10,000 ohms between the seat control switch and ground?**	**Yes** INSTALL a new seat control switch. REFER to Seat Control Switch — 6-Way in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR circuit 982 (YE/LG). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
F10	**CHECK THE VOLTAGE TO FRONT HEIGHT MOTOR**	
	• Disconnect: Power Seat Motor C382. • Measure the voltage between power seat motor C382-2, circuit 979 (RD/LB), harness side and C382-1, circuit 978 (YE/LB), harness side while pushing the rear tilting switch up and down.  A0049753 • **Is the voltage greater than +10 volts when the front tilt switch is pressed up, greater than -10 volts when the front tilt switch is pressed down and 0 volts when the switch is in the rest position?**	**Yes** INSTALL a new front height power seat motor. REFER to Front Seat Track Motor in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **F11**.
F11	**CHECK CIRCUIT 979 (RD/LB) FOR AN OPEN AND A SHORT TO GROUND**	
	• Disconnect: Seat Control Switch C352.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

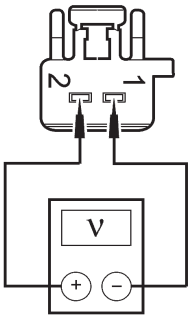
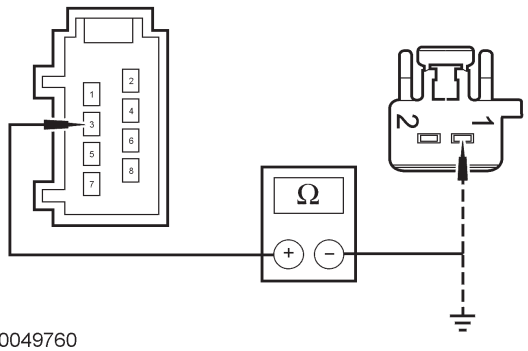
PINPOINT TEST F: THE POWER SEAT DOES NOT MOVE HORIZONTALLY/VERTICALLY — EXPEDITION (Continued)

Test Step		Result / Action to Take
F11	**CHECK CIRCUIT 979 (RD/LB) FOR AN OPEN AND A SHORT TO GROUND (Continued)**	
	• Measure the resistance between seat control switch C352-8, circuit 979 (RD/LB), harness side and power seat motor C382-2, circuit 979 (RD/LB), harness side; and between seat control switch C352-8, circuit 979 (RD/LB), harness side and ground.  A0049758 • **Is the resistance less than 5 ohms between the power seat motor and the seat control switch, and greater than 10,000 ohms between the seat control switch and ground?**	**Yes** GO to F12. **No** REPAIR circuit 979 (RD/LB). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
F12	**CHECK CIRCUIT 978 (YE/LB) FOR AN OPEN**	
	• Measure the resistance between seat control switch C352-2, circuit 978 (YE/LB), harness side and power seat motor C382-1, circuit 978 (YE/LB), harness side; and between seat control switch C352-2, circuit 978 (YE/LB), harness side and ground.  A0049759 • **Is the resistance less than 5 ohms between the power seat motor and the seat control switch, and greater than 10,000 ohms between the seat control switch and ground?**	**Yes** INSTALL a new seat control switch. REFER to Seat Control Switch — 6-Way in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR circuit 978 (YE/LB). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
F13	**DETERMINE WHICH DIRECTION HAS FAILED — PASSENGER SEAT**	
	• Depower the SRS. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in the General Procedures portion of Section 501-20B. • Disconnect the passenger seat safety belt buckle pretensioner C3202. • Connect restraint system diagnostic tool 418-133 to the passenger seat safety belt buckle pretensioner C3202. • ⚠ **WARNING: Be sure that nobody is in the vehicle and that there is nothing blocking or set in front of any air bag module when the battery ground cable is connected.** Connect the battery ground cable. • Operate the power seat forward and rearward. • **Will the track move horizontally?**	**Yes** GO to F17. **No** GO to F14.

(Continued)

DIAGNOSIS AND TESTING (Continued)

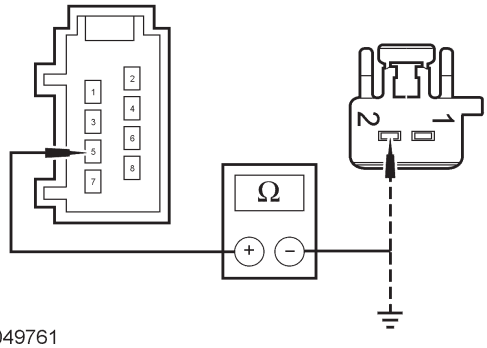
PINPOINT TEST F: THE POWER SEAT DOES NOT MOVE HORIZONTALLY/VERTICALLY — EXPEDITION (Continued)

Test Step		Result / Action to Take
F14	**CHECK THE VOLTAGE TO FORWARD REVERSE SEAT MOTOR — PASSENGER SEAT**	**Yes** INSTALL a new forward/reverse power seat motor assembly. REFER to Front Seat Track Motor in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **F15**.
	• Disconnect: Power Seat Motor C332. • Measure the voltage between power seat motor C332-1, circuit 986 (YE/WH), harness side and C332-2, circuit 987 (RD/WH), harness side while pushing the forward/reverse switch forward and backward.  A0049753 • **Is the voltage greater than -10 volts when the forward/reverse switch is pressed forward, greater than +10 volts when the forward/reverse switch is pressed backward and 0 volts when the switch is in the rest position?**	
F15	**CHECK CIRCUIT 986 (YE/WH) FOR AN OPEN AND A SHORT TO GROUND**	**Yes** GO to **F16**. **No** REPAIR circuit 986 (YE/WH). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
	• Disconnect: Seat Control Switch C355. • Measure the resistance between seat control switch C355-3, circuit 986 (YE/WH), harness side and power seat motor C332-1, circuit 986 (YE/WH), harness side; and between seat control switch C355-3, circuit 986 (YE/WH), harness side and ground.  A0049760 • **Is the resistance less than 5 ohms between the power seat motor and the seat control switch, and greater than 10,000 ohms between the seat control switch and ground?**	

(Continued)

DIAGNOSIS AND TESTING (Continued)

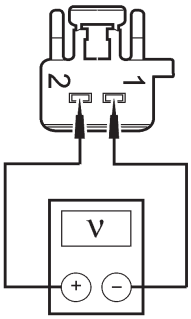
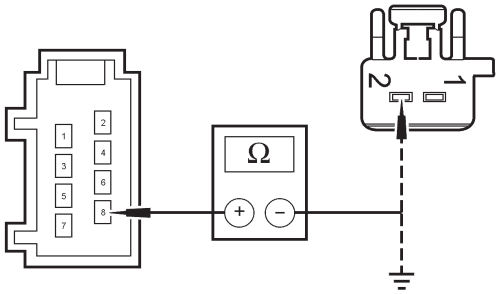
PINPOINT TEST F: THE POWER SEAT DOES NOT MOVE HORIZONTALLY/VERTICALLY — EXPEDITION (Continued)

Test Step		Result / Action to Take
F16	**CHECK CIRCUIT 987 (RD/WH) FOR AN OPEN AND A SHORT TO GROUND**	
	• Measure the resistance between seat control switch C355-5, circuit 987 (RD/WH), harness side and power seat motor C332-2, circuit 987 (RD/WH), harness side; and between seat control switch C355-5, circuit 987 (RD/WH), harness side and ground.  A0049761 • **Is the resistance less than 5 ohms between the power seat motor and the seat control switch, and greater than 10,000 ohms between the seat control switch and ground?**	**Yes** INSTALL a new seat control switch. REFER to Seat Control Switch — 6-Way in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR circuit 987 (RD/WH). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
F17	**DETERMINE SEAT TILTING FAILURE — PASSENGER SEAT**	
	• Determine seat tilting failure. • **Can the seat be tilted forward or backward?**	**Yes** If only the forward tilting operates, GO to **F18**. If only the rear tilting operates, GO to **F21**. **No** INSTALL a new seat control switch. REFER to Seat Control Switch — 6-Way in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
F18	**CHECK THE VOLTAGE TO THE REAR HEIGHT MOTOR — PASSENGER SEAT**	
	• Disconnect: Power Seat Motor C3075.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

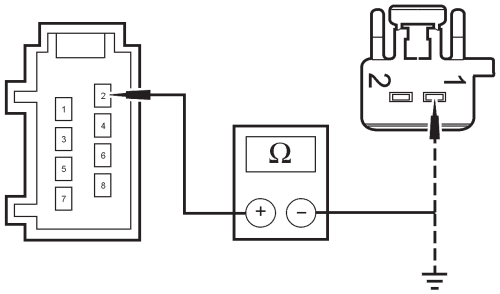
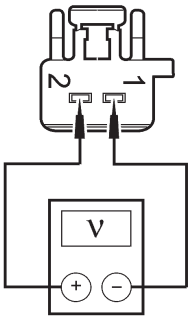
PINPOINT TEST F: THE POWER SEAT DOES NOT MOVE HORIZONTALLY/VERTICALLY — EXPEDITION (Continued)

Test Step		Result / Action to Take
F18	**CHECK THE VOLTAGE TO THE REAR HEIGHT MOTOR — PASSENGER SEAT (Continued)**	
	• Measure the voltage between power seat motor C3075-2, circuit 989 (RD/LG), harness side and C3075-1, circuit 988 (YE/LG), harness side while depressing the rear tilt switch up and down.  A0049753 • **Is the voltage greater than +10 volts when the rear tilt switch is pressed up, greater than -10 volts when the rear tilt switch is pressed down and 0 volts when the switch is in the rest position?**	**Yes** INSTALL a new rear height power seat motor. REFER to Front Seat Track Motor in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **F19**.
F19	**CHECK CIRCUIT 989 (RD/LG) FOR OPEN AND A SHORT TO GROUND**	
	• Disconnect: Seat Control Switch C355. • Measure the resistance between seat control switch C355-8, circuit 989 (RD/LG), harness side and power seat motor C3075-2, circuit 989 (RD/LG), harness side; and between seat control switch C355-8, circuit 989 (RD/LG), harness side and ground.  A0049758 • **Is the resistance less than 5 ohms between the power seat motor and the seat control switch, and greater than 10,000 ohms between the seat control switch and ground?**	**Yes** GO to **F20**. **No** REPAIR circuit 989 (RD/LG). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

(Continued)

DIAGNOSIS AND TESTING (Continued)

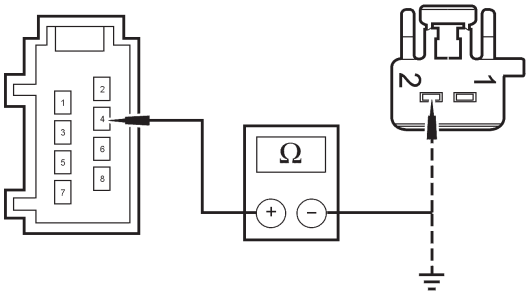
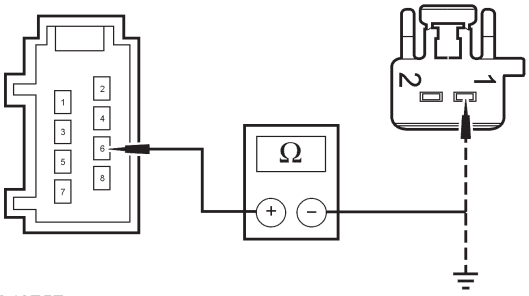
PINPOINT TEST F: THE POWER SEAT DOES NOT MOVE HORIZONTALLY/VERTICALLY — EXPEDITION (Continued)

Test Step		Result / Action to Take
F20	**CHECK CIRCUIT 988 (YE/LG) FOR AN OPEN AND A SHORT TO GROUND**	
	• Measure the resistance between seat control switch C355-2, circuit 988 (YE/LG), harness side and power seat motor C3075-1, circuit 988 (YE/LG), harness side; and between seat control switch C355-2, circuit 988 (YE/LG), harness side and ground.  A0049759 • **Is the resistance less than 5 ohms between the power seat motor and the seat control switch, and greater than 10,000 ohms between the seat control switch and ground?**	**Yes** INSTALL a new seat control switch. REFER to Seat Control Switch — 6-Way in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR circuit 988 (YE/LG). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
F21	**CHECK THE VOLTAGE TO FRONT HEIGHT MOTOR — PASSENGER SEAT**	
	• Disconnect: Power Seat Motor C3074. • Measure the voltage between power seat motor C3074-2, circuit 985 (RD/LB), harness side and C3074-1, circuit 984 (YE/LB), harness side while pushing the rear tilting switch up and down.  A0049753 • **Is the voltage greater than +10 volts when the front tilt switch is pressed up, greater than -10 volts when the front tilt switch is pressed down and 0 volts when the switch is in the rest position?**	**Yes** INSTALL a new front height power seat motor. REFER to Front Seat Track Motor in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **F22**.
F22	**CHECK CIRCUIT 985 (RD/LB) FOR AN OPEN AND A SHORT TO GROUND**	
	• Disconnect: Seat Control Switch C355.	

(Continued)

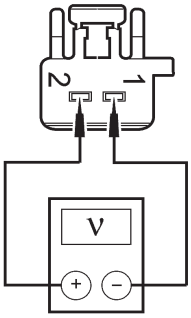
DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST F: THE POWER SEAT DOES NOT MOVE HORIZONTALLY/VERTICALLY — EXPEDITION (Continued)

Test Step		Result / Action to Take
F22	**CHECK CIRCUIT 985 (RD/LB) FOR AN OPEN AND A SHORT TO GROUND (Continued)**	
	• Measure the resistance between seat control switch C355-4, circuit 985 (RD/LB), harness side and power seat motor C3074-2, circuit 985 (RD/LB), harness; side and between seat control switch C355-4, circuit 985 (RD/LB), harness side and ground.  A0049756 • **Is the resistance less than 5 ohms between the power seat motor and the seat control switch, and greater than 10,000 ohms between the seat control switch and ground?**	**Yes** GO to **F23**. **No** REPAIR circuit 985 (RD/LB). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
F23	**CHECK CIRCUIT 984 (YE/LB) FOR AN OPEN**	
	• Measure the resistance between seat control switch C355-6, circuit 984 (YE/LB), harness side and power seat motor C3074-1, circuit 984 (YE/LB), harness side; and between seat control switch C355-6, circuit 984 (YE/LB), harness side and ground.  A0049757 • **Is the resistance less than 5 ohms between the power seat motor and the seat control switch, and greater than 10,000 ohms between the seat control switch and ground?**	**Yes** INSTALL a new seat control switch. REFER to Seat Control Switch — 6-Way in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR circuit 984 (YE/LB). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

DIAGNOSIS AND TESTING (Continued)

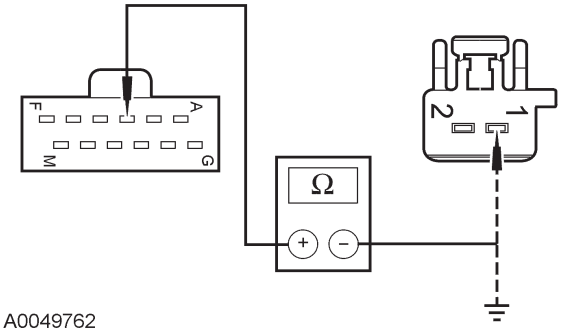
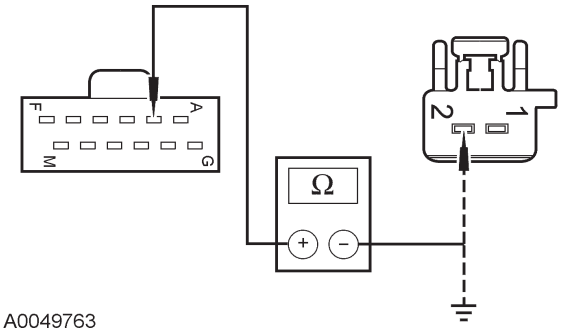
PINPOINT TEST G: THE POWER SEAT DOES NOT MOVE HORIZONTALLY/VERTICALLY/RECLINE — PASSENGER SIDE, NAVIGATOR

Test Step		Result / Action to Take
G1	**DETERMINE WHICH DIRECTION HAS FAILED — PASSENGER SEAT**	
	WARNING: The restraint system diagnostic tool is for restraint system service only. Remove from vehicle prior to road use. Failure to remove could result in injury and possible violation of vehicle safety standards. **NOTE:** If a seat equipped with a seat mounted side air bag and/or a safety belt pretensioner (if equipped) system is being serviced, **the supplemental restraint system (SRS) must be depowered.** Refer to Section 501-20B. **NOTE:** The SRS must be fully operational and free of faults before releasing the vehicle to the customer. • Depower the SRS. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in the General Procedures portion of Section 501-20B. • Disconnect the passenger seat safety belt buckle pretensioner C3202. • Connect restraint system diagnostic tool 418-133 to the passenger seat safety belt buckle pretensioner C3202. • **WARNING: Be sure that nobody is in the vehicle and that there is nothing blocking or set in front of any air bag module when the battery ground cable is connected.** Connect the battery ground cable. • Operate the power seat forward and rearward. • **Will the track move horizontally?**	**Yes** GO to **G5**. **No** GO to **G2**.
G2	**CHECK THE VOLTAGE TO THE FORWARD REVERSE SEAT MOTOR — PASSENGER SEAT**	
	• Disconnect: Power Seat Motor C332. • Measure the voltage between power seat motor C332-1, circuit 986 (YE/WH), harness side and C332-2, circuit 987 (RD/WH), harness side while pushing the forward/reverse switch forward and backward.  A0049753 • **Is the voltage greater than -10 volts when the forward/reverse switch is pressed forward, greater than +10 volts when the forward/reverse switch is pressed backward and 0 volts when the switch is in the rest position?**	**Yes** INSTALL a new forward/reverse power seat motor. REFER to Front Seat Track Motor in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **G3**.
G3	**CHECK CIRCUIT 986 (YE/WH) FOR AN OPEN AND A SHORT TO GROUND**	
	• Disconnect: Seat Control Switch C3026.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

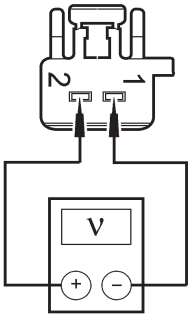
PINPOINT TEST G: THE POWER SEAT DOES NOT MOVE HORIZONTALLY/VERTICALLY/RECLINE — PASSENGER SIDE, NAVIGATOR (Continued)

Test Step		Result / Action to Take
G3	**CHECK CIRCUIT 986 (YE/WH) FOR AN OPEN AND A SHORT TO GROUND (Continued)**	
	• Measure the resistance between seat control switch C3026-C, circuit 986 (YE/WH), harness side and power seat motor C332-1, circuit 986 (YE/WH), harness side; and between seat control switch C3026-C, circuit 986 (YE/WH), harness side and ground.  A0049762 • **Is the resistance less than 5 ohms between the power seat motor and the seat control switch, and greater than 10,000 ohms between the seat control switch and ground?**	**Yes** GO to **G4**. **No** REPAIR circuit 986 (YE/WH). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
G4	**CHECK CIRCUIT 987 (RD/WH) FOR AN OPEN AND A SHORT TO GROUND**	
	• Measure the resistance between seat control switch C3026-B, circuit 987 (RD/WH), harness side and power seat motor C332-2, circuit 987 (RD/WH), harness side; and between seat control switch C3026-B, circuit 987 (RD/WH), harness side and ground.  A0049763 • **Is the resistance less than 5 ohms between the power seat motor and the seat control switch, and greater than 10,000 ohms between the seat control switch and ground?**	**Yes** INSTALL a new seat control switch. REFER to Seat Control Switch — 8-Way in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR circuit 987 (RD/WH). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

(Continued)

DIAGNOSIS AND TESTING (Continued)

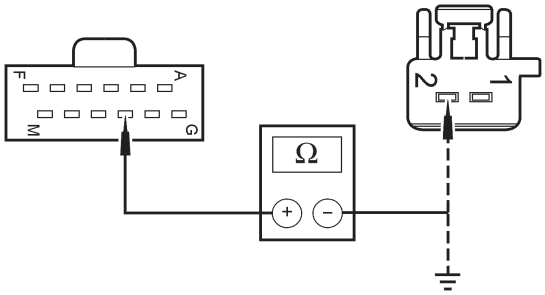
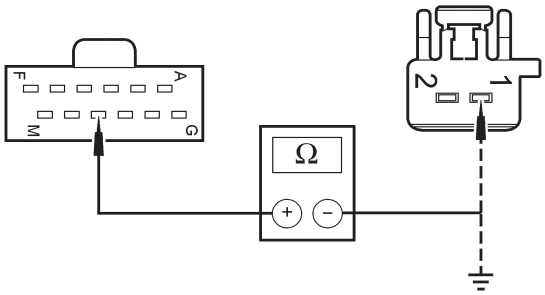
PINPOINT TEST G: THE POWER SEAT DOES NOT MOVE HORIZONTALLY/VERTICALLY/RECLINE — PASSENGER SIDE, NAVIGATOR (Continued)

Test Step		Result / Action to Take
G5	**DETERMINE SEAT TILTING FAILURE — PASSENGER SEAT**	
	• Determine seat tilting failure. • **Can the seat be tilted forward or backward or recline?**	**Yes** If the rear tilting does not operate, GO to G6. If the front tilting does not operate, GO to G9. If the recline does not operate, GO to G12. **No** INSTALL a new seat control switch. REFER to Seat Control Switch — 8-Way in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
G6	**CHECK THE VOLTAGE TO THE REAR HEIGHT MOTOR — PASSENGER SEAT**	
	• Disconnect: Power Seat Motor C3075. • Measure the voltage between rear height power seat motor C3075-2, circuit 989 (RD/LG), harness side and C3075-1, circuit 988 (YE/LG), harness side while depressing the rear tilt switch up and down.  A0049753 • **Is the voltage greater than +10 volts when the rear tilt switch is pressed up, greater than -10 volts when the rear tilt switch is pressed down and 0 volts when the switch is in the rest position?**	**Yes** INSTALL a new rear height power seat motor. REFER to Front Seat Track Motor in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to G7.
G7	**CHECK CIRCUIT 989 (RD/LG) FOR AN OPEN AND A SHORT TO GROUND**	
	• Disconnect: Seat Control Switch C3026.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

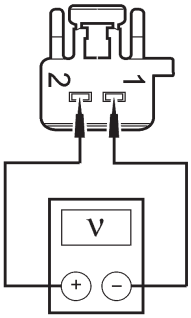
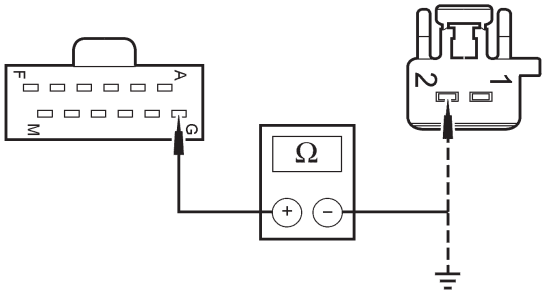
PINPOINT TEST G: THE POWER SEAT DOES NOT MOVE HORIZONTALLY/VERTICALLY/RECLINE — PASSENGER SIDE, NAVIGATOR (Continued)

Test Step		Result / Action to Take
G7	**CHECK CIRCUIT 989 (RD/LG) FOR AN OPEN AND A SHORT TO GROUND (Continued)**	
	• Measure the resistance between seat control switch C3026-J, circuit 989 (RD/LG), harness side and rear height power seat motor C3075-2, circuit 989 (RD/LG), harness side; and between seat control switch C3026-J, circuit 989 (RD/LG), and ground.  A0049764 • **Is the resistance less than 5 ohms between the power seat motor and the seat control switch, and greater than 10,000 ohms between the seat control switch and ground?**	**Yes** GO to **G8**. **No** REPAIR circuit 989 (RD/LG). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
G8	**CHECK CIRCUIT 988 (YE/LG) FOR AN OPEN AND A SHORT TO GROUND**	
	• Measure the resistance between seat control switch C3026-K, circuit 988 (YE/LG), harness side and rear height power seat motor C3075-1, circuit 988 (YE/LG), harness side; and between seat control switch C3026-K, circuit 988 (YE/LG), harness side and ground.  A0049765 • **Is the resistance less than 5 ohms between the power seat motor and the seat control switch, and greater than 10,000 ohms between the seat control switch and ground?**	**Yes** INSTALL a new seat control switch. REFER to Seat Control Switch — 8-Way in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR circuit 988 (YE/LG). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
G9	**CHECK THE VOLTAGE TO FRONT HEIGHT MOTOR — PASSENGER SEAT**	
	• Disconnect: Power Seat Motor C3074.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

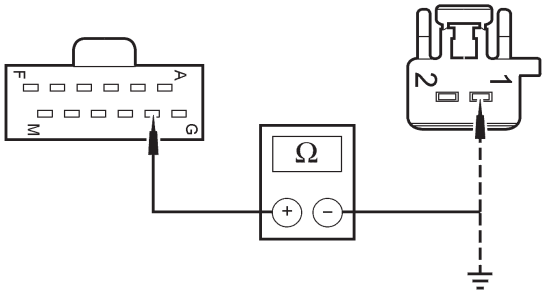
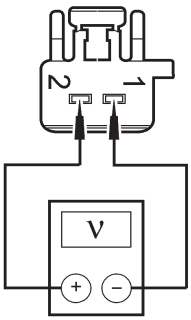
PINPOINT TEST G: THE POWER SEAT DOES NOT MOVE HORIZONTALLY/VERTICALLY/RECLINE — PASSENGER SIDE, NAVIGATOR (Continued)

Test Step		Result / Action to Take
G9	**CHECK THE VOLTAGE TO FRONT HEIGHT MOTOR — PASSENGER SEAT (Continued)**	
	• Measure the voltage between front height power seat motor C3074-2, circuit 985 (RD/LB), harness side and C3074-1, circuit 984 (YE/LB), harness side while pushing the rear tilting switch up and down.  A0049753 • **Is the voltage greater than +10 volts when the front tilt switch is pressed up, greater than -10 volts when the front tilt switch is pressed down and 0 volts when the switch is in the rest position?**	**Yes** INSTALL a new front height power seat motor. REFER to Front Seat Track Motor in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **G10**.
G10	**CHECK CIRCUIT 985 (RD/LB) FOR AN OPEN AND A SHORT TO GROUND**	
	• Disconnect: Seat Control Switch C3026. • Measure the resistance between seat control switch C3026-G, circuit 985 (RD/LB), harness side and front height power seat motor C3074-2, circuit 985 (RD/LB), harness side; and between seat control switch C3026-G, circuit 985 (RD/LB), harness side and ground.  A0049766 • **Is the resistance less than 5 ohms between the power seat motor and the seat control switch, and greater than 10,000 ohms between the seat control switch and ground?**	**Yes** GO to **G11**. **No** REPAIR circuit 985 (RD/LB). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

(Continued)

DIAGNOSIS AND TESTING (Continued)

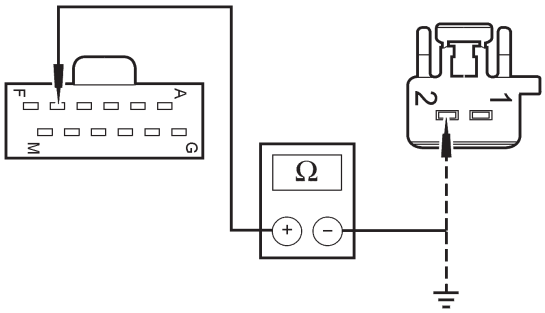
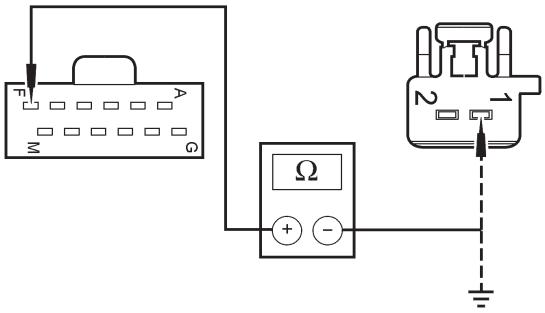
PINPOINT TEST G: THE POWER SEAT DOES NOT MOVE HORIZONTALLY/VERTICALLY/RECLINE — PASSENGER SIDE, NAVIGATOR (Continued)

Test Step		Result / Action to Take
G11	**CHECK CIRCUIT 984 (YE/LB) FOR AN OPEN**	
	• Measure the resistance between seat control switch C3026-H, circuit 984 (YE/LB), harness side and front height power seat motor C3074-1, circuit 984 (YE/LB), harness side; and between seat control switch C3026-H, circuit 984 (YE/LB), harness side and ground.  A0049767 • **Is the resistance less than 5 ohms between the power seat motor and the seat control switch, and greater than 10,000 ohms between the seat control switch and ground?**	**Yes** INSTALL a new seat control switch. REFER to Seat Control Switch — 8-Way in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR circuit 984 (YE/LB). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
G12	**CHECK THE VOLTAGE TO THE RECLINER MOTOR — PASSENGER SEAT**	
	• Disconnect: Recliner Motor C3189. • Measure the voltage between recliner motor C3189-2, circuit 919 (GY/BK), harness side and C3189-1, circuit 918 (GY), harness side while depressing the recliner switch up and down.  A0049753 • **Is the voltage greater than +10 volts when the recliner switch is pressed up, greater than -10 volts when the recliner switch is pressed down and 0 volts when the switch is in the rest position?**	**Yes** INSTALL a new recliner power seat motor. REFER to Front Seat Recliner Motor in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **G13**.
G13	**CHECK CIRCUIT 919 (GY/BK) FOR AN OPEN AND A SHORT TO GROUND**	
	• Disconnect: Seat Control Switch C3026.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST G: THE POWER SEAT DOES NOT MOVE HORIZONTALLY/VERTICALLY/RECLINE — PASSENGER SIDE, NAVIGATOR (Continued)

Test Step		Result / Action to Take
G13	**CHECK CIRCUIT 919 (GY/BK) FOR AN OPEN AND A SHORT TO GROUND (Continued)**	
	• Measure the resistance between seat control switch C3026-E, circuit 919 (GY/BK), harness side and power recliner seat motor C3189-2, circuit 919 (GY/BK), harness side; and between seat control switch C3026-E, circuit 919 (GY/BK), and ground.  A0049984 • **Is the resistance less than 5 ohms between the power recliner seat motor and the seat control switch, and greater than 10,000 ohms between the seat control switch and ground?**	**Yes** GO to **G14**. **No** REPAIR circuit 919 (GY/BK). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
G14	**CHECK CIRCUIT 918 (GY) FOR AN OPEN AND A SHORT TO GROUND**	
	• Measure the resistance between seat control switch C3026-F, circuit 918 (GY), harness side and power recline seat motor C3075-1, circuit 918 (GY), harness side; and between seat control switch C3026-F, circuit 918 (GY), harness side and ground.  A0049985 • **Is the resistance less than 5 ohms between the power recline seat motor and the seat control switch, and greater than 10,000 ohms between the seat control switch and ground?**	**Yes** INSTALL a new seat control switch. REFER to Seat Control Switch — 8-Way in this section. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR circuit 918 (GY). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

DIAGNOSIS AND TESTING (Continued)

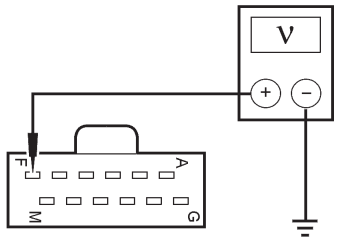
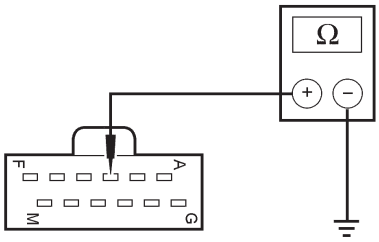
PINPOINT TEST H: THE MEMORY SEAT IS INOPERATIVE — NAVIGATOR

Test Step		Result / Action to Take
H1	**RETRIEVE THE DTCS**	
	WARNING: The restraint system diagnostic tool is for restraint system service only. Remove from vehicle prior to road use. Failure to remove could result in injury and possible violation of vehicle safety standards. **NOTE:** If a seat equipped with a seat mounted side air bag and/or a safety belt pretensioner (if equipped) system is being serviced, **the supplemental restraint system (SRS) must be depowered.** Refer to Section 501-20B. **NOTE:** The SRS must be fully operational and free of faults before releasing the vehicle to the customer. • Depower the SRS. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in the General Procedures portion of Section 501-20B. • Disconnect the driver seat safety belt buckle pretensioner C3201. • Connect restraint system diagnostic tool 418-133 to the driver seat safety belt buckle pretensioner C3201. • **WARNING: Be sure that nobody is in the vehicle and that there is nothing blocking or set in front of any air bag module when the battery ground cable is connected.** Connect the battery ground cable. • Connect the scan tool. • Enter the following diagnostic mode on the scan tool: Retrieve and Document Continuous DTCs. • Enter the following diagnostic mode on the scan tool: Clear the Continuous DTCs. • Enter the following diagnostic mode on the scan tool: On-Demand Self-Test. • **Are any DTCs retrieved?**	**Yes** If DTCs B1663, B1664, B1665 and B1666 are all retrieved, GO to **H10**. If DTC B1663, GO to **H20**. If DTC B1664, GO to **H23**. If DTC B1665, GO to **H26**. If DTC B1666, GO to **H29**. If DTC B1703, GO to **H3**. If DTC B1707, GO to **H3**. If DTC B1711, GO to **H3**. If DTC B1715, GO to **H3**. If DTC B1719, GO to **H3**. If DTC B1723, GO to **H3**. If DTC B1727, GO to **H3**. If DTC B1731, GO to **H3**. If DTC B1342, INSTALL a new DSM. REFER to Section 419-10. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **H2**.
H2	**CHECK THE DSM FOR CORRECT MEMORY SEAT SWITCH INPUTS — MONITOR THE DSM PIDS SFNT__SW, SREARSW, SFWS__SW AND SRCL__SW**	
	• Enter the following diagnostic mode on the scan tool: Monitor PIDs. Monitor the PIDs SFNT__SW, SREARSW, SFWS__SW and SRCLSW while activating the seat switch. • **Do the PID values agree with the switch positions?**	**Yes** GO to **H9**. **No** If Power Distribution Junction Box (PDJB) fuse 3 (7.5A) fails while operating the seat control switch, DISCONNECT the seat control switch C3016 and GO to **H7**. If PDJB fuse 3 (7.5A) is OK, GO to **H3**.
H3	**CHECK THE SEAT CONTROL SWITCH**	
	• Key in OFF position. • Disconnect: Seat Control Switch C3016. • Check the seat control switch. For additional information, refer to Refer to Wiring Diagrams Cell 149 for component testing. • **Is the seat control switch OK?**	**Yes** GO to **H4**. **No** INSTALL a new seat control switch. REFER to Seat Control Switch — 8-Way in this section. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST H: THE MEMORY SEAT IS INOPERATIVE — NAVIGATOR (Continued)

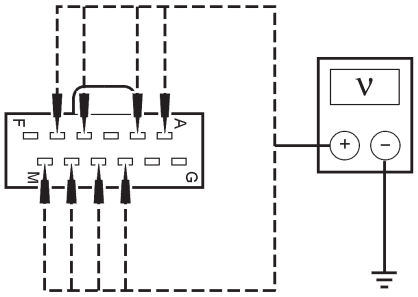
Test Step		Result / Action to Take
H4	**CHECK FOR VOLTAGE TO THE SEAT CONTROL SWITCH — CIRCUIT 956 (OG/LG)**	
	• Measure the voltage between seat control switch C3016-F, circuit 956 (OG/LG), harness side and ground.  A0050068 • **Is the voltage greater than 10 volts?**	**Yes** GO to **H5**. **No** REPAIR circuit 956 (OG/LG). CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
H5	**CHECK CIRCUIT 875 (BK/LB) FOR AN OPEN**	
	• Measure the resistance between seat control switch C3016-C, circuit 875 (BK/LB), harness side and ground.  A0050069 • **Is the resistance less than 5 ohms?**	**Yes** GO to **H6**. **No** REPAIR circuit 875 (BK/LB). CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
H6	**CHECK CIRCUITS 1468, 1467, 1466, 1463, 1465, 1464, 456 AND 457 FOR A SHORT TO POWER**	
	• Disconnect: Driver Seat Module (DSM) C341b. • Key in ON position. • Measure the voltage between the following seat control switch C3016 pins, harness side and ground.	

Connector C3016	Circuit
Pin M	1463 (RD/WH)
Pin D	1466 (GY/OG)
Pin J	1467 (GY/WH)
Pin E	1465 (GY/WH)
Pin K	1468 (GY/LB)
Pin L	1464 (YE)
Pin B	456 (DG/OG)
Pin A	457 (DB/YE)

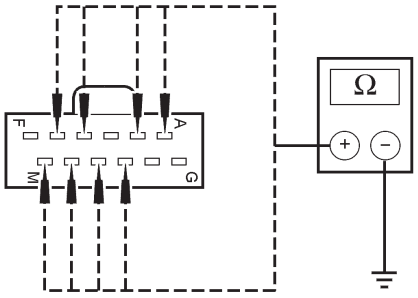
(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST H: THE MEMORY SEAT IS INOPERATIVE — NAVIGATOR (Continued)

Test Step		Result / Action to Take
H6	**CHECK CIRCUITS 1468, 1467, 1466, 1463, 1465, 1464, 456 AND 457 FOR A SHORT TO POWER (Continued)**	
	 A0050489 • **Is any voltage indicated?**	**Yes** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to H7.
H7	**CHECK CIRCUITS 1468, 1467, 1466, 1463, 1465, 1464, 456 AND 457 FOR A SHORT TO GROUND**	
	• Key in OFF position. • Measure the resistance between the following seat control switch C3016 pins, harness side and ground.	

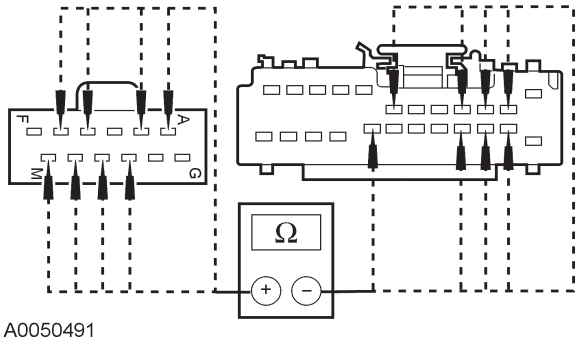
Connector C3016	Circuit
Pin M	1463 (RD/WH)
Pin D	1466 (GY/OG)
Pin J	1467 (GY/WH)
Pin E	1465 (GY/WH)
Pin K	1468 (GY/LB)
Pin L	1464 (YE)
Pin B	456 (DG/OG)
Pin A	457 (DB/YE)

	 A0050490 • **Are the resistances greater than 10,000 ohms?**	**Yes** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to H8.
H8	**CHECK CIRCUITS 1468, 1467, 1466, 1463, 1465, 1464, 456 AND 457 FOR AN OPEN**	
	• Measure the resistance between the following seat control switch C3016 pins, harness side and driver seat module (DSM) C341b pins, harness side.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST H: THE MEMORY SEAT IS INOPERATIVE — NAVIGATOR (Continued)

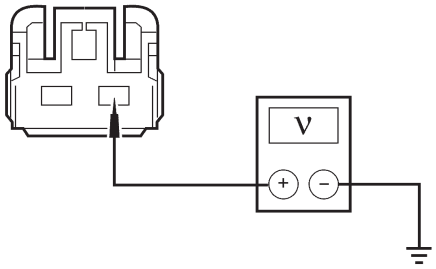
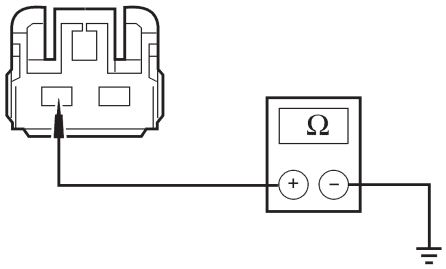
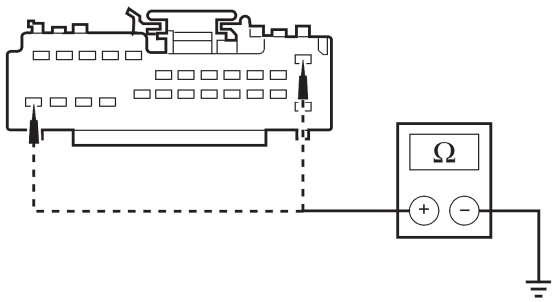
<table>
<tr><th colspan="2">Test Step</th><th>Result / Action to Take</th></tr>
<tr><td>H8</td><td>CHECK CIRCUITS 1468, 1467, 1466, 1463, 1465, 1464, 456 AND 457 FOR AN OPEN (Continued)</td><td rowspan="2">Yes
INSTALL a new DSM. REFER to Section 419-10. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
No
REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.</td></tr>
<tr><td colspan="2">
<table>
<tr><th>Seat Control Switch C3016</th><th>Circuit</th><th>Driver Seat Module (DSM) C341b</th></tr>
<tr><td>Pin M</td><td>1463 (RD/WH)</td><td>Pin 7</td></tr>
<tr><td>Pin D</td><td>1466 (GY/OG)</td><td>Pin 14</td></tr>
<tr><td>Pin J</td><td>1467 (GY/WH)</td><td>Pin 3</td></tr>
<tr><td>Pin E</td><td>1465 (GY/WH)</td><td>Pin 15</td></tr>
<tr><td>Pin K</td><td>1468 (GY/LB)</td><td>Pin 4</td></tr>
<tr><td>Pin L</td><td>1464 (YE)</td><td>Pin 16</td></tr>
<tr><td>Pin B</td><td>456 (DG/OG)</td><td>Pin 20</td></tr>
<tr><td>Pin A</td><td>457 (DB/YE)</td><td>Pin 2</td></tr>
</table>


A0050491
• Are the resistances less than 5 ohms?
</td></tr>
<tr><td>H9</td><td>CHECK THE DRIVER SEAT MODULE (DSM) FOR CORRECT OUTPUTS USING SCAN TOOL DSM ACTIVE COMMANDS</td><td rowspan="2">Yes
INSTALL a new DSM. REFER to Section 419-10. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
No
If no seat movement, GO to H10.
If no front vertical seat movement, GO to H20.
If no rear vertical seat movement, GO to H23.
If no horizontal seat movement, GO to H26.
If no recline seat movement, GO to H29.</td></tr>
<tr><td colspan="2">• Enter the following diagnostic mode on the scan tool: Active Commands.
Toggle the following DSM active commands:
— FRONT UP on and off.
— FRONT DWN on and off.
— REAR UP on and off.
— REAR DWN on and off.
— HORZ FWD on and off.
— HORZ RWD on and off.
— RECL FWD on and off.
— RECL RWD on and off.
• Does the driver seat operate correctly?</td></tr>
<tr><td>H10</td><td>CHECK THE DRIVER SEAT MODULE (DSM) FOR VOLTAGE — CIRCUIT 566 (DG)</td><td rowspan="2"></td></tr>
<tr><td colspan="2">• Key in OFF position.
• Disconnect: Driver Seat Module (DSM) C341a.</td></tr>
</table>

(Continued)

DIAGNOSIS AND TESTING (Continued)

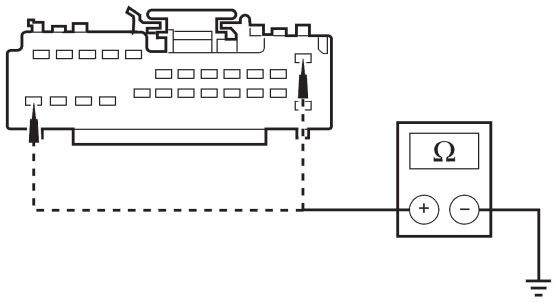
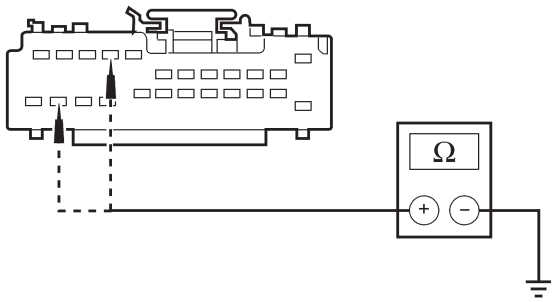
PINPOINT TEST H: THE MEMORY SEAT IS INOPERATIVE — NAVIGATOR (Continued)

Test Step		Result / Action to Take
H10	**CHECK THE DRIVER SEAT MODULE (DSM) FOR VOLTAGE — CIRCUIT 566 (DG) (Continued)**	
	• Measure the voltage between driver seat module (DSM) C341a-1, circuit 566 (DG), harness side and ground.  A0042092 • **Is the voltage greater than 10 volts?**	**Yes** GO to **H11**. **No** REPAIR circuit 566 (DG). CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
H11	**CHECK CIRCUIT 57 (BK) FOR AN OPEN**	
	• Measure the resistance between driver seat module (DSM) C341a-2, circuit 57 (BK), harness side and ground.  A0042093 • **Is the resistance less than 5 ohms?**	**Yes** GO to **H12**. **No** REPAIR circuit 57 (BK). CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
H12	**CHECK CIRCUITS 1469 (RD/LB) AND 1470 (YE/LB) FOR A SHORT TO GROUND**	
	• Disconnect: Driver Seat Module (DSM) C341b. • Measure the resistance between driver seat module (DSM) C341b-1, circuit 1469 (RD/LB), harness side and ground; and between DSM C341b-24, circuit 1470 (YE/LB), harness side and ground.  A0042094 • **Are the resistances greater than 10,000 ohms?**	**Yes** GO to **H14**. **No** GO to **H13**.

(Continued)

DIAGNOSIS AND TESTING (Continued)

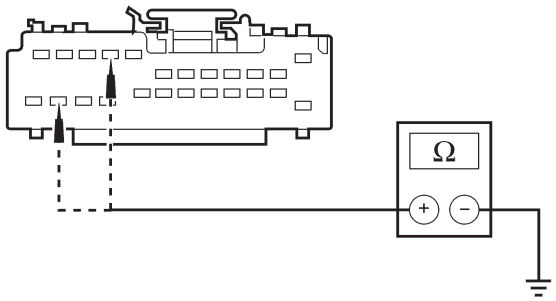
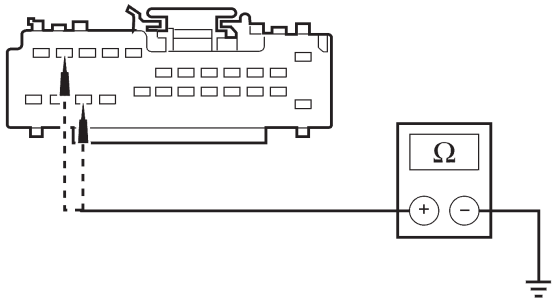
PINPOINT TEST H: THE MEMORY SEAT IS INOPERATIVE — NAVIGATOR (Continued)

Test Step		Result / Action to Take
H13	**CHECK FRONT HEIGHT MOTOR FOR A SHORT TO GROUND — CIRCUITS 1469 (RD/LB) AND 1470 (YE/LB)**	
	• Disconnect: Driver Seat Module (DSM) C341b. • Disconnect: Front Height Power Seat Motor C382. • Measure the resistance between driver seat module (DSM) C341b-1, circuit 1469 (RD/LB), harness side and ground; and between DSM C341b-24, circuit 1470 (YE/LB), harness side and ground.  A0042094 • **Are the resistances greater than 10,000 ohms?**	**Yes** INSTALL a new front height power seat motor. REFER to Front Seat Track Motor in this section. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
H14	**CHECK CIRCUITS 1474 (RD/LG) AND 1473 (YE/LG) FOR A SHORT TO GROUND**	
	• Measure the resistance between driver seat module (DSM) C341b-9, circuit 1474 (RD/LG), harness side and ground; and between DSM C341b-23, circuit 1473 (YE/LG), harness side and ground.  A0042095 • **Are the resistances greater than 10,000 ohms?**	**Yes** GO to **H16**. **No** GO to **H15**.

(Continued)

DIAGNOSIS AND TESTING (Continued)

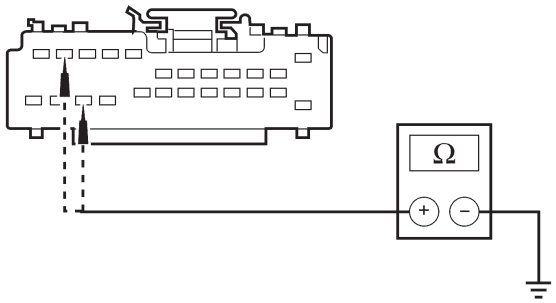
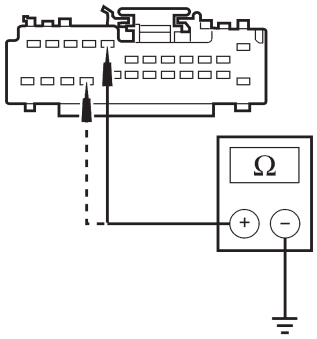
PINPOINT TEST H: THE MEMORY SEAT IS INOPERATIVE — NAVIGATOR (Continued)

Test Step		Result / Action to Take
H15	**CHECK THE REAR HEIGHT MOTOR FOR A SHORT TO GROUND — CIRCUITS 1474 (RD/LG) AND 1473 (YE/LG)**	
	• Disconnect: Rear Height Power Seat Motor C363. • Measure the resistance between driver seat module (DSM) C341b-9, circuit 1474 (RD/LG), harness side and ground; and between DSM C341b-23, circuit 1473 (YE/LG), harness side and ground.  A0042095 • **Are the resistances greater than 10,000 ohms?**	**Yes** INSTALL a new rear height power seat motor. REFER to Front Seat Track Motor in this section. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
H16	**CHECK CIRCUITS 1472 (YE/WH) AND 1471 (RD/WH) FOR A SHORT TO GROUND**	
	• Measure the resistance between driver seat module (DSM) C341b-22, circuit 1472 (YE/WH), harness side and ground; and between DSM C341b-11, circuit 1471 (RD/WH), harness side and ground.  A0042096 • **Are the resistances greater than 10,000 ohms?**	**Yes** GO to **H18**. **No** GO to **H17**.

(Continued)

DIAGNOSIS AND TESTING (Continued)

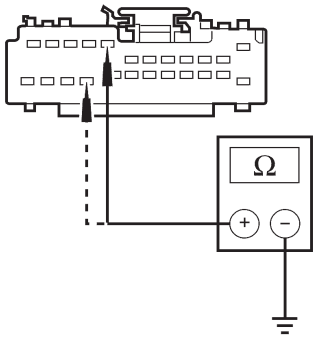
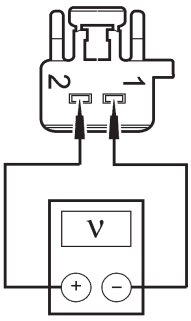
PINPOINT TEST H: THE MEMORY SEAT IS INOPERATIVE — NAVIGATOR (Continued)

Test Step		Result / Action to Take
H17	**CHECK THE HORIZONTAL MOTOR FOR A SHORT TO GROUND — CIRCUITS 1472 (YE/WH) AND 1471 (RD/WH)**	
	• Disconnect: Horizontal Power Seat Motor C362. • Measure the resistance between driver seat module (DSM) C341b-22, circuit 1472 (YE/WH), harness side and ground; and between DSM C341b-11, circuit 1471 (RD/WH), harness side and ground.  A0042096 • **Are the resistances greater than 10,000 ohms?**	**Yes** INSTALL a new horizontal power seat motor. REFER to Front Seat Track Motor in this section. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
H18	**CHECK CIRCUITS 918 (GY) AND 919 (GY/BK) FOR A SHORT TO GROUND**	
	• Measure the resistance between driver seat module (DSM) C341b-8, circuit 918 (GY), harness side and ground; and between DSM C341b-21, circuit 919 (GY/BK) harness side and ground.  A0050492 • **Are the resistances greater than 10,000 ohms?**	**Yes** INSTALL a new DSM. REFER to Section 419-10. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **H19**.

(Continued)

DIAGNOSIS AND TESTING (Continued)

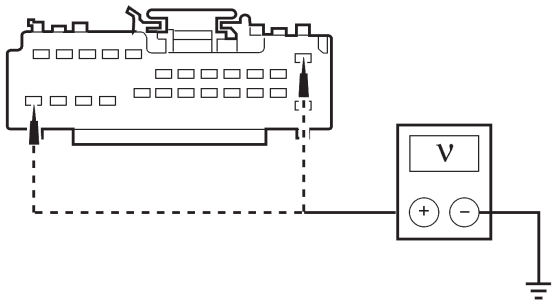
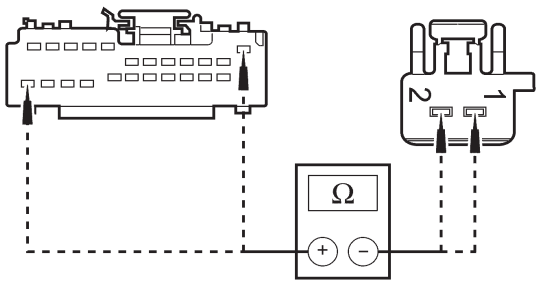
PINPOINT TEST H: THE MEMORY SEAT IS INOPERATIVE — NAVIGATOR (Continued)

Test Step		Result / Action to Take
H19	**CHECK THE RECLINER MOTOR FOR A SHORT TO GROUND — CIRCUITS 918 (GY) AND 919 (GY/BK)**	
	• Disconnect: Power Recliner Seat Motor C3187. • Measure the resistance between driver seat module (DSM) C341b-8, circuit 918 (GY), harness side and ground; and between DSM C341b-21, circuit 919 (GY/BK), harness side and ground.  A0050492 • **Are the resistances greater than 10,000 ohms?**	**Yes** INSTALL a new recliner power seat motor. REFER to Front Seat Recliner Motor in this section. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
H20	**CHECK THE FRONT HEIGHT MOTOR FOR CORRECT OPERATION**	
	• Key in OFF position. • Disconnect: Front Height Power Seat Motor C382. • Key in ON position. • Measure the voltage between front height power seat motor C382-1, circuit 1469 (RD/LB), and C382-2, circuit 1470 (YE/LB), harness side while toggling DSM active commands FRONT UP and FRONT DOWN on and off.  A0049753 • **Does the voltage change from zero volts?**	**Yes** INSTALL a new front height power seat motor. REFER to Front Seat Track Motor in this section. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **H21**.
H21	**CHECK CIRCUITS 1469 (RD/LB) AND 1470 (YE/LB) FOR A SHORT TO POWER**	
	• Key in OFF position. • Disconnect: Driver Seat Module (DSM) C341b. • Key in ON position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

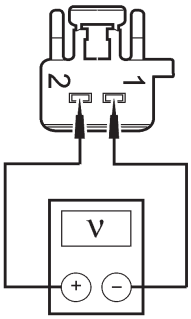
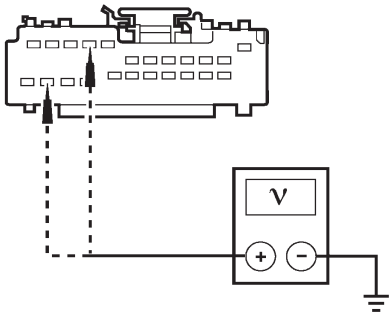
PINPOINT TEST H: THE MEMORY SEAT IS INOPERATIVE — NAVIGATOR (Continued)

Test Step		Result / Action to Take
H21	**CHECK CIRCUITS 1469 (RD/LB) AND 1470 (YE/LB) FOR A SHORT TO POWER (Continued)**	
	• Measure the voltage between driver seat module (DSM) C341b-1, circuit 1469 (RD/LB), harness side and ground; and between DSM C341b-24, circuit 1470 (YE/LB), harness side and ground.  A0042097 • **Is any voltage indicated?**	**Yes** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **H22**.
H22	**CHECK CIRCUITS 1469 (RD/LB) AND 1470 (YE/LB) FOR AN OPEN**	
	• Key in OFF position. • Measure the resistance between driver seat module (DSM) C341b-1, circuit 1469 (RD/LB), harness side and front height power seat motor C382-1, circuit 1469 (RD/LB), harness side; and between DSM C341b-24, circuit 1470 (YE/LB), harness side and front height power seat motor C382-2 circuit 1470 (YE/LB), harness side.  A0050493 • **Are the resistances less than 5 ohms?**	**Yes** INSTALL a new DSM. REFER to Section 419-10. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
H23	**CHECK THE REAR HEIGHT MOTOR FOR CORRECT OPERATION**	
	• Key in OFF position. • Disconnect: Rear Height Power Seat Motor C363. • Key in ON position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

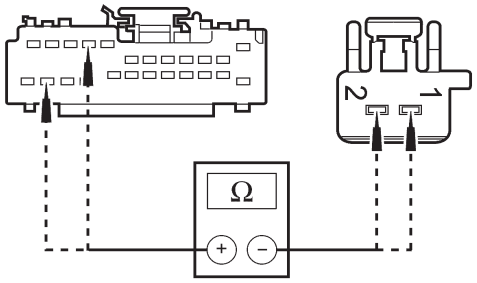
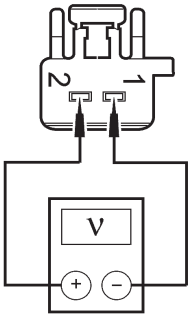
PINPOINT TEST H: THE MEMORY SEAT IS INOPERATIVE — NAVIGATOR (Continued)

Test Step		Result / Action to Take
H23	**CHECK THE REAR HEIGHT MOTOR FOR CORRECT OPERATION (Continued)**	
	• Measure the voltage between rear height power seat motor C363-1, circuit 1474 (RD/LG), harness side and C363-2, circuit 1473 (YE/LG), harness side while toggling DSM active commands REAR UP and REAR DOWN ON and OFF.  A0049753 • **Does the voltage change from zero volts?**	**Yes** INSTALL a new rear height power seat motor. REFER to Front Seat Track Motor in this section. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **H24**.
H24	**CHECK CIRCUITS 1474 (RD/LG) AND 1473 (YE/LG) FOR A SHORT TO POWER**	
	• Key in OFF position. • Disconnect: Driver Seat Module (DSM) C341b. • Key in ON position. • Measure the voltage between driver seat module (DSM) C341b-9, circuit 1474 (RD/LG), harness side and ground; and between DSM C341b-23, circuit 1473 (YE/LG), harness side and ground.  A0042099 • **Is any voltage indicated?**	**Yes** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **H25**.
H25	**CHECK CIRCUITS 1474 (RD/LG) AND 1473 (YE/LG) FOR AN OPEN**	
	• Key in OFF position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

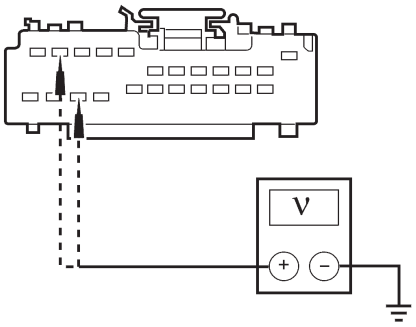
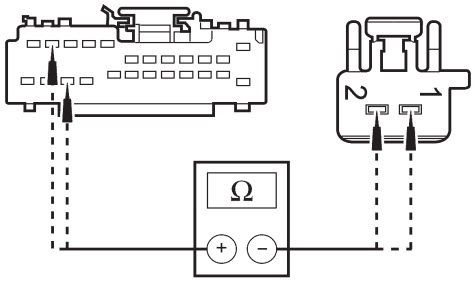
PINPOINT TEST H: THE MEMORY SEAT IS INOPERATIVE — NAVIGATOR (Continued)

Test Step		Result / Action to Take
H25	**CHECK CIRCUITS 1474 (RD/LG) AND 1473 (YE/LG) FOR AN OPEN (Continued)**	
	• Measure the resistance between driver seat module (DSM) C341b-9, circuit 1474 (RD/LG), harness side and rear height power seat motor C363-1, circuit 1474 (RD/LG), harness side; and between DSM C341b-23, circuit 1473 (YE/LG), harness side and rear height power seat motor C363-2, circuit 1473 (YE/LG), harness side.  A0050494 • **Are the resistances less than 5 ohms?**	**Yes** INSTALL a new DSM. REFER to Section 419-10. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
H26	**CHECK THE HORIZONTAL MOTOR FOR CORRECT OPERATION**	
	• Key in OFF position. • Disconnect: Horizontal Power Seat Motor C362. • Key in ON position. • Measure the voltage between horizontal power seat motor C362-2, circuit 1472 (YE/WH), and C362-1, circuit 1471 (RD/WH), harness side while toggling DSM active commands HORZ FWD and HORZ RWD ON and OFF.  A0049753 • **Does the voltage change from zero volts?**	**Yes** CONNECT horizontal power seat motor C362 and OPERATE the motor in both directions using the seat control switch. NOTE if the motor torques (motor attempts to operate but the seat track does not move). If the motor torques, the seat track is stuck. FREE the seat track and INSTALL a new memory seat position sensor. REFER to Memory Seat Position Sensor in this section. If the motor does not torque, INSTALL a new horizontal power seat motor. REFER to Front Seat Track Motor — Memory Seat in this section. REPEAT the self-test. CLEAR the DTCs. DISCONNECT the battery ground cable. CONNECT the driver safety belt buckle pretensioner C3201. REPOWER the SRS. REFER to Section 501-20B. **No** GO to **H27**.
H27	**CHECK CIRCUITS 1472 (YE/WH) AND 1471 (RD/WH) FOR A SHORT TO POWER**	
	• Key in OFF position. • Disconnect: Driver Seat Module (DSM) C341b. • Key in ON position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

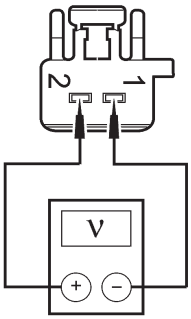
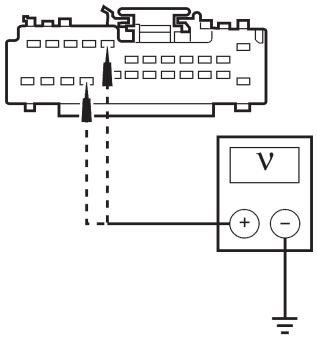
PINPOINT TEST H: THE MEMORY SEAT IS INOPERATIVE — NAVIGATOR (Continued)

Test Step		Result / Action to Take
H27	**CHECK CIRCUITS 1472 (YE/WH) AND 1471 (RD/WH) FOR A SHORT TO POWER (Continued)**	
	• Measure the voltage between driver seat module (DSM) C341b-22, circuit 1472 (YE/WH), harness side and ground; and between DSM C341b-11, circuit 1471 (RD/WH), harness side and ground.  A0042101 • **Is any voltage indicated?**	**Yes** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **H28**.
H28	**CHECK CIRCUITS 1472 (YE/WH) AND 1471 (RD/WH) FOR AN OPEN**	
	• Key in OFF position. • Measure the resistance between driver seat module (DSM) C341b-22, circuit 1472 (YE/WH), harness side and horizontal power seat motor C362-2, circuit 1472 (YE/WH), harness side; and between DSM C341b-11, circuit 1471 (RD/WH), harness side and horizontal power seat motor C362-1, circuit 1471 (RD/WH), harness side.  A0050495 • **Are the resistances less than 5 ohms?**	**Yes** INSTALL a new DSM. REFER to Section 419-10. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
H29	**CHECK THE RECLINER MOTOR FOR CORRECT OPERATION**	
	• Key in OFF position. • Disconnect: Power Recliner Seat Motor C3187. • Key in ON position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

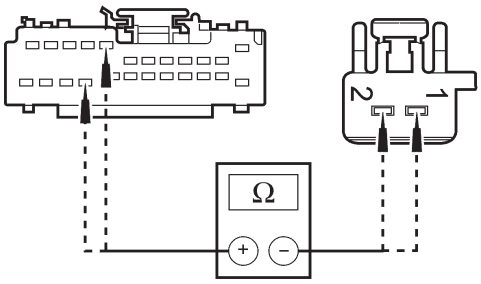
PINPOINT TEST H: THE MEMORY SEAT IS INOPERATIVE — NAVIGATOR (Continued)

Test Step		Result / Action to Take
H29	**CHECK THE RECLINER MOTOR FOR CORRECT OPERATION (Continued)**	
	• Measure the voltage between recliner power seat motor C3187-1, circuit 918 (GY), and C3187-2, circuit 919 (GY/BK), harness side while toggling DSM active commands RECLINE FWD and RECLINE RWD ON and OFF.  A0049753 • **Does the voltage change from zero volts?**	**Yes** INSTALL a new power recliner seat motor. REFER to Front Seat Recliner Motor in this section. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **H30**.
H30	**CHECK CIRCUITS 918 (GY) AND 919 (GY/BK) FOR A SHORT TO POWER**	
	• Key in OFF position. • Disconnect: Driver Seat Module (DSM) C341b. • Key in ON position. • Measure the voltage between driver seat module (DSM) C341b-8, circuit 918 (GY), harness side and ground; and between DSM C341b-21, circuit 919 (GY/BK), harness side and ground.  A0050496 • **Is any voltage indicated?**	**Yes** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **H31**.
H31	**CHECK CIRCUITS 918 (GY) AND 919 (GY/BK) FOR AN OPEN**	
	• Key in OFF position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST H: THE MEMORY SEAT IS INOPERATIVE — NAVIGATOR (Continued)

Test Step		Result / Action to Take
H31	**CHECK CIRCUITS 918 (GY) AND 919 (GY/BK) FOR AN OPEN (Continued)**	
	• Measure the resistance between driver seat module (DSM) C341b-8, circuit 918 (GY), harness side and recliner power seat motor C3187-1, circuit 918 (GY), harness side; and between DSM C341b-21, circuit 919 (GY/BK), harness side and recliner power seat motor C3187-2, circuit 919 (GY/BK), harness side.  A0050497 • **Are the resistances less than 5 ohms?**	**Yes** INSTALL a new DSM. REFER to Section 419-10. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

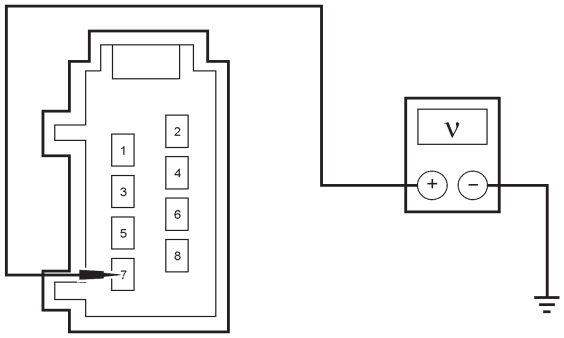
PINPOINT TEST I: THE MEMORY SEAT IS INOPERATIVE — EXPEDITION

Test Step		Result / Action to Take
I1	**RETRIEVE THE DTCS**	
	WARNING: The restraint system diagnostic tool is for restraint system service only. Remove from vehicle prior to road use. Failure to remove could result in injury and possible violation of vehicle safety standards. **NOTE:** If a seat equipped with a seat mounted side air bag and/or a safety belt pretensioner (if equipped) system is being serviced, **the supplemental restraint system (SRS) must be depowered.** Refer to Section 501-20B. **NOTE:** The SRS must be fully operational and free of faults before releasing the vehicle to the customer. • Depower the SRS. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in the General Procedures portion of Section 501-20B. • Disconnect the driver seat safety belt buckle pretensioner C3201. • Connect restraint system diagnostic tool 418-133 to the driver seat safety belt buckle pretensioner C3201. • **WARNING: Be sure that nobody is in the vehicle and that there is nothing blocking or set in front of any air bag module when the battery ground cable is connected.** Connect the battery ground cable. • Connect the scan tool. • Enter the following diagnostic mode on the scan tool: Retrieve and Document Continuous DTCs. • Enter the following diagnostic mode on the scan tool: Clear the Continuous DTCs. • Enter the following diagnostic mode on the scan tool: On-Demand Self-Test. • **Are any DTCs retrieved?**	**Yes** If DTCs B1663, B1664, and B1665 are all retrieved, GO to **I10**. If DTC B1663, GO to **I18**. If DTC B1664,. If DTC B1665, GO to **I24**. If DTC B1711, GO to **I3**. If DTC B1715, GO to **I3**. If DTC B1719, GO to **I3**. If DTC B1723, GO to **I3**. If DTC B1727, GO to **I3**. If DTC B1731, GO to **I3**. If DTC B1342, INSTALL a new DSM. REFER to Section 419-10. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **I2**.

(Continued)

DIAGNOSIS AND TESTING (Continued)

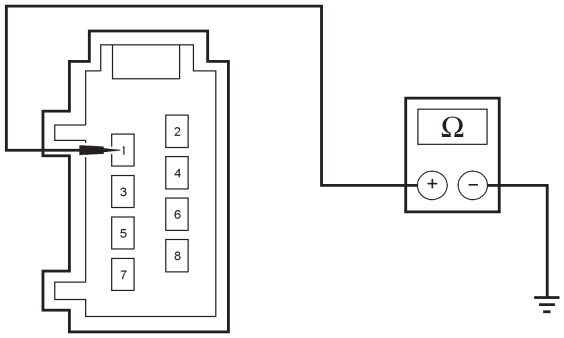
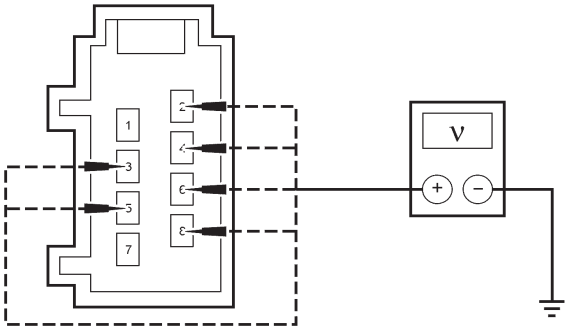
PINPOINT TEST I: THE MEMORY SEAT IS INOPERATIVE — EXPEDITION (Continued)

Test Step		Result / Action to Take
I2	**CHECK THE DSM FOR CORRECT MEMORY SEAT SWITCH INPUTS — MONITOR THE DSM PIDS SFNT__SW, SREARSW AND SFWS__SW**	
	• Enter the following diagnostic mode on the scan tool: Monitor PIDs. Monitor the PIDs SFNT__SW, SREARSW and SFWS__SW while activating the seat switch. • **Do the PID values agree with the switch positions?**	**Yes** GO to **I9**. **No** If Power Distribution Junction Box (PDJB) fuse 3 (7.5A) fails while operating the seat control switch, GO to **I7**. If PDJB fuse 3 (7.5A) is OK, GO to **I3**.
I3	**CHECK THE SEAT CONTROL SWITCH**	
	• Key in OFF position. • Disconnect: Seat Control Switch C352. • Check the seat control switch. For additional information, Refer to Wiring Diagrams Cell 149 for component testing. • **Is the seat control switch OK?**	**Yes** GO to **I4**. **No** INSTALL a new seat control switch. REFER to Seat Control Switch — 6-Way in this section. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
I4	**CHECK FOR VOLTAGE TO THE SEAT CONTROL SWITCH — CIRCUIT 956 (OG/LG)**	
	• Measure the voltage between seat control switch C352-7, circuit 956 (OG/LG), harness side and ground.  A0017520 • **Is the voltage greater than 10 volts?**	**Yes** GO to **I5**. **No** REPAIR circuit 956 (OG/LG). CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

(Continued)

DIAGNOSIS AND TESTING (Continued)

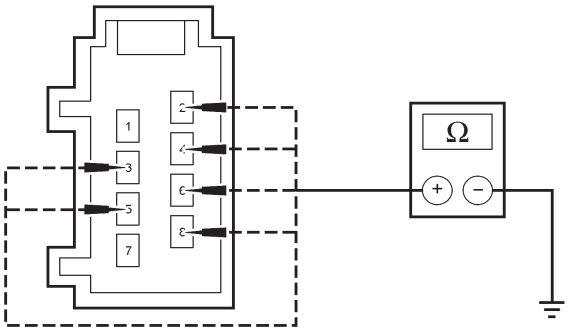
PINPOINT TEST I: THE MEMORY SEAT IS INOPERATIVE — EXPEDITION (Continued)

Test Step		Result / Action to Take
I5	**CHECK CIRCUIT 875 (BK/LB) FOR AN OPEN**	
	• Measure the resistance between seat control switch C352-1, circuit 875 (BK/LB), harness side and ground.  A0017521 • **Is the resistance less than 5 ohms?**	**Yes** GO to I6. **No** REPAIR circuit 875 (BK/LB). CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
I6	**CHECK CIRCUITS 1468, 1467, 1466, 1463, 1465 AND 1464 FOR A SHORT TO POWER**	
	• Disconnect: Driver Seat Module (DSM) C341b. • Key in ON position. • Measure the voltage between the following seat control switch C352 pins, harness side and ground. **Connector C352** Pin 2 — 1463 (RD/WH) Pin 3 — 1466 (GY/OG) Pin 4 — 1467 (GY/WH) Pin 5 — 1465 (GY/WH) Pin 6 — 1468 (GY/LB) Pin 8 — 1464 (YE)  A0017522 • **Is any voltage indicated?**	**Yes** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to I7.
I7	**CHECK CIRCUITS 1468, 1467, 1466, 1463, 1465 AND 1464 FOR A SHORT TO GROUND**	
	• Key in OFF position. • Measure the resistance between the following seat control switch C352 pins, harness side and ground.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST I: THE MEMORY SEAT IS INOPERATIVE — EXPEDITION (Continued)

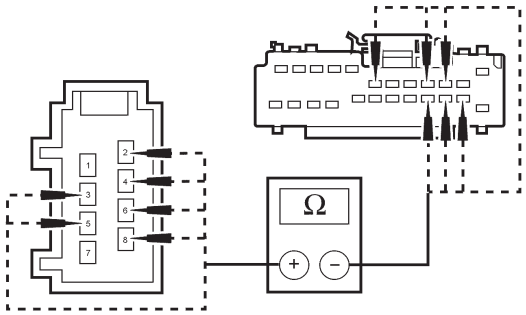
<table>
<tr><th colspan="2">Test Step</th><th>Result / Action to Take</th></tr>
<tr><td>I7</td><td>CHECK CIRCUITS 1468, 1467, 1466, 1463, 1465 AND 1464 FOR A SHORT TO GROUND (Continued)</td><td rowspan="3">Yes
REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
No
GO to I8.</td></tr>
<tr><td colspan="2">
<table>
<tr><th>Connector C352</th><th>Circuit</th></tr>
<tr><td>Pin 2</td><td>1463 (RD/WH)</td></tr>
<tr><td>Pin 3</td><td>1466 (GY/OG)</td></tr>
<tr><td>Pin 4</td><td>1467 (GY/WH)</td></tr>
<tr><td>Pin 5</td><td>1465 (GY/WH)</td></tr>
<tr><td>Pin 6</td><td>1468 (GY/LB)</td></tr>
<tr><td>Pin 8</td><td>1464 (YE)</td></tr>
</table>


A0017523
• Are the resistances greater than 10,000 ohms?
</td></tr>
<tr><td>I8</td><td>CHECK CIRCUITS 1468, 1467, 1466, 1463, 1465 AND 1464 FOR AN OPEN</td></tr>
<tr><td colspan="2">• Measure the resistance between the following seat control switch C352 pins harness side and driver seat module (DSM) C341b pins, harness side.</td><td></td></tr>
</table>

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST I: THE MEMORY SEAT IS INOPERATIVE — EXPEDITION (Continued)

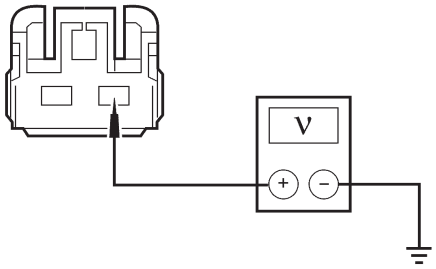
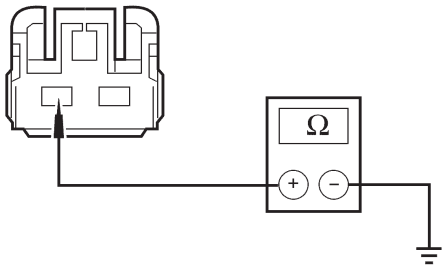
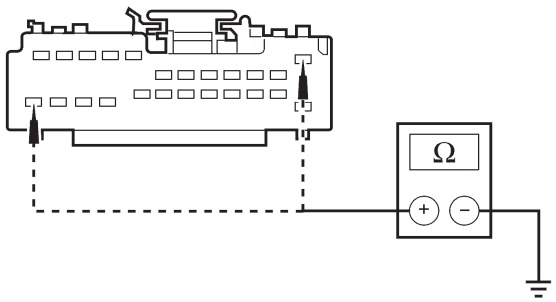
<table>
<tr><th colspan="2">Test Step</th><th>Result / Action to Take</th></tr>
<tr><td>I8</td><td>CHECK CIRCUITS 1468, 1467, 1466, 1463, 1465 AND 1464 FOR AN OPEN (Continued)</td><td rowspan="2">Yes
INSTALL a new DSM. REFER to Section 419-10. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
No
REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.</td></tr>
<tr><td colspan="2">
<table>
<tr><th>Seat Control Switch C352</th><th>Circuit</th><th>Driver Seat Module (DSM) C341b</th></tr>
<tr><td>Pin 2</td><td>1463 (RD/WH)</td><td>Pin 7</td></tr>
<tr><td>Pin 3</td><td>1466 (GY/OG)</td><td>Pin 14</td></tr>
<tr><td>Pin 4</td><td>1467 (GY/WH)</td><td>Pin 3</td></tr>
<tr><td>Pin 5</td><td>1465 (GY/WH)</td><td>Pin 15</td></tr>
<tr><td>Pin 6</td><td>1468 (GY/LB)</td><td>Pin 4</td></tr>
<tr><td>Pin 8</td><td>1464 (YE)</td><td>Pin 16</td></tr>
</table>


A0050507
• Are the resistances less than 5 ohms?
</td></tr>
<tr><td>I9</td><td>CHECK THE DRIVER SEAT MODULE (DSM) FOR CORRECT OUTPUTS USING SCAN TOOL DSM ACTIVE COMMANDS</td><td rowspan="2">Yes
INSTALL a new DSM. REFER to Section 419-10. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
No
If no seat movement, GO to I10.
If no front vertical seat movement, GO to I18.
If no rear vertical seat movement, GO to I21.
If no horizontal seat movement, GO to I24.</td></tr>
<tr><td colspan="2">• Enter the following diagnostic mode on the scan tool: Active Commands.
Toggle the following DSM active commands:
— FRONT UP on and off.
— FRONT DWN on and off.
— REAR UP on and off.
— REAR DWN on and off.
— HORZ FWD on and off.
— HORZ RWD on and off.
• Does the driver seat operate correctly?</td></tr>
<tr><td>I10</td><td>CHECK THE DRIVER SEAT MODULE (DSM) FOR VOLTAGE — CIRCUIT 566 (DG)</td><td></td></tr>
<tr><td colspan="2">• Key in OFF position.
• Disconnect: Driver Seat Module (DSM) C341a.</td><td></td></tr>
</table>

(Continued)

DIAGNOSIS AND TESTING (Continued)

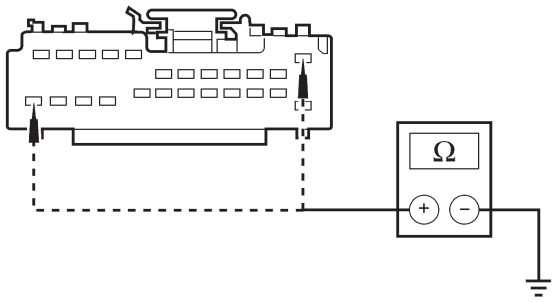
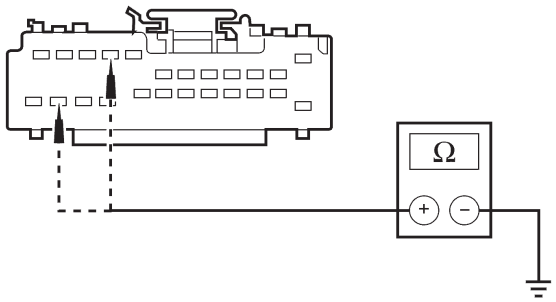
PINPOINT TEST I: THE MEMORY SEAT IS INOPERATIVE — EXPEDITION (Continued)

Test Step		Result / Action to Take
I10	**CHECK THE DRIVER SEAT MODULE (DSM) FOR VOLTAGE — CIRCUIT 566 (DG) (Continued)**	
	• Measure the voltage between driver seat module (DSM) C341a-1, circuit 566 (DG), harness side and ground.  A0042092 • **Is the voltage greater than 10 volts?**	**Yes** GO to I11. **No** REPAIR circuit 566 (DG). CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
I11	**CHECK CIRCUIT 57 (BK) FOR AN OPEN**	
	• Measure the resistance between driver seat module (DSM) C341a-2, circuit 57 (BK), harness side and ground.  A0042093 • **Is the resistance less than 5 ohms?**	**Yes** GO to I12. **No** REPAIR circuit 57 (BK). CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
I12	**CHECK CIRCUITS 1469 (RD/LB) AND 1470 (YE/LB) FOR A SHORT TO GROUND**	
	• Disconnect: Driver Seat Module (DSM) C341b. • Measure the resistance between driver seat module (DSM) C341b-1, circuit 1469 (RD/LB), harness side and ground; and between DSM C341b-24, circuit 1470 (YE/LB), harness side and ground.  A0042094 • **Are the resistances greater than 10,000 ohms?**	**Yes** GO to I14. **No** GO to I13.

(Continued)

DIAGNOSIS AND TESTING (Continued)

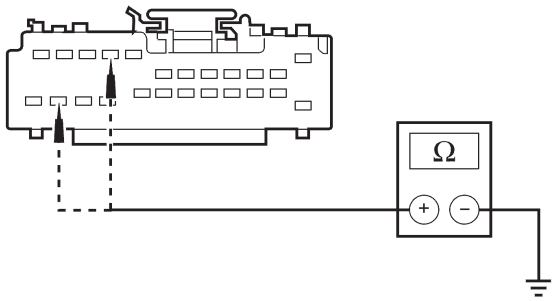
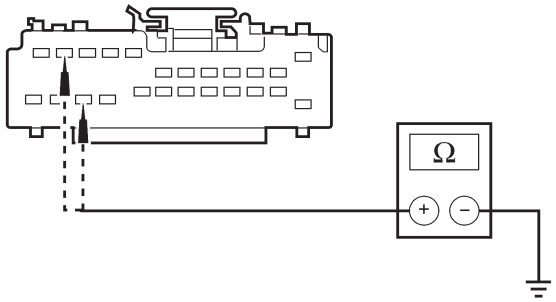
PINPOINT TEST I: THE MEMORY SEAT IS INOPERATIVE — EXPEDITION (Continued)

Test Step		Result / Action to Take
I13	**CHECK FRONT HEIGHT MOTOR FOR A SHORT TO GROUND — CIRCUITS 1469 (RD/LB) AND 1470 (YE/LB)**	
	• Disconnect: Driver Seat Module (DSM) C341b. • Disconnect: Front Height Power Seat Motor C382. • Measure the resistance between driver seat module (DSM) C341b-1, circuit 1469 (RD/LB), harness side and ground; and between DSM C341b-24, circuit 1470 (YE/LB), harness side and ground.  A0042094 • **Are the resistances greater than 10,000 ohms?**	**Yes** INSTALL a new front height power seat motor. REFER to Front Seat Track Motor in this section. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
I14	**CHECK CIRCUITS 1474 (RD/LG) AND 1473 (YE/LG) FOR A SHORT TO GROUND**	
	• Measure the resistance between driver seat module (DSM) C341b-9, circuit 1474 (RD/LG), harness side and ground; and between DSM C341b-23, circuit 1473 (YE/LG), harness side and ground.  A0042095 • **Are the resistances greater than 10,000 ohms?**	**Yes** GO to **I16**. **No** GO to **I15**.

(Continued)

DIAGNOSIS AND TESTING (Continued)

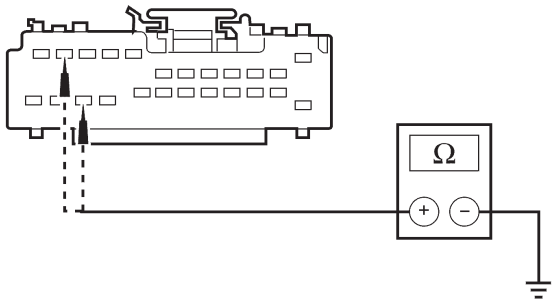
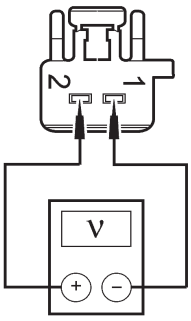
PINPOINT TEST I: THE MEMORY SEAT IS INOPERATIVE — EXPEDITION (Continued)

Test Step		Result / Action to Take
I15	**CHECK THE REAR HEIGHT MOTOR FOR A SHORT TO GROUND — CIRCUITS 1474 (RD/LG) AND 1473 (YE/LG)**	
	• Disconnect: Rear Height Power Seat Motor C363. • Measure the resistance between driver seat module (DSM) C341b-9, circuit 1474 (RD/LG), harness side and ground; and between DSM C341b-23, circuit 1473 (YE/LG), harness side and ground.  A0042095 • **Are the resistances greater than 10,000 ohms?**	**Yes** INSTALL a new rear height power seat motor. REFER to Front Seat Track Motor in this section. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
I16	**CHECK CIRCUITS 1472 (YE/WH) AND 1471 (RD/WH) FOR A SHORT TO GROUND**	
	• Measure the resistance between driver seat module (DSM) C341b-22, circuit 1472 (YE/WH), harness side and ground; and between DSM C341b-11, circuit 1471 (RD/WH), harness side and ground.  A0042096 • **Are the resistances greater than 10,000 ohms?**	**Yes** INSTALL a new DSM. REFER to Section 419-10. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **I17**.

(Continued)

DIAGNOSIS AND TESTING (Continued)

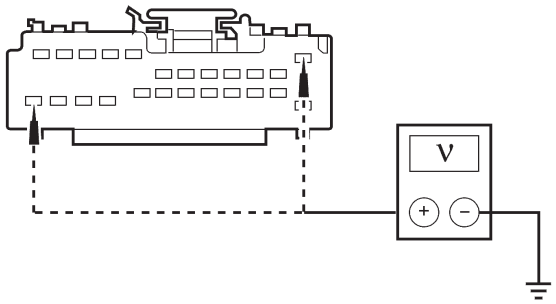
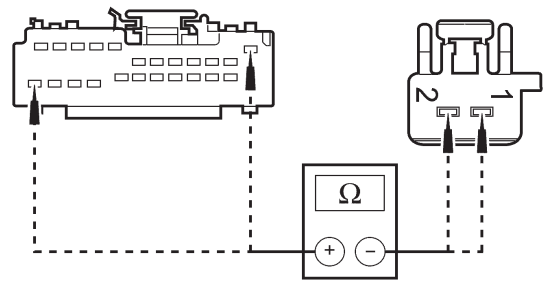
PINPOINT TEST I: THE MEMORY SEAT IS INOPERATIVE — EXPEDITION (Continued)

Test Step		Result / Action to Take
I17	**CHECK THE HORIZONTAL MOTOR FOR A SHORT TO GROUND — CIRCUITS 1472 (YE/WH) AND 1471 (RD/WH)**	
	• Disconnect: Horizontal Power Seat Motor C362. • Measure the resistance between driver seat module (DSM) C341b-22, circuit 1472 (YE/WH), harness side and ground; and between DSM C341b-11, circuit 1471 (RD/WH), harness side and ground.  A0042096 • **Are the resistances greater than 10,000 ohms?**	**Yes** INSTALL a new horizontal power seat motor. REFER to Front Seat Track Motor in this section. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
I18	**CHECK THE FRONT HEIGHT MOTOR FOR CORRECT OPERATION**	
	• Key in OFF position. • Disconnect: Front Height Power Seat Motor C382. • Key in ON position. • Measure the voltage between front height power seat motor C382-1, circuit 1469 (RD/LB), and C382-2, circuit 1470 (YE/LB), harness side while toggling DSM active commands FRONT UP and FRONT DOWN on and off.  A0049753 • **Does the voltage change from zero volts?**	**Yes** INSTALL a new front height power seat motor. REFER to Front Seat Track Motor in this section. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **I19**.
I19	**CHECK CIRCUITS 1469 (RD/LB) AND 1470 (YE/LB) FOR A SHORT TO POWER**	
	• Key in OFF position. • Disconnect: Driver Seat Module (DSM) C341b. • Key in ON position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

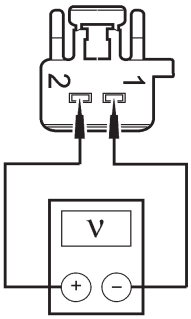
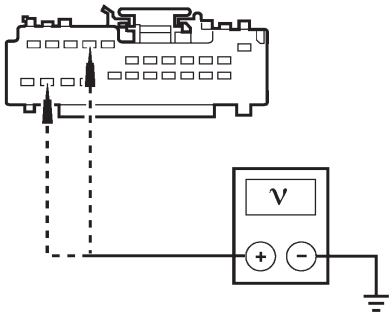
PINPOINT TEST I: THE MEMORY SEAT IS INOPERATIVE — EXPEDITION (Continued)

Test Step		Result / Action to Take
I19	**CHECK CIRCUITS 1469 (RD/LB) AND 1470 (YE/LB) FOR A SHORT TO POWER (Continued)**	
	• Measure the voltage between driver seat module (DSM) C341b-1, circuit 1469 (RD/LB), harness side and ground; and between DSM C341b-24, circuit 1470 (YE/LB), harness side and ground.  A0042097 • **Is any voltage indicated?**	**Yes** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **I20**.
I20	**CHECK CIRCUITS 1469 (RD/LB) AND 1470 (YE/LB) FOR AN OPEN**	
	• Key in OFF position. • Measure the resistance between driver seat module (DSM) C341b-1, circuit 1469 (RD/LB), harness side and front height power seat motor C382-1, circuit 1469 (RD/LB), harness side; and between DSM C341b-24, circuit 1470 (YE/LB), harness side and front height power seat motor C382-2, circuit 1470 (YE/LB), harness side.  A0050493 • **Are the resistances less than 5 ohms?**	**Yes** INSTALL a new DSM. REFER to Section 419-10. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
I21	**CHECK THE REAR HEIGHT MOTOR FOR CORRECT OPERATION**	
	• Key in OFF position. • Disconnect: Rear Height Power Seat Motor C363. • Key in ON position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

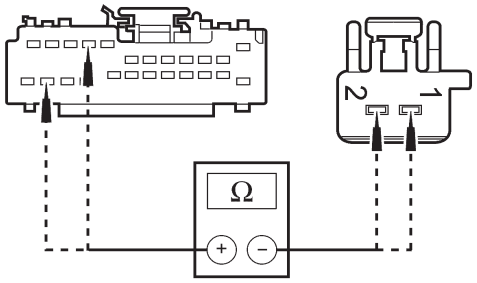
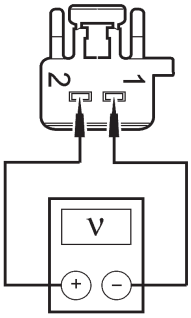
PINPOINT TEST I: THE MEMORY SEAT IS INOPERATIVE — EXPEDITION (Continued)

Test Step		Result / Action to Take
I21	**CHECK THE REAR HEIGHT MOTOR FOR CORRECT OPERATION (Continued)**	
	• Measure the voltage between rear height power seat motor C363-1, circuit 1474 (RD/LG), harness side and C363-2, circuit 1473 (YE/LG), harness side while toggling DSM active commands REAR UP and REAR DOWN ON and OFF.  A0049753 • **Does the voltage change from zero volts?**	**Yes** INSTALL a new rear height power seat motor. REFER to Front Seat Track Motor in this section. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **I22**.
I22	**CHECK CIRCUITS 1474 (RD/LG) AND 1473 (YE/LG) FOR A SHORT TO POWER**	
	• Key in OFF position. • Disconnect: Driver Seat Module (DSM) C341b. • Key in ON position. • Measure the voltage between driver seat module (DSM) C341b-9, circuit 1474 (RD/LG), harness side and ground; and between DSM C341b-23, circuit 1473 (YE/LG), harness side and ground.  A0042099 • **Is any voltage indicated?**	**Yes** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **I23**.
I23	**CHECK CIRCUITS 1474 (RD/LG) AND 1473 (YE/LG) FOR AN OPEN**	
	• Key in OFF position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

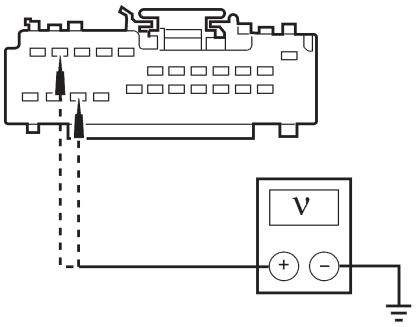
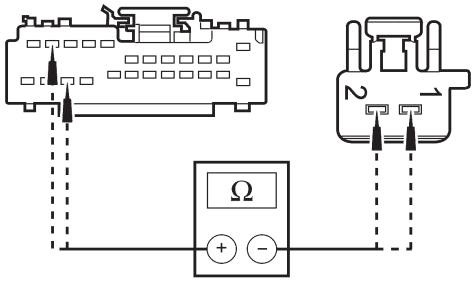
PINPOINT TEST I: THE MEMORY SEAT IS INOPERATIVE — EXPEDITION (Continued)

Test Step		Result / Action to Take
I23	**CHECK CIRCUITS 1474 (RD/LG) AND 1473 (YE/LG) FOR AN OPEN (Continued)**	
	• Measure the resistance between driver seat module (DSM) C341b-9, circuit 1474 (RD/LG), harness side and rear height power seat motor C363-1, circuit 1474 (RD/LG), harness side; and between DSM C341b-23, circuit 1473 (YE/LG), harness side and rear height power seat motor C363-2, circuit 1473 (YE/LG), harness side.  A0050494 • **Are the resistances less than 5 ohms?**	**Yes** INSTALL a new DSM. REFER to Section 419-10. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
I24	**CHECK THE HORIZONTAL MOTOR FOR CORRECT OPERATION**	
	• Key in OFF position. • Disconnect: Horizontal Power Seat Motor C362. • Key in ON position. • Measure the voltage between horizontal power seat motor C362-2, circuit 1472 (YE/WH), and C362-1, circuit 1471 (RD/WH), harness side while toggling DSM active commands HORZ FWD and HORZ RWD ON and OFF.  A0049753 • **Does the voltage change from zero volts?**	**Yes** CONNECT horizontal power seat motor C362 and OPERATE the motor in both directions using the seat control switch. NOTE if the motor torques (motor attempts to operate but the seat track does not move). If the motor torques, the seat track is stuck. FREE the seat track and INSTALL a new memory seat position sensor. REFER to Memory Seat Position Sensor in this section. If the motor does not torque, INSTALL a new horizontal power seat motor. REFER to Front Seat Track Motor — Memory Seat in this section. REPEAT the self-test. CLEAR the DTCs. DISCONNECT the battery ground cable. CONNECT the driver safety belt buckle pretensioner C3201. REPOWER the SRS. REFER to Section 501-20B. **No** GO to I25.
I25	**CHECK CIRCUITS 1472 (YE/WH) AND 1471 (RD/WH) FOR A SHORT TO POWER**	
	• Key in OFF position. • Disconnect: Driver Seat Module (DSM) C341b. • Key in ON position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST I: THE MEMORY SEAT IS INOPERATIVE — EXPEDITION (Continued)

Test Step		Result / Action to Take
I25	**CHECK CIRCUITS 1472 (YE/WH) AND 1471 (RD/WH) FOR A SHORT TO POWER (Continued)**	
	• Measure the voltage between driver seat module (DSM) C341b-22, circuit 1472 (YE/WH), harness side and ground; and between DSM C341b-11, circuit 1471 (RD/WH), harness side and ground.  A0042101 • **Is any voltage indicated?**	**Yes** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **I26**.
I26	**CHECK CIRCUITS 1472 (YE/WH) AND 1471 (RD/WH) FOR AN OPEN**	
	• Key in OFF position. • Measure the resistance between driver seat module (DSM) C341b-22, circuit 1472 (YE/WH), harness side and horizontal power seat motor C362-2, circuit 1472 (YE/WH), harness side; and between DSM C341b-11, circuit 1471 (RD/WH), harness side and horizontal power seat motor C362-1, circuit 1471 (RD/WH), harness side.  A0050495 • **Are the resistances less than 5 ohms?**	**Yes** INSTALL a new DSM. REFER to Section 419-10. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

DIAGNOSIS AND TESTING (Continued)

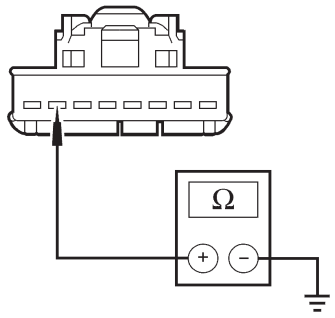
PINPOINT TEST J: THE MEMORY SEAT DOES NOT OPERATE CORRECTLY — DOES NOT OPERATE USING THE MEMORY SET SWITCH

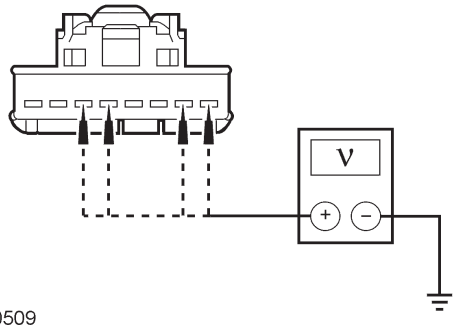
Test Step		Result / Action to Take
J1	**RETRIEVE THE DTCS**	**Yes** If the memory set LED fails to illuminate during the On-Demand Self-Test, GO to J5. If DTCs B1950, B1954, B1958 and B1962 are all retrieved, GO to J8. If DTC B1530, GO to J3. If DTC B1534, GO to J3. If DTC B1538, GO to J3. If DTC B1663, GO to J9. If DTC B1664, GO to J12. If DTC B1665, GO to J15. If DTC B1666, GO to J18. If DTC B1950, GO to J12. If DTC B1952, GO to J12. If DTC B1954, GO to J9. If DTC B1956, GO to J9. If DTC B1958, GO to J18. If DTC B1961, GO to J18. If DTC B1962, GO to J15. If DTC B1964, GO to J15. If DTC B1342, INSTALL a new DSM. REFER to Section 419-10. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to J2.
	WARNING: The restraint system diagnostic tool is for restraint system service only. Remove from vehicle prior to road use. Failure to remove could result in injury and possible violation of vehicle safety standards. **NOTE:** If a seat equipped with a seat mounted side air bag and/or a safety belt pretensioner (if equipped) system is being serviced, **the supplemental restraint system (SRS) must be depowered.** Refer to Section 501-20B. **NOTE:** The SRS must be fully operational and free of faults before releasing the vehicle to the customer. • Depower the SRS. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in the General Procedures portion of Section 501-20B. • Disconnect the driver seat safety belt buckle pretensioner C3201. • Connect restraint system diagnostic tool 418-133 to the driver seat safety belt buckle pretensioner C3201. • **WARNING: Be sure that nobody is in the vehicle and that there is nothing blocking or set in front of any air bag module when the battery ground cable is connected.** Connect the battery ground cable. • Connect the scan tool. • Enter the following diagnostic mode on the scan tool: Retrieve and Document Continuous DTCs. • Enter the following diagnostic mode on the scan tool: Clear Continuous DTCs. • Enter the following diagnostic mode on the scan tool: On-Demand Self-Test. **NOTE:** During the On-Demand Self-Test, document when the memory set LED illuminates and turns off. • **Are any DTCs retrieved or does the memory set LED fail to illuminate during the On-Demand Self-Test?**	
J2	**CHECK THE DSM FOR CORRECT MEMORY SET SWITCH INPUTS — MONITOR THE DSM PIDS MEM1__SW, MEM2__SW AND MEMS__SW**	**Yes** GO to J8. **No** GO to J3.
	• Enter the following diagnostic mode on the scan tool: Monitor PIDs. Monitor the DSM PIDs MEM1__SW, MEM2__SW and MEMS__SW while activating the seat switch. • **Do the PID values agree with the switch positions?**	
J3	**CHECK THE MEMORY SET SWITCH**	**Yes** GO to J4. **No** INSTALL a new memory set switch. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
	• Key in OFF position. • Disconnect: Memory Set Switch C503. • Carry out the Memory Set Switch Component Test. • **Is the memory set switch OK?**	
J4	**CHECK GROUND CIRCUIT TO THE MEMORY SET SWITCH — CIRCUIT 875 (BK/LB)**	
	• Key in ON position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST J: THE MEMORY SEAT DOES NOT OPERATE CORRECTLY — DOES NOT OPERATE USING THE MEMORY SET SWITCH (Continued)

<table>
<tr><th colspan="2">Test Step</th><th>Result / Action to Take</th></tr>
<tr><td>J4</td><td>CHECK GROUND CIRCUIT TO THE MEMORY SET SWITCH — CIRCUIT 875 (BK/LB) (Continued)</td><td rowspan="2">Yes
GO to J5.
No
REPAIR circuit 875 (BK/LB). CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.</td></tr>
<tr><td colspan="2">• Measure the resistance between memory set switch C503-7, circuit 875 (BK/LB), harness side and ground.
 

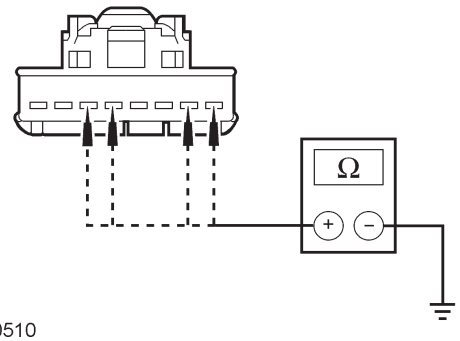
A0042473
• Is the resistance less than 5 ohms?</td></tr>
<tr><td>J5</td><td>CHECK CIRCUITS 267 (BN/LG), 268 (BK/OG), 270 (BN/OG) AND 272 (WH/OG) FOR A SHORT TO POWER</td><td rowspan="2">Yes
REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
No
GO to J6.</td></tr>
<tr><td colspan="2">• Disconnect: DSM C341c.
• Key in ON position.
• Measure the voltage between the following memory set switch C503 pins, harness side and ground:
<table><tr><th>Connector C503</th><th>Circuit</th></tr><tr><td>Pin 2</td><td>267 (BN/LG)</td></tr><tr><td>Pin 6</td><td>268 (BK/OG)</td></tr><tr><td>Pin 5</td><td>270 (BN/OG)</td></tr><tr><td>Pin 1</td><td>272 (WH/OG)</td></tr></table> 

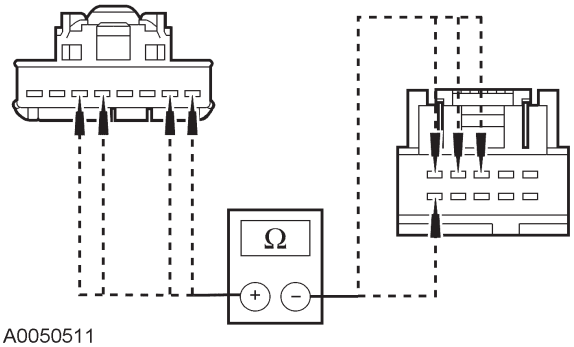
A0050509
• Is any voltage indicated?</td></tr>
<tr><td>J6</td><td>CHECK CIRCUITS 267 (BN/LG), 268 (BK/OG), 270 (BN/OG) AND 272 (WH/OG) FOR A SHORT TO GROUND</td><td></td></tr>
<tr><td colspan="2">• Key in OFF position.
• Measure the resistance between the following memory set switch C503 pins, harness side and ground:</td><td></td></tr>
</table>

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST J: THE MEMORY SEAT DOES NOT OPERATE CORRECTLY — DOES NOT OPERATE USING THE MEMORY SET SWITCH (Continued)

<table>
<tr><th colspan="2">Test Step</th><th>Result / Action to Take</th></tr>
<tr><td>J6</td><td>CHECK CIRCUITS 267 (BN/LG), 268 (BK/OG), 270 (BN/OG) AND 272 (WH/OG) FOR A SHORT TO GROUND (Continued)</td><td rowspan="2">Yes
GO to J7.
No
REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.</td></tr>
<tr><td colspan="2">
<table>
<tr><th>Connector C503</th><th>Circuit</th></tr>
<tr><td>Pin 2</td><td>267 (BN/LG)</td></tr>
<tr><td>Pin 6</td><td>268 (BK/OG)</td></tr>
<tr><td>Pin 5</td><td>270 (BN/OG)</td></tr>
<tr><td>Pin 1</td><td>272 (WH/OG)</td></tr>
</table>


A0050510
• Are the resistances greater than 10,000 ohms?
</td></tr>
<tr><td>J7</td><td>CHECK CIRCUITS 267 (BN/LG), 268 (BK/OG), 270 (BN/OG) AND 272 (WH/OG) FOR AN OPEN</td><td rowspan="2">Yes
INSTALL a new DSM. REFER to Section 419-10. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
No
REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.</td></tr>
<tr><td colspan="2">
• Measure the resistance between the following memory set switch C503 pins and DSM C341c pins:
<table>
<tr><th>Memory Set Switch C503</th><th>Circuit</th><th>DSM C341c</th></tr>
<tr><td>Pin 2</td><td>267 (BN/LG)</td><td>Pin 4</td></tr>
<tr><td>Pin 6</td><td>268 (BK/OG)</td><td>Pin 3</td></tr>
<tr><td>Pin 5</td><td>270 (BN/OG)</td><td>Pin 5</td></tr>
<tr><td>Pin 1</td><td>272 (WH/OG)</td><td>Pin 10</td></tr>
</table>


A0050511
• Are the resistances less than 5 ohms?
</td></tr>
</table>

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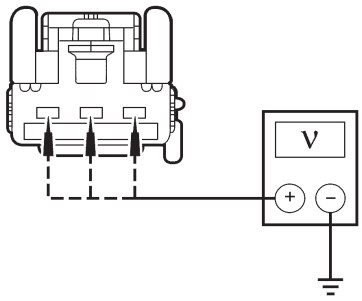
DIAGNOSIS AND TESTING (Continued)

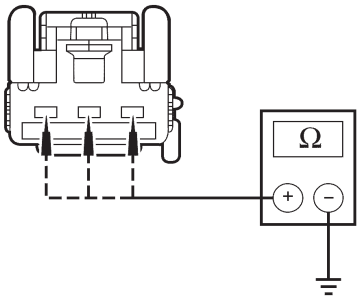
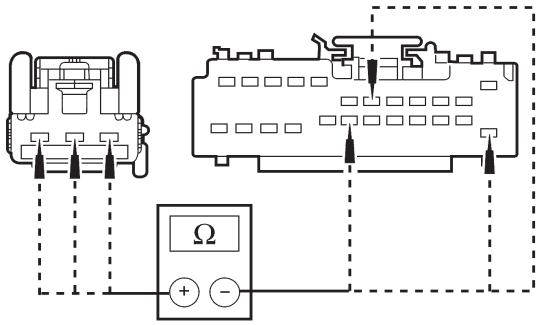
PINPOINT TEST J: THE MEMORY SEAT DOES NOT OPERATE CORRECTLY — DOES NOT OPERATE USING THE MEMORY SET SWITCH (Continued)

Test Step		Result / Action to Take
J8	**CHECK THE DSM FOR CORRECT OUTPUTS — MONITOR THE DSM PIDS SFWD__P, SFNT__P, SREAR__P AND SEATRCN**	
	• Place the seat in a central position, using the seat control switch. • Enter the following diagnostic mode on the scan tool: Monitor PIDs. Monitor the following DSM PIDs — SFWD__P while operating the seat control switch forward/rearward switch. — SFNT__P while operating the seat control switch front up/down switch. — SREAR__P while operating the seat control switch rear up/down switch. — SRCL__SW while operating the seat control switch recline forward/rearward switch. • **Do the PID (position % of travel) values increase with forward/down movement and decrease with rearward/up movement throughout entire travel?**	**Yes** INSTALL a new DSM. REFER to Section 419-10. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** If the PID SFWD__P values do not increase or decrease, GO to **J15**. If the PID SFNT__P values do not increase or decrease, GO to **J9**. If the PID SREAR__P values do not increase or decrease, GO to **J12**. If the PID SRCL__SW values do not increase or decrease GO to **J18**.
J9	**CHECK CIRCUITS 443 (LG/RD), 447 (OG/RD) AND 446 (OG/WH) FOR A SHORT TO POWER**	
	• Key in OFF position. • Disconnect: DSM C341b. • Disconnect: Front Height Position Sensor C383. • Key in ON position. • Measure the voltage between front height position sensor C383, circuit 443 (LG/RD), harness side and ground; and between front height position sensor C383, circuit 447 (OG/RD), harness side and ground; and between front height position sensor C383, circuit 446 (OG/WH), harness side and ground.  A0050512 • **Is any voltage indicated?**	**Yes** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **J10**.
J10	**CHECK CIRCUITS 443 (LG/RD), 447 (OG/RD) AND 446 (OG/WH) FOR A SHORT TO GROUND**	
	• Key in OFF position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

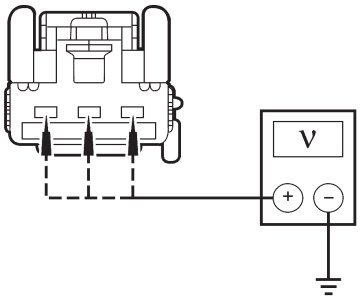
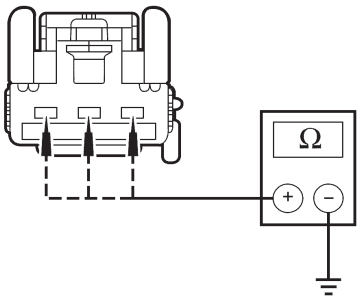
PINPOINT TEST J: THE MEMORY SEAT DOES NOT OPERATE CORRECTLY — DOES NOT OPERATE USING THE MEMORY SET SWITCH (Continued)

Test Step		Result / Action to Take
J10	**CHECK CIRCUITS 443 (LG/RD), 447 (OG/RD) AND 446 (OG/WH) FOR A SHORT TO GROUND (Continued)**	
	• Measure the resistance between front height position sensor C383, circuit 443 (LG/RD), harness side and ground; and between front height position sensor C383, circuit 447 (OG/RD), harness side and ground; and between front height position sensor C383, circuit 446 (OG/WH), harness side and ground.  A0050513 • **Are the resistances greater than 10,000 ohms?**	**Yes** GO to **J11**. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
J11	**CHECK CIRCUITS 443 (LG/RD), 447 (OG/RD) AND 446 (OG/WH) FOR AN OPEN**	
	• Measure the resistance between front height position sensor C383, circuit 443 (LG/RD), harness side and DSM C341b-6, circuit 443 (LG/RD), harness side; between front height position sensor C383, circuit 447 (OG/RD), harness side and DSM C341b-13, circuit 447 (OG/RD), harness side; and between front height position sensor C383, circuit 446 (OG/WH), harness side and DSM C341b-19, circuit 446 (OG/WH), harness side.  A0050514 • **Are the resistances less than 5 ohms?**	**Yes** INSTALL a new front height power seat motor. REFER to Front Seat Track Motor in this section. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
J12	**CHECK CIRCUITS 444 (LG/BK), 447 (OG/RD) AND 446 (OG/WH) FOR A SHORT TO POWER**	
	• Key in OFF position. • Disconnect: DSM C341b. • Disconnect: Rear Height Position Sensor C373.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

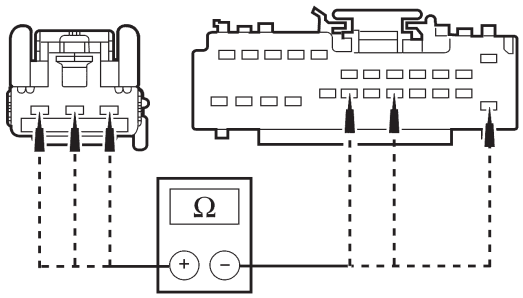
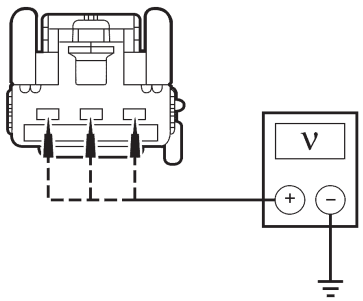
PINPOINT TEST J: THE MEMORY SEAT DOES NOT OPERATE CORRECTLY — DOES NOT OPERATE USING THE MEMORY SET SWITCH (Continued)

Test Step		Result / Action to Take
J12	**CHECK CIRCUITS 444 (LG/BK), 447 (OG/RD) AND 446 (OG/WH) FOR A SHORT TO POWER (Continued)**	
	• Measure the voltage between rear height position sensor C373, circuit 444 (LG/BK), harness side and ground; between rear height position sensor C373, circuit 447 (OG/RD), harness side and ground; and between rear height position sensor C373, circuit 446 (OG/WH), harness side and ground.  A0050512 • **Is any voltage indicated?**	**Yes** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **J13**.
J13	**CHECK CIRCUITS 444 (LG/BK), 447 (OG/RD) AND 446 (OG/WH) FOR A SHORT TO GROUND**	
	• Key in OFF position. • Measure the resistance between rear height position sensor C373, circuit 444 (LG/BK), harness side and ground; between rear height position sensor C373, circuit 447 (OG/RD), harness side and ground; and between rear height position sensor C373, circuit 446 (OG/WH), harness side and ground.  A0050513 • **Are the resistances greater than 10,000 ohms?**	**Yes** GO to **J14**. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

(Continued)

DIAGNOSIS AND TESTING (Continued)

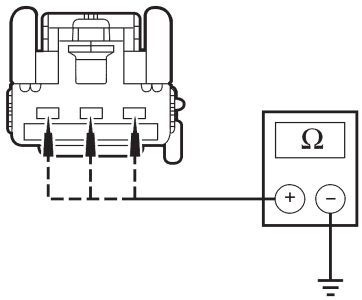
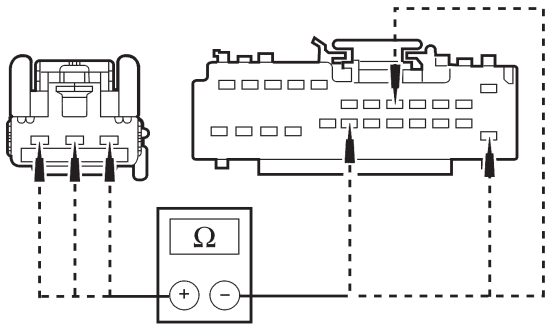
PINPOINT TEST J: THE MEMORY SEAT DOES NOT OPERATE CORRECTLY — DOES NOT OPERATE USING THE MEMORY SET SWITCH (Continued)

Test Step		Result / Action to Take
J14	**CHECK CIRCUITS 444 (LG/BK), 447 (OG/RD) AND 446 (OG/WH) FOR OPEN**	
	• Measure the resistance between rear height position sensor C373, circuit 444 (LG/BK), harness side and DSM C341b-17, circuit 444 (LG/BK), harness side; between rear height position sensor C373, circuit 447 (OG/RD), harness side, and DSM C341b-13, circuit 447 (OG/RD), harness side; and between rear height position sensor C373, circuit 446 (OG/WH), harness side, and DSM C341b-19, circuit 446 (OG/WH), harness side.  A0050515 • **Are the resistances less than 5 ohms?**	**Yes** INSTALL a new rear height power seat motor. REFER to Front Seat Track Motor in this section. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
J15	**CHECK CIRCUITS 442 (LG/OG), 447 (OG/RD) AND 446 (OG/WH) FOR A SHORT TO POWER**	
	• Key in OFF position. • Disconnect: DSM C341b. • Disconnect: Forward/Rearward Position Sensor C372. • Measure the voltage between forward/rearward position sensor C372, circuit 442 (LG/OG), harness side and ground; between forward/rearward position sensor C372, circuit 447 (OG/RD), harness side and ground; and between forward/rearward position sensor C372, circuit 446 (OG/WH), harness side and ground.  A0050512 • **Is any voltage indicated?**	**Yes** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **J16**.
J16	**CHECK CIRCUITS 442 (LG/OG), 447 (OG/RD) AND 446 (OG/WH) FOR A SHORT TO GROUND**	
	• Key in OFF position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

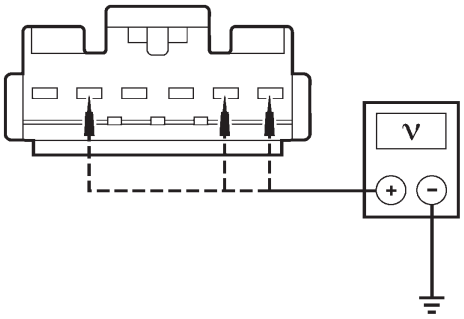
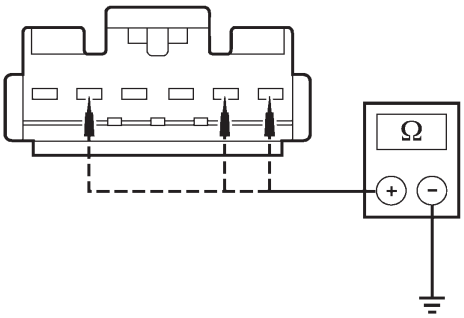
PINPOINT TEST J: THE MEMORY SEAT DOES NOT OPERATE CORRECTLY — DOES NOT OPERATE USING THE MEMORY SET SWITCH (Continued)

Test Step		Result / Action to Take
J16	**CHECK CIRCUITS 442 (LG/OG), 447 (OG/RD) AND 446 (OG/WH) FOR A SHORT TO GROUND (Continued)**	
	• Measure the resistance between forward/rearward position sensor C372, circuit 442 (LG/OG), harness side and ground; between forward/rearward position sensor C372, circuit 447 (OG/RD), harness side and ground; and between forward/rearward position sensor C372, circuit 446 (OG/WH), harness side and ground.  A0050513 • **Are the resistances greater than 10,000 ohms?**	**Yes** GO to **J17**. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
J17	**CHECK CIRCUITS 442 (LG/OG), 447 (OG/RD) AND 446 (OG/WH) FOR AN OPEN**	
	• Measure the resistance between forward/rearward position sensor C372, circuit 442 (LG/OG), harness side and DSM C341b-5, circuit 442 (LG/OG), harness side; between forward/rearward position sensor C372, circuit 447 (OG/RD), harness side and DSM C341b-13, circuit 447 (OG/RD), harness side; and between forward/rearward position sensor C372, circuit 446 (OG/WH), harness side, and DSM C341b-19, circuit 446 (OG/WH), harness side.  A0050516 • **Are the resistances less than 5 ohms?**	**Yes** INSTALL a new horizontal memory seat position sensor. REFER to Memory Seat Position Sensor in this section. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
J18	**CHECK CIRCUITS 445 (OG/LB), 447 (OG/RD) AND 446 (OG/WH) FOR A SHORT TO POWER**	
	• Key in OFF position. • Disconnect: DSM C341b. • Disconnect: Recliner Position Sensor C3188.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST J: THE MEMORY SEAT DOES NOT OPERATE CORRECTLY — DOES NOT OPERATE USING THE MEMORY SET SWITCH (Continued)

Test Step		Result / Action to Take
J18	**CHECK CIRCUITS 445 (OG/LB), 447 (OG/RD) AND 446 (OG/WH) FOR A SHORT TO POWER (Continued)**	
	• Measure the voltage between recliner position sensor C3188, circuit 445-2 (OG/LB), harness side and ground; between recliner position sensor C3188, circuit 447-6 (OG/RD), harness side and ground; and between recliner position sensor C3188, circuit 446-5 (OG/WH), harness side and ground.  A0050517 • **Is any voltage indicated?**	**Yes** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **J19**.
J19	**CHECK CIRCUITS 445 (OG/LB), 447 (OG/RD) AND 446 (OG/WH) FOR A SHORT TO GROUND**	
	• Key in OFF position. • Measure the resistance between recliner position sensor C3188, circuit 445-2 (OG/LB), harness side and ground; between recliner position sensor C3188, circuit 447-6 (OG/RD), harness side and ground; and between recliner position sensor C3188, circuit 446-5 (OG/WH), harness side and ground.  A0050518 • **Are the resistances greater than 10,000 ohms?**	**Yes** GO to **J20**. **No** REPAIR the circuit(s) in question. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

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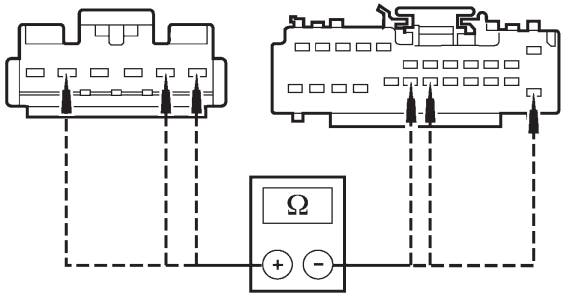
DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST J: THE MEMORY SEAT DOES NOT OPERATE CORRECTLY — DOES NOT OPERATE USING THE MEMORY SET SWITCH (Continued)

Test Step		Result / Action to Take
J20	**CHECK CIRCUITS 445 (OG/LB), 447 (OG/RD) AND 446 (OG/WH) FOR AN OPEN**	
	• Measure the resistance between recliner position sensor C3188, circuit 445 (OG/LB), harness side and DSM C341b-18, circuit 445 (OG/LB), harness side; between recliner position sensor C3188, circuit 447 (OG/RD), harness side and DSM C341b-13, circuit 447 (OG/RD), harness side; and between recliner position sensor C3188, circuit 446 (OG/WH), harness side and DSM C341b-19, circuit 446 (OG/WH), harness side.  A0050519 • **Are the resistances less than 5 ohms?**	**Yes** INSTALL a new recline power seat motor. REFER to Front Seat Recliner Motor in this section. CLEAR the DTCs. REPEAT the self-test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the circuit(s) in question. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

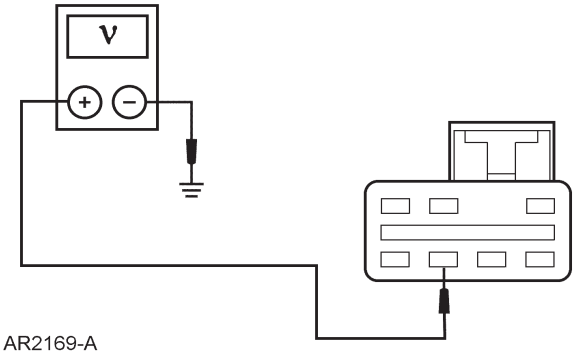
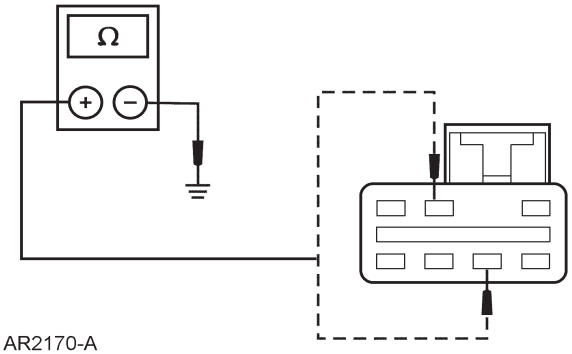
PINPOINT TEST K: THE POWER LUMBAR IS INOPERATIVE—DRIVER

Test Step		Result / Action to Take
K1	**CHECK CIRCUIT 566 (DG) FOR AN OPEN**	
	⚠ WARNING: The restraint system diagnostic tool is for restraint system service only. Remove from vehicle prior to road use. Failure to remove could result in injury and possible violation of vehicle safety standards. **NOTE:** If a seat equipped with a seat mounted side air bag and/or a safety belt pretensioner (if equipped) system is being serviced, **the supplemental restraint system (SRS) must be depowered.** Refer to Section 501-20B. **NOTE:** The SRS must be fully operational and free of faults before releasing the vehicle to the customer. • Depower the SRS. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in the General Procedures portion of Section 501-20B. • Disconnect the driver seat safety belt buckle pretensioner C3201. • Connect restraint system diagnostic tool 418-133 to the driver seat safety belt buckle pretensioner C3201. • **⚠ WARNING: Be sure that nobody is in the vehicle and that there is nothing blocking or set in front of any air bag module when the battery ground cable is connected.** Connect the battery ground cable. • Disconnect: Lumbar Switch C361.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

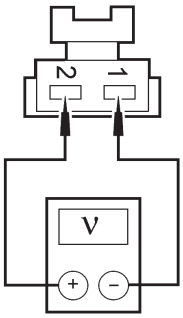
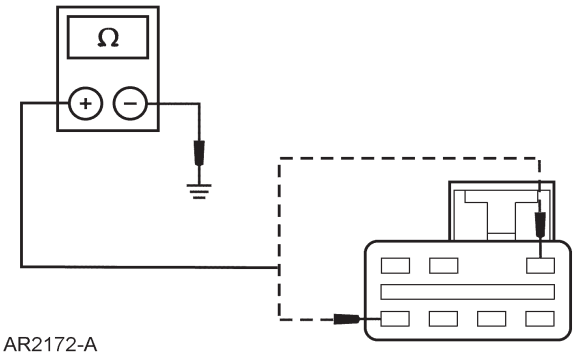
PINPOINT TEST K: THE POWER LUMBAR IS INOPERATIVE—DRIVER (Continued)

Test Step		Result / Action to Take
K1	CHECK CIRCUIT 566 (DG) FOR AN OPEN (Continued)	
	• Measure the voltage between driver power lumbar switch C361 pin 2, circuit 566 (DG), harness side and ground.  AR2169-A • **Is the voltage greater than 10 volts?**	**Yes** GO to **K2**. **No** **No** REPAIR the circuit. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
K2	CHECK CIRCUIT 57 (BK) FOR AN OPEN	
	• Measure the resistance between driver power lumbar switch C361 pin 3, circuit 57 (BK), harness side and ground; and between driver power lumbar switch C361 pin 6, circuit 57 (BK), harness side and ground.  AR2170-A • **Are both resistances less than 5 ohms?**	**Yes** GO to **K3**. **No** REPAIR the circuit. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
K3	CHECK THE LUMBAR MOTOR	
	• Connect: Lumbar Switch C361. • Disconnect: Lumbar Motor C366.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

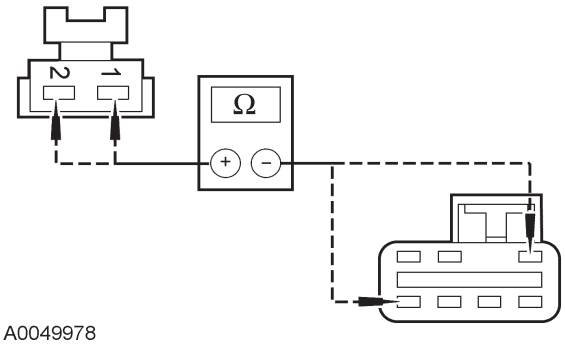
PINPOINT TEST K: THE POWER LUMBAR IS INOPERATIVE—DRIVER (Continued)

Test Step		Result / Action to Take
K3	**CHECK THE LUMBAR MOTOR (Continued)**	
	• Measure the voltage between driver power lumbar motor C366, circuit 1097 (BN), harness side and driver power lumbar motor C366, circuit 1094 (PK), harness side.  A0049979 • Operate the driver power lumbar switch in both directions. • **Is the voltage less than 10 volts in both directions?**	**Yes** INSTALL a new driver power lumbar motor. REFER to Lumbar Motor in this section. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **K4**.
K4	**CHECK CIRCUIT 1094 (PK) AND CIRCUIT 1097 (BN) FOR A SHORT TO GROUND**	
	• Disconnect: Lumbar Switch C361. • Measure the resistance between driver power lumbar switch C361 pin 1, circuit 1094 (PK), harness side and ground; and between driver power lumbar switch C361 pin 7, circuit 1097 (BN), harness side and ground.  AR2172-A • **Are the resistances greater than 10,000 ohms?**	**Yes** GO to **K5**. **No** REPAIR the circuit. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST K: THE POWER LUMBAR IS INOPERATIVE—DRIVER (Continued)

Test Step		Result / Action to Take
K5	CHECK CIRCUIT 1094 (PK) AND CIRCUIT 1097 (BN) FOR AN OPEN	
	• Measure the resistance between driver power lumbar switch C361, pin 7, circuit 1097 (BN), harness side and driver power lumbar motor C366, circuit 1097 (BN), harness side; and between driver power lumbar switch C361, pin 1, circuit 1094 (PK), harness side and driver power lumbar motor C366, circuit 1094 (PK), harness side.  A0049978 • **Are the resistances less than 5 ohms?**	**Yes** INSTALL a new power lumbar switch. REFER to Lumbar Control Switch in this section. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the circuit. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201. CONNECT driver seat safety belt buckle pretensioner C3201. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

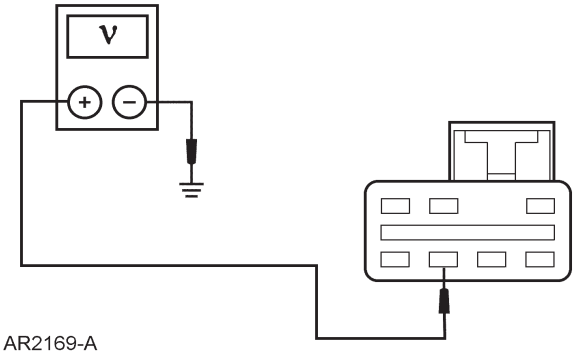
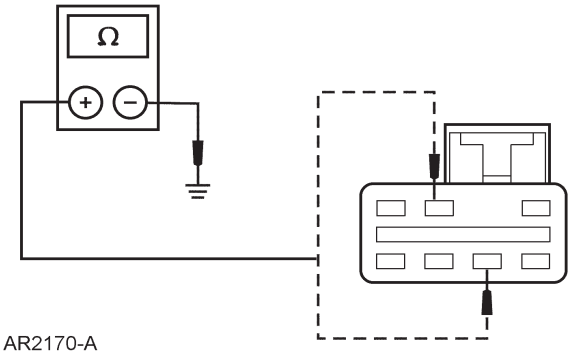
PINPOINT TEST L: THE POWER LUMBAR IS INOPERATIVE—PASSENGER

Test Step		Result / Action to Take
L1	CHECK CIRCUIT 1462 (RD/WH) FOR AN OPEN	
	⚠ WARNING: The restraint system diagnostic tool is for restraint system service only. Remove from vehicle prior to road use. Failure to remove could result in injury and possible violation of vehicle safety standards. **NOTE:** If a seat equipped with a seat mounted side air bag and/or a safety belt pretensioner (if equipped) system is being serviced, **the supplemental restraint system (SRS) must be depowered.** Refer to Section 501-20B. **NOTE:** The SRS must be fully operational and free of faults before releasing the vehicle to the customer. • Depower the SRS. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in the General Procedures portion of Section 501-20B. • Disconnect the passenger seat safety belt buckle pretensioner C3202. • Connect restraint system diagnostic tool 418-133 to the passenger seat safety belt buckle pretensioner C3202. • **⚠ WARNING: Be sure that nobody is in the vehicle and that there is nothing blocking or set in front of any air bag module when the battery ground cable is connected.** Connect the battery ground cable. • Disconnect: Lumbar Switch C331.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

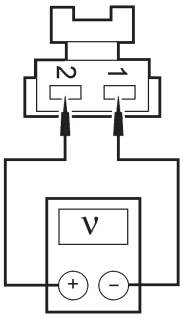
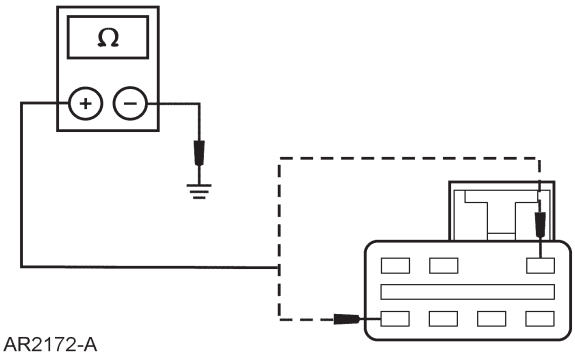
PINPOINT TEST L: THE POWER LUMBAR IS INOPERATIVE—PASSENGER (Continued)

Test Step		Result / Action to Take
L1	**CHECK CIRCUIT 1462 (RD/WH) FOR AN OPEN (Continued)**	
	• Measure the voltage between passenger power lumbar switch C331 pin 2, circuit 1462 (RD/WH), harness side and ground.  AR2169-A • **Is the voltage greater than 10 volts?**	**Yes** GO to L2. **No** REPAIR the circuit. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
L2	**CHECK CIRCUIT 57 (BK) FOR AN OPEN**	
	• Measure the resistance between passenger power lumbar switch C331 pin 3, circuit 57 (BK), harness side and ground; and between passenger power lumbar switch C331 pin 6, circuit 57 (BK), harness side and ground.  AR2170-A • **Are both resistances less than 5 ohms?**	**Yes** GO to L3. **No** REPAIR the circuit. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
L3	**CHECK THE LUMBAR MOTOR**	
	• Connect: Passenger Lumbar Switch C331. • Disconnect: Lumbar Motor C336.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

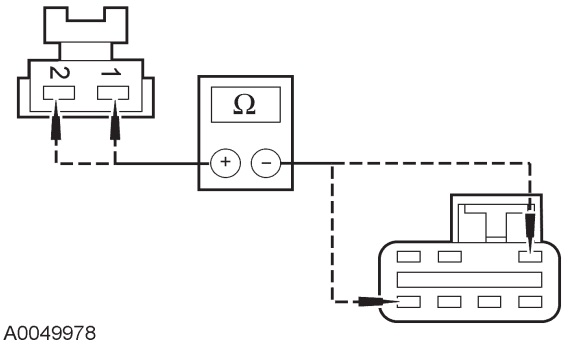
PINPOINT TEST L: THE POWER LUMBAR IS INOPERATIVE—PASSENGER (Continued)

Test Step		Result / Action to Take
L3	**CHECK THE LUMBAR MOTOR (Continued)**	
	• Measure the voltage between passenger power lumbar motor C336, circuit 1097 (BN), harness side and passenger power lumbar motor C336, circuit 1094 (PK), harness side.  A0049979 • Operate the passenger power lumbar switch in both directions. • **Is the voltage less than 10 volts in both directions?**	**Yes** INSTALL a new power lumbar motor. REFER to Lumbar Motor in this section. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **L4**.
L4	**CHECK CIRCUIT 1094 (PK) AND CIRCUIT 1097 (BN) FOR A SHORT TO GROUND**	
	• Disconnect: Lumbar Switch C331. • Measure the resistance between passenger power lumbar switch C331 pin 7, circuit 1094 (PK), harness side and ground; and between passenger power lumbar switch C331 pin 1, circuit 1097 (BN), harness side and ground.  AR2172-A • **Are the resistances greater than 10,000 ohms?**	**Yes** GO to **L5**. **No** REPAIR the circuit. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

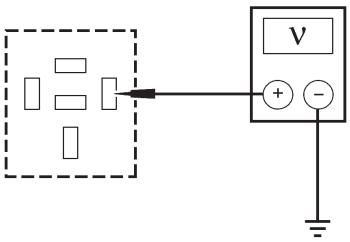
(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST L: THE POWER LUMBAR IS INOPERATIVE—PASSENGER (Continued)

Test Step		Result / Action to Take
L5	CHECK CIRCUIT 1094 (PK) AND CIRCUIT 1097 (BN) FOR AN OPEN	
	• Measure the resistance between passenger power lumbar switch C331, pin 1, circuit 1097 (BN), harness side and passenger power lumbar motor C336, circuit 1097 (BN), harness side; and between passenger power lumbar switch C331, pin 7, circuit 1094 (PK), harness side and passenger power lumbar motor C336, circuit 1094 (PK), harness side.  A0049978 • **Are the resistances less than 5 ohms?**	**Yes** INSTALL a new power lumbar switch. REFER to Lumbar Control Switch in this section. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the circuit. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from passenger seat safety belt buckle pretensioner C3202. CONNECT passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

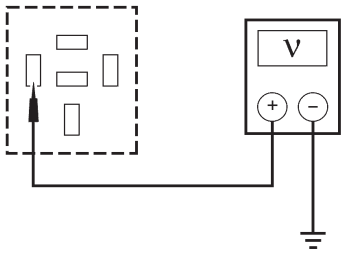
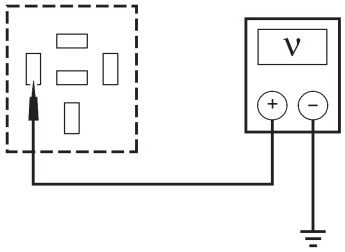
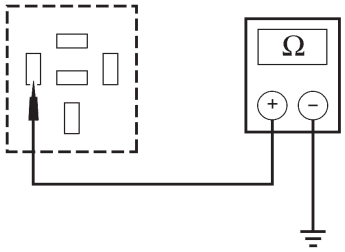
PINPOINT TEST M: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE — LEFT AND RIGHT

Test Step		Result / Action to Take
M1	CHECK CIRCUIT 729 (RD/WH) FOR AN OPEN	
	• Key in ON position. • Disconnect: Left Third Row Seat Relay C4183. • Measure the voltage between left third row relay C4183-86, circuit 729 (RD/WH), harness side and ground.  A0050607 • **Is the voltage greater than 10 volts?**	**Yes** GO to **M2**. **No** REPAIR the circuit. TEST the system for normal operation.
M2	CHECK CIRCUIT 1951 (BK/WH) FOR POWER	
	• Key in OFF position. • Disconnect: Right Third Row Seat Relay C4184. • Key in ON position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

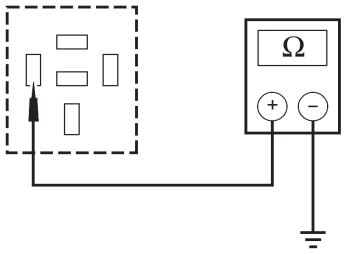
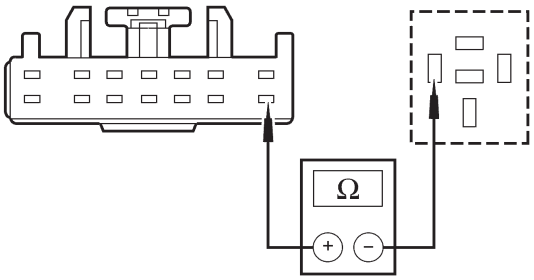
PINPOINT TEST M: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE — LEFT AND RIGHT (Continued)

Test Step		Result / Action to Take
M2	**CHECK CIRCUIT 1951 (BK/WH) FOR POWER (Continued)**	
	• Measure the voltage between left third row seat relay C4183-85, circuit 1951 (TN), harness side and ground.  A0050608 • **Is voltage present?**	**Yes** GO to **M3**. **No** GO to **M4**.
M3	**CHECK CIRCUIT 1951 (BK/WH) FOR A SHORT TO POWER**	
	• Key in OFF position. • Disconnect: Body Security Module (BSM) C2113c. • Key in ON position. • Measure the voltage between left third row seat relay C4183-85, circuit 1951 (TN), harness side and ground.  A0050608 • **Is voltage present?**	**Yes** REPAIR the circuit. TEST the system for normal operation. **No** INSTALL a new VSM. REFER to Section 419-10. Test the system for normal operation.
M4	**CHECK CIRCUIT 1951 (TN) FOR GROUND**	
	• Key in ON position. • Measure the resistance between left third row seat relay C4183-85, circuit 1951 (TN), harness side and ground.  A0050609 • **Is the resistance less than 5 ohms?**	**Yes** GO to **M5**. **No** GO to **M6**.

(Continued)

DIAGNOSIS AND TESTING (Continued)

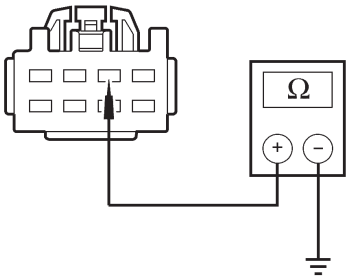
PINPOINT TEST M: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE — LEFT AND RIGHT (Continued)

Test Step		Result / Action to Take
M5	CHECK CIRCUIT 1951 (TN) FOR A SHORT TO GROUND	
	• Key in OFF position. • Disconnect: Body Security Module C2113c. • Measure the resistance between left third row seat relay C4183-85, circuit 1951 (TN), harness side and ground.  A0050609 • **Is the resistance greater than 10,000 ohms?**	**Yes** GO to **M7**. **No** REPAIR the circuit. TEST the system for normal operation.
M6	CHECK CIRCUIT 1951 (TN) FOR AN OPEN	
	• Key in OFF position. • Disconnect: Body Security Module C2113c. • Measure the resistance between BSM C2113c-8, circuit 1951 (TN), harness side and left third row seat relay C4183-85, circuit 1951 (TN), harness side.  A0050610 • **Is the resistance less than 5 ohms?**	**Yes** REFER to Section 419-10 to determine the VSM fault. Test the system for normal operation. **No** REPAIR the circuit. TEST the system for normal operation.
M7	CHECK CIRCUIT 57 (BK) FOR AN OPEN	
	• Key in OFF position. • Disconnect: Left Rear Third Row Seat Switch C4179.	

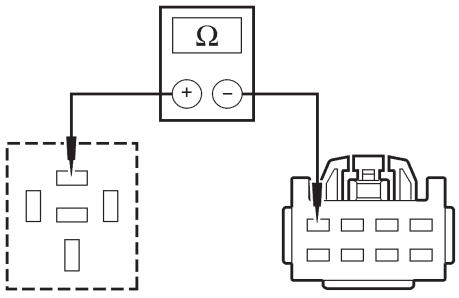
(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST M: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE — LEFT AND RIGHT (Continued)

Test Step		Result / Action to Take
M7	CHECK CIRCUIT 57 (BK) FOR AN OPEN (Continued)	
	• Measure the resistance between left rear third row seat switch C4179-2, circuit 57 (BK), harness side and ground.  A0050611 • **Is the resistance less than 5 ohms?**	**Yes** INSTALL a new VSM. REFER to Section 419-10. Test the system for normal operation. **No** REPAIR the circuit. TEST the system for normal operation.

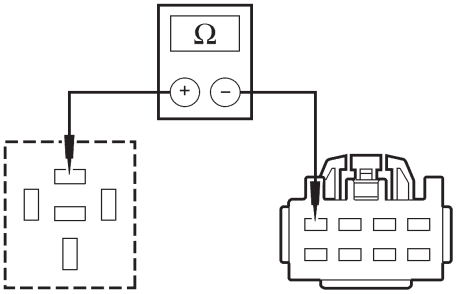
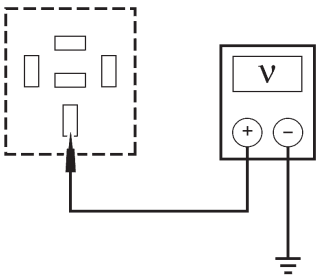
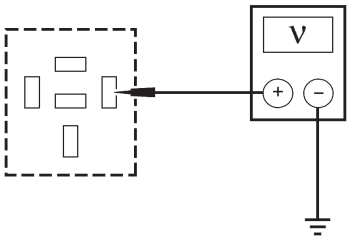
PINPOINT TEST N: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — LEFT — VEHICLES BUILT UP TO 02/2003

Test Step		Result / Action to Take
N1	VERIFY LEFT THIRD ROW SEAT SYMPTOM	
	• Verify if the third row seat is not operating properly at both switches or at a single switch. • **Is the left third row seat inoperative from both switches?**	**Yes** GO to **N4**. **No** If the left front switch does not operate GO to **N2**. If the left rear does not operate GO to **N3**.
N2	CHECK CIRCUIT 51 (BK/WH) FOR AN OPEN	
	• Key in OFF position. • Disconnect: Left Front Third Row Seat Switch C3199. • Disconnect: Left Third Row Seat Relay C4183. • Measure the resistance between left third row seat relay C4183-87, circuit 51 (BK/WH), harness side and the left front third row seat switch C3199-4, circuit 51 (BK/WH), harness side.  A0050616 • **Is the resistance less than 5 ohms?**	**Yes** INSTALL a new left front third row seat switch. TEST system for normal operation. **No** REPAIR the circuit. TEST the system for normal operation.
N3	CHECK CIRCUIT 51 (BK/WH) FOR AN OPEN	
	• Key in OFF position. • Disconnect: Left Rear Third Row Seat Switch C4179. • Disconnect: Left Third Row Seat Relay C4183.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

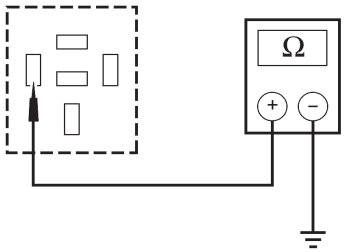
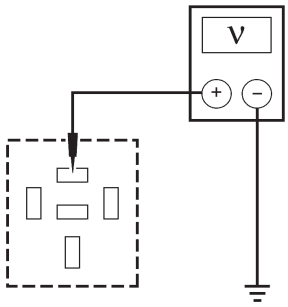
PINPOINT TEST N: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — LEFT — VEHICLES BUILT UP TO 02/2003 (Continued)

Test Step		Result / Action to Take
N3	**CHECK CIRCUIT 51 (BK/WH) FOR AN OPEN (Continued)**	
	• Measure the resistance between left third row seat relay C4183-87, circuit 51 (BK/WH), harness side and the left rear third row seat switch C4179-4, circuit 51 (BK/WH), harness side.  A0050612 • **Is the resistance less than 5 ohms?**	**Yes** INSTALL a new left rear third row seat switch. TEST system for normal operation. **No** REPAIR the circuit. TEST the system for normal operation.
N4	**CHECK CIRCUIT 2115 (OG) FOR AN OPEN**	
	• Key in ON position. • Measure the voltage between left third row seat relay C4183-30, circuit 2115 (OG), harness side and ground.  A0050613 • **Is the voltage greater than 10 volts?**	**Yes** GO to **N5**. **No** REPAIR the circuit. TEST the system for normal operation.
N5	**CHECK CIRCUIT 729 (RD/WH) FOR AN OPEN**	
	• Measure the voltage between left third row seat relay C4183-86, circuit 729 (RD/WH), harness side and ground.  A0050607 • **Is the voltage greater than 10 volts?**	**Yes** GO to **N6**. **No** REPAIR the circuit. TEST the system for normal operation.

(Continued)

DIAGNOSIS AND TESTING (Continued)

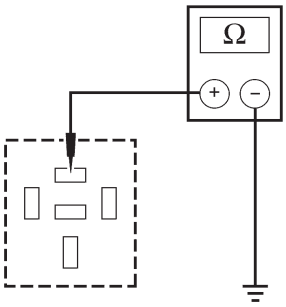
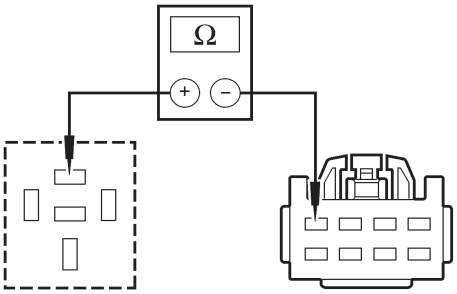
PINPOINT TEST N: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — LEFT — VEHICLES BUILT UP TO 02/2003 (Continued)

Test Step		Result / Action to Take
N6	**CHECK LEFT THIRD ROW SEAT RELAY**	
	• Key in OFF position. • Perform component test on the left third row seat relay. Refer to Wiring Diagrams Cell 149 for component testing. • **Did the relay pass?**	**Yes** GO to **N7**. **No** INSTALL a new left third row seat relay. TEST the system for normal operation.
N7	**CHECK CIRCUIT 1951 (TN) FOR AN OPEN**	
	• Key in ON position. • Measure the resistance between left third row seat relay C4183-85, circuit 1951 (TN), harness side and ground.  A0050609 • **Is the resistance less than 5 ohms?**	**Yes** GO to **N8**. **No** REPAIR the circuit. TEST the system for normal operation.
N8	**CHECK CIRCUIT 51 (BK/WH) FOR A SHORT TO POWER**	
	• Key in OFF position. • Disconnect: Left Front and Left Rear Third Row Seat Switches C3199 and C4179. • Key in ON position. • Measure the voltage between left rear third row seat relay C4183-87, circuit 51 (BK/WH), harness side and ground.  A0050614 • **Is voltage present?**	**Yes** REPAIR the circuit. TEST the system for normal operation. **No** GO to **N9**.
N9	**CHECK CIRCUIT 51 (BK/WH) FOR A SHORT TO GROUND**	
	• Key in OFF position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

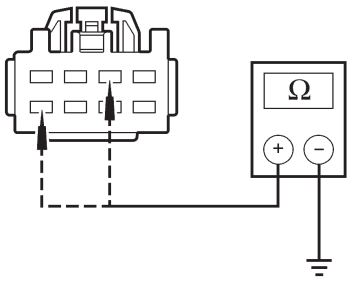
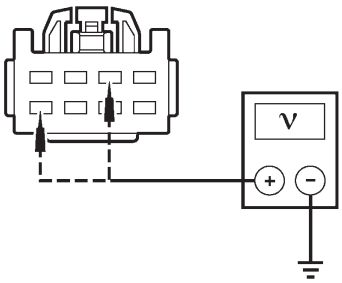
PINPOINT TEST N: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — LEFT — VEHICLES BUILT UP TO 02/2003 (Continued)

Test Step		Result / Action to Take
N9	**CHECK CIRCUIT 51 (BK/WH) FOR A SHORT TO GROUND (Continued)**	
	• Measure the resistance between left third row seat relay C4183-87, circuit 51 (BK/WH), harness side and ground.  A0050615 • **Is the resistance greater than 10,000 ohms?**	**Yes** GO to **N10**. **No** REPAIR the circuit. TEST the system for normal operation.
N10	**CHECK CIRCUIT 51 (BK/WH) FOR AN OPEN**	
	• Key in OFF position. • Measure the resistance between left third row seat relay C4183-87, circuit 51 (BK/WH), harness side and left front third row seat switch C3199-4, circuit 51 (BK/WH), harness side.  A0050616 • **Is the resistance less than 5 ohms?**	**Yes** GO to **N11**. **No** REPAIR the circuit. TEST the system for normal operation.
N11	**CHECK CIRCUIT 57 (BK) FOR AN OPEN**	
	• Key in OFF position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

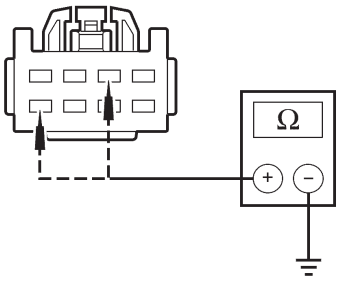
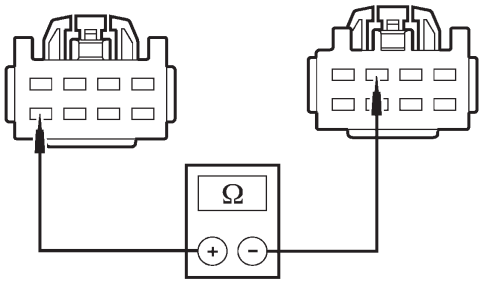
PINPOINT TEST N: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — LEFT — VEHICLES BUILT UP TO 02/2003 (Continued)

Test Step		Result / Action to Take
N11	**CHECK CIRCUIT 57 (BK) FOR AN OPEN (Continued)**	
	• Measure the resistance between left rear third row seat switch C4179-8, circuit 57 (BK), harness side and ground and between C4179-2 circuit 57 (BK), harness side and ground.  A0050617 • **Is the resistance less than 5 ohms?**	**Yes** GO to **N12**. **No** REPAIR the circuit. TEST the system for normal operation.
N12	**CHECK CIRCUIT 2112 (OG/BK) AND 2111 (OG/WH) FOR A SHORT TO POWER**	
	• Key in ON position. • Measure the voltage between left front third row seat switch C3199-8, circuit 2112 (OG/BK), harness side and ground and between C3199-2, circuit 2111 (OG/WH), harness side and ground.  A0050618 • **Is voltage present?**	**Yes** REPAIR the circuit(s). TEST the system for normal operation. **No** GO to **N13**.
N13	**CHECK CIRCUIT 2112 (OG/BK) AND 2111 (OG/WH) FOR A SHORT TO GROUND**	
	• Key in OFF position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

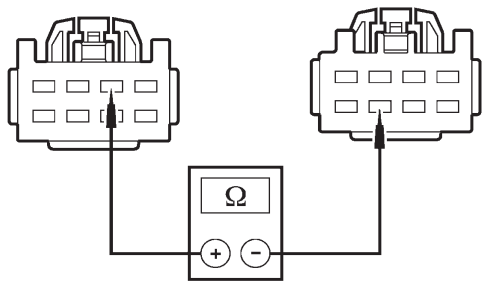
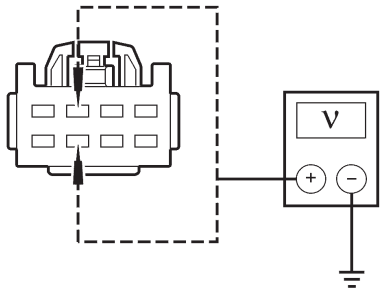
PINPOINT TEST N: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — LEFT — VEHICLES BUILT UP TO 02/2003 (Continued)

Test Step		Result / Action to Take
N13	**CHECK CIRCUIT 2112 (OG/BK) AND 2111 (OG/WH) FOR A SHORT TO GROUND (Continued)**	
	• Measure the resistance between left front third row seat switch C3199-8, circuit 2112 (OG/BK), harness side and ground and between C3199-2, circuit 2111 (OG/WH), harness side and ground.  A0050619 • **Is the resistance greater than 10,000 ohms?**	**Yes** GO to **N14**. **No** REPAIR the circuit(s). TEST the system for normal operation.
N14	**CHECK CIRCUIT 2112 (OG/BK) FOR AN OPEN**	
	• Key in OFF position. • Measure the resistance between left front third row seat switch C3199-8, circuit 2112 (OG/BK), harness side and ground and between left rear third row seat switch C4179-3, circuit 2112 (OG/BK), harness side and ground.  A0050620 • **Is the resistance less than 5 ohms?**	**Yes** GO to **N15**. **No** REPAIR the circuit. TEST the system for normal operation.
N15	**CHECK CIRCUIT 2111 (OG/WH) FOR AN OPEN**	
	• Key in OFF position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

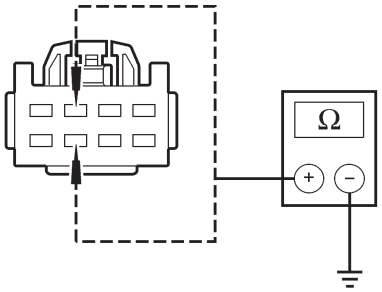
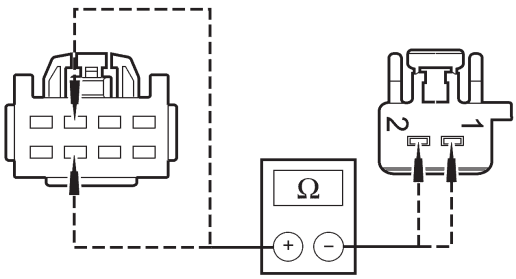
PINPOINT TEST N: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — LEFT — VEHICLES BUILT UP TO 02/2003 (Continued)

Test Step		Result / Action to Take
N15	**CHECK CIRCUIT 2111 (OG/WH) FOR AN OPEN (Continued)**	
	• Measure the resistance between left front third row seat switch C3199-2, circuit 2111 (OG/WH), harness side and ground and between left rear third row seat switch C4179-7, circuit 2111 (OG/WH), harness side and ground.  A0050621 • **Is the resistance less than 5 ohms?**	**Yes** GO to **N16**. **No** REPAIR the circuit. TEST the system for normal operation.
N16	**CHECK LEFT FRONT AND LEFT REAR THIRD ROW SEAT SWITCHES**	
	• Perform component test on both switches. Refer to Wiring Diagrams Cell 149 for component testing. • **Did the switches pass?**	**Yes** GO to **N17**. **No** INSTALL a new switch(es). TEST the system for normal operation.
N17	**CHECK CIRCUIT 1948 (LB/WH) AND 1947 (DG/WH) FOR A SHORT TO POWER**	
	• Disconnect: Left Front Third Row Seat Switch C3199. • Key in ON position. • Measure the voltage between left front third row seat switch C3199-7, circuit 1948 (LB/WH), harness side and ground and between C3199-3, circuit 1947 (DG/WH), harness side and ground.  A0050622 • **Is voltage present?**	**Yes** REPAIR the circuit(s). TEST the system for normal operation. **No** GO to **N18**.
N18	**CHECK CIRCUIT 1948 (LB/WH) AND 1947 (DG/WH) FOR A SHORT TO GROUND**	
	• Key in OFF position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST N: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — LEFT — VEHICLES BUILT UP TO 02/2003 (Continued)

Test Step		Result / Action to Take
N18	**CHECK CIRCUIT 1948 (LB/WH) AND 1947 (DG/WH) FOR A SHORT TO GROUND (Continued)**	
	• Measure the resistance between left front third row seat switch C3199-7, circuit 1948 (LB/WH), harness side and ground and between C3199-3, circuit 1947 (DG/WH), harness side and ground.  A0050623 • **Is the resistance greater than 10,000 ohms?**	**Yes** GO to **N19**. **No** REPAIR the circuit(s). TEST the system for normal operation.
N19	**CHECK CIRCUIT 1948 (LB/WH) AND 1947 (DG/WH) FOR AN OPEN**	
	• Key in OFF position. • Measure the resistance between left front third row seat switch C3199-7, circuit 1948 (LB/WH), harness side and left third row seat motor C4181-2, circuit 1948 (LB/WH) harness side; and between left third row seat switch, C3199-3, circuit 1947 (DG/WH), harness side and left third row seat motor C4181-1, circuit 1947 (DG/WH), harness side.  A0050624 • **Is the resistance less than 5 ohms?**	**Yes** INSTALL a new left third row power seat motor. TEST the system for normal operation. **No** REPAIR the circuit(s). TEST the system for normal operation.

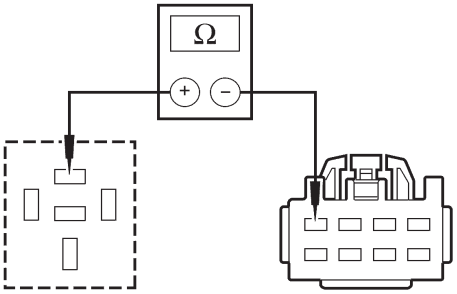
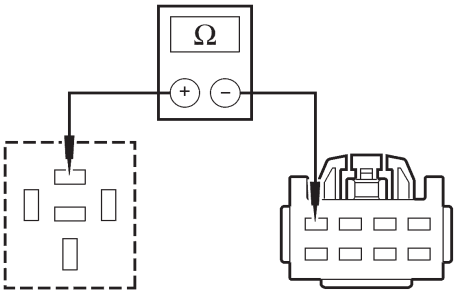
PINPOINT TEST O: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — RIGHT — VEHICLES BUILT UP TO 02/2003

Test Step		Result / Action to Take
O1	**VERIFY RIGHT THIRD ROW SEAT SYMPTOM**	
	• Verify if the third row seat is not operating properly at both switches or at a single switch. • **Is the right third row seat inoperative from both switches?**	**Yes** GO to **O4**. **No** If the right front switch does not operate, GO to **O2**. If the right rear switch does not operate, GO to **O3**.
O2	**CHECK CIRCUIT 1946 (OG/LB) FOR AN OPEN**	
	• Key in OFF position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

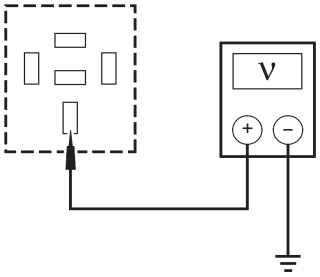
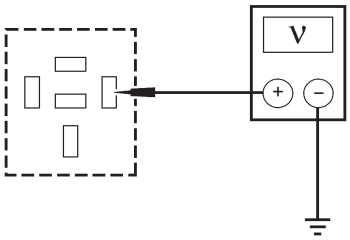
PINPOINT TEST O: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — RIGHT — VEHICLES BUILT UP TO 02/2003 (Continued)

Test Step		Result / Action to Take
O2	**CHECK CIRCUIT 1946 (OG/LB) FOR AN OPEN (Continued)**	
	• Disconnect: Right Front Third Row Seat Switch C3200. • Disconnect: Right Third Row Seat Relay C4184. • Measure the resistance between right third row seat relay C4184-87, circuit 1946 (OG/LB), harness side and the right front third row seat switch C3200-4, circuit 1946 (OG/LB), harness side.  A0050612 • **Is the resistance less than 5 ohms?**	**Yes** INSTALL a new right front third row seat switch. TEST system for normal operation. **No** REPAIR the circuit. TEST the system for normal operation.
O3	**CHECK CIRCUIT 1946 (OG/LB) FOR AN OPEN**	
	• Key in OFF position. • Disconnect: Right Rear Third Row Seat Switch C4180. • Disconnect: Right Third Row Seat Relay C4184. • Measure the resistance between right third row seat relay C4184-87, circuit 1946 (OG/LB), harness side and the right rear third row seat switch C4180-4, circuit 1946 (OG/LB), harness side.  A0050616 • **Is the resistance less than 5 ohms?**	**Yes** INSTALL a new right front third row seat switch. TEST system for normal operation. **No** REPAIR the circuit. TEST the system for normal operation.
O4	**CHECK CIRCUIT 2116 (YE) FOR AN OPEN**	
	• Key in ON position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

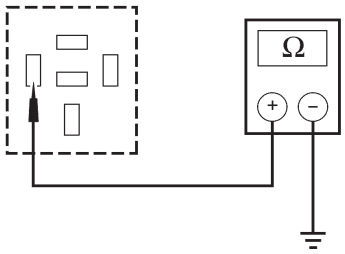
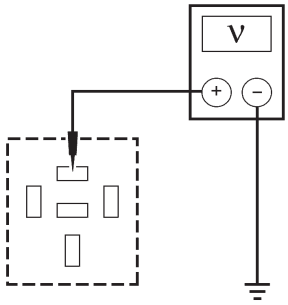
PINPOINT TEST O: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — RIGHT — VEHICLES BUILT UP TO 02/2003 (Continued)

Test Step		Result / Action to Take
O4	**CHECK CIRCUIT 2116 (YE) FOR AN OPEN (Continued)**	
	• Measure the voltage between right third row seat relay C4184-30, circuit 2116 (YE), harness side and ground.  A0050613 • **Is the voltage greater than 10 volts?**	**Yes** GO to **O5**. **No** REPAIR the circuit. TEST the system for normal operation.
O5	**CHECK CIRCUIT 729 (RD/WH) FOR AN OPEN**	
	• Measure the voltage between right third row seat relay C4184-86, circuit 729 (RD/WH), harness side and ground.  A0050607 • **Is the voltage greater than 10 volts?**	**Yes** GO to **O6**. **No** REPAIR the circuit. TEST the system for normal operation.
O6	**CHECK RIGHT THIRD ROW SEAT RELAY**	
	• Key in OFF position. • Perform component test on the right third row seat relay. Refer to Wiring Diagrams Cell 149 for component testing. • **Did the relay pass?**	**Yes** GO to **O7**. **No** INSTALL a new right third row seat relay. TEST the system for normal operation.
O7	**CHECK CIRCUIT 1951 (TN) FOR AN OPEN**	
	• Key in ON position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

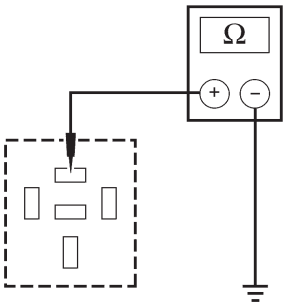
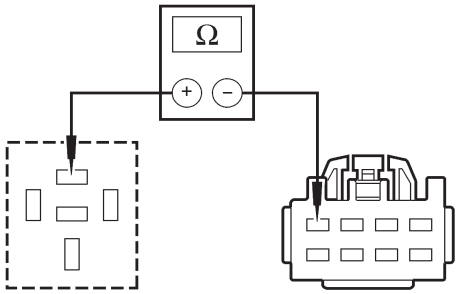
PINPOINT TEST O: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — RIGHT — VEHICLES BUILT UP TO 02/2003 (Continued)

Test Step		Result / Action to Take
O7	**CHECK CIRCUIT 1951 (TN) FOR AN OPEN (Continued)**	
	• Measure the resistance between right third row seat relay C4184-85, circuit 1951 (TN), harness side and ground.  A0050609 • **Is the resistance less than 5 ohms?**	**Yes** GO to **O8**. **No** REPAIR the circuit. TEST the system for normal operation.
O8	**CHECK CIRCUIT 1946 (OG/LB) FOR A SHORT TO POWER**	
	• Key in OFF position. • Disconnect: Right Front and Right Rear Third Row Seat Switches C3200 and C4180. • Key in ON position. • Measure the voltage between right rear third row seat relay C4184-87, circuit 1946 (OG/LB), harness side and ground.  A0050614 • **Is voltage present?**	**Yes** REPAIR the circuit. TEST the system for normal operation. **No** GO to **O9**.
O9	**CHECK CIRCUIT 1946 (OG/LB) FOR A SHORT TO GROUND**	
	• Key in OFF position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

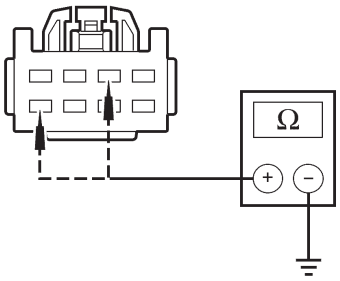
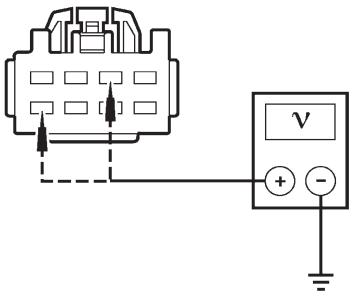
PINPOINT TEST O: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — RIGHT — VEHICLES BUILT UP TO 02/2003 (Continued)

Test Step		Result / Action to Take
O9	**CHECK CIRCUIT 1946 (OG/LB) FOR A SHORT TO GROUND (Continued)**	
	• Measure the resistance between right third row seat relay C4184-87, circuit 1946 (OG/LB), harness side and ground.  A0050615 • **Is the resistance greater than 10,000 ohms?**	**Yes** GO to **O10**. **No** REPAIR the circuit. TEST the system for normal operation.
O10	**CHECK CIRCUIT 1946 (OG/LB) FOR AN OPEN**	
	• Key in OFF position. • Measure the resistance between right third row seat relay C4184-87, circuit 1946 (OG/LB), harness side and right front third row seat switch C3200-4, circuit 1946 (OG/LB), harness side.  A0050612 • **Is the resistance less than 5 ohms?**	**Yes** GO to **O11**. **No** REPAIR the circuit. TEST the system for normal operation.
O11	**CHECK CIRCUIT 57 (BK) FOR AN OPEN**	
	• Key in OFF position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

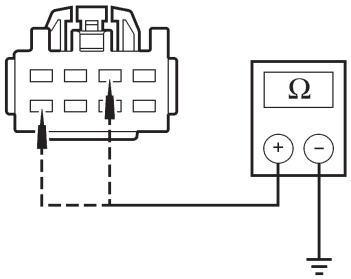
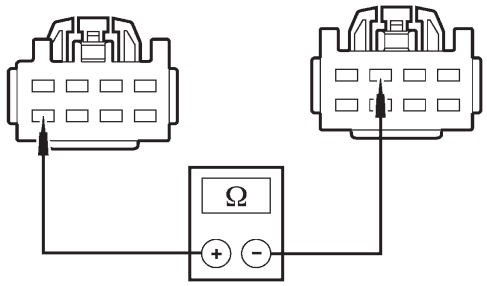
PINPOINT TEST O: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — RIGHT — VEHICLES BUILT UP TO 02/2003 (Continued)

Test Step		Result / Action to Take
O11	**CHECK CIRCUIT 57 (BK) FOR AN OPEN (Continued)**	
	• Measure the resistance between right rear third row seat switch C4180-8, circuit 57 (BK), harness side and ground and between C4180-2 circuit 57 (BK), harness side and ground.  A0050619 • **Is the resistance less than 5 ohms?**	**Yes** GO to **O12**. **No** REPAIR the circuit. TEST the system for normal operation.
O12	**CHECK CIRCUIT 2113 (YE/WH) AND 2114 (YE/BK) FOR A SHORT TO POWER**	
	• Key in ON position. • Measure the voltage between right front third row seat switch C3200-8, circuit 2113 (YE/WH), harness side and ground and between C3200-2, circuit 2114 (YE/BK), harness side and ground.  A0050625 • **Is voltage present?**	**Yes** REPAIR the circuit(s). TEST the system for normal operation. **No** GO to **O13**.
O13	**CHECK CIRCUIT 2113 (YE/WH) AND 2114 (YE/BK) FOR A SHORT TO GROUND**	
	• Key in OFF position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

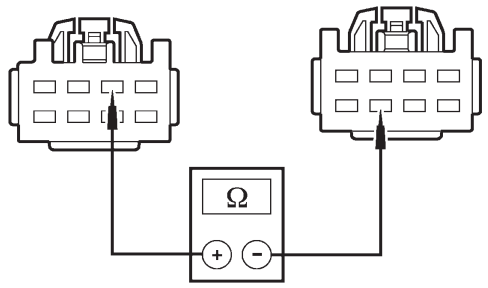
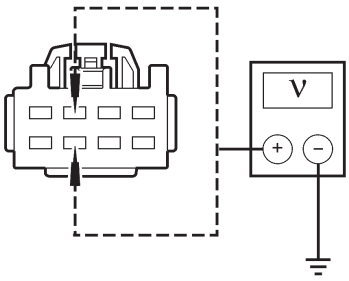
PINPOINT TEST O: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — RIGHT — VEHICLES BUILT UP TO 02/2003 (Continued)

Test Step		Result / Action to Take
O13	**CHECK CIRCUIT 2113 (YE/WH) AND 2114 (YE/BK) FOR A SHORT TO GROUND (Continued)**	
	• Measure the resistance between right front third row seat switch C3200-8, circuit 2113 (YE/WH), harness side and ground and between C3200-2, circuit 2114 (YE/BK), harness side and ground.  A0050617 • **Is the resistance greater than 10,000 ohms?**	**Yes** GO to **O14**. **No** REPAIR the circuit(s). TEST the system for normal operation.
O14	**CHECK CIRCUIT 2113 (YE/WH) FOR AN OPEN**	
	• Key in OFF position. • Measure the resistance between right front third row seat switch C3200-8, circuit 2113 (YE/WH), harness side and ground and between right rear third row seat switch C4180-3, circuit 2113 (YE/WH), harness side and ground.  A0050626 • **Is the resistance less than 5 ohms?**	**Yes** GO to **O15**. **No** REPAIR the circuit. TEST the system for normal operation.
O15	**CHECK CIRCUIT 2114 (YE/BK) FOR AN OPEN**	
	• Key in OFF position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

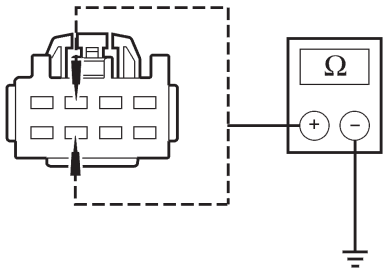
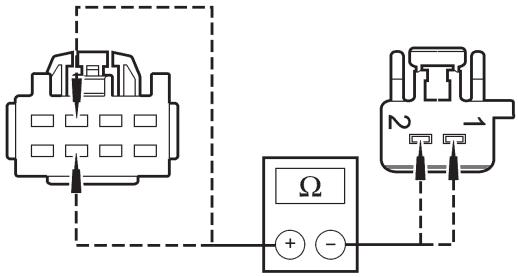
PINPOINT TEST O: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — RIGHT — VEHICLES BUILT UP TO 02/2003 (Continued)

Test Step		Result / Action to Take
O15	**CHECK CIRCUIT 2114 (YE/BK) FOR AN OPEN (Continued)**	
	• Measure the resistance between right front third row seat switch C3200-2, circuit 2114 (YE/BK), harness side and ground and between right rear third row seat switch C4180-7, circuit 2114 (YE/BK), harness side and ground.  A0050627 • **Is the resistance less than 5 ohms?**	**Yes** GO to **O16**. **No** REPAIR the circuit. TEST the system for normal operation.
O16	**CHECK RIGHT FRONT AND RIGHT REAR THIRD ROW SEAT SWITCHES**	
	• Perform component test on both switches. Refer to Wiring Diagrams Cell 149 for component testing. • **Did the switches pass?**	**Yes** GO to **O17**. **No** INSTALL a new switch(es). TEST the system for normal operation.
O17	**CHECK CIRCUIT 1949 (OG/BK) AND 1950 (PK/DB) FOR A SHORT TO POWER**	
	• Disconnect: Right Front Third Row Seat Switch C3200. • Key in ON position. • Measure the voltage between right front third row seat switch C3200-7, circuit 1949 (OG/BK), harness side and ground and between C3200-3, circuit 1950 (PK/DB), harness side and ground.  A0050628 • **Is voltage present?**	**Yes** REPAIR the circuit(s). TEST the system for normal operation. **No** GO to **O18**.
O18	**CHECK CIRCUIT 1949 (OG/BK) AND 1950 (PK/DB) FOR A SHORT TO GROUND**	
	• Key in OFF position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST O: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — RIGHT — VEHICLES BUILT UP TO 02/2003 (Continued)

Test Step		Result / Action to Take
O18	**CHECK CIRCUIT 1949 (OG/BK) AND 1950 (PK/DB) FOR A SHORT TO GROUND (Continued)**	
	• Measure the resistance between right front third row seat switch C3200-7, circuit 1949 (OG/BK), harness side and ground and between C3200-3, circuit 1950 (PK/DB) harness side and ground.  A0050629 • **Is the resistance greater than 10,000 ohms?**	**Yes** GO to **O19**. **No** REPAIR the circuit(s). TEST the system for normal operation.
O19	**CHECK CIRCUIT 1949 (OG/BK) AND 1950 (PK/DB) FOR AN OPEN**	
	• Key in OFF position. • Measure the resistance between right front third row seat switch C3200-7, circuit 1949 (OG/BK), harness side and right third row seat motor C4182-1, circuit 1949 (OG/BK) harness side; and between right third row seat switch, C3200-3, circuit 1950 (PK/DB), harness side and right third row seat motor C4182-2, circuit 1950 (PK/DB), harness side.  A0050630 • **Is the resistance less than 5 ohms?**	**Yes** INSTALL a new right third row power seat motor. TEST the system for normal operation. **No** REPAIR the circuit(s). TEST the system for normal operation.

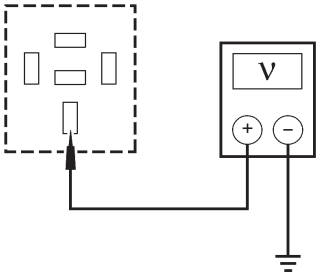
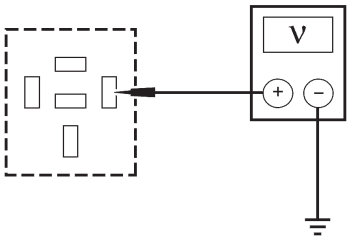
PINPOINT TEST P: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — LEFT— VEHICLES BUILT 2/2003 ONWARD

Test Step		Result / Action to Take
P1	**CHECK CIRCUIT 2115 (OG) FOR AN OPEN**	
	• Key in ON position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

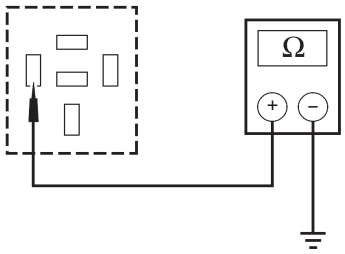
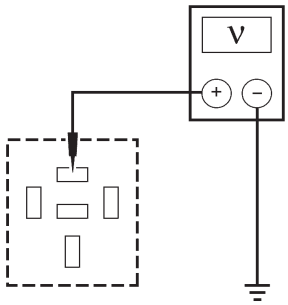
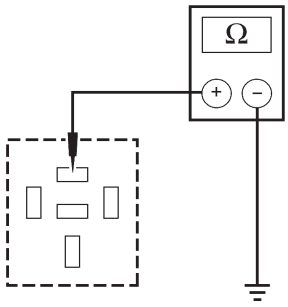
PINPOINT TEST P: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — LEFT— VEHICLES BUILT 2/2003 ONWARD (Continued)

Test Step		Result / Action to Take
P1	**CHECK CIRCUIT 2115 (OG) FOR AN OPEN (Continued)**	
	• Measure the voltage between left third row seat relay C4183-30, circuit 2115 (OG), harness side and ground.  A0050613 • **Is the voltage greater than 10 volts?**	**Yes** GO to **P2**. **No** REPAIR the circuit. TEST the system for normal operation.
P2	**CHECK CIRCUIT 729 (RD/WH) FOR AN OPEN**	
	• Measure the voltage between left third row seat relay C4183-86, circuit 729 (RD/WH), harness side and ground.  A0050607 • **Is the voltage greater than 10 volts?**	**Yes** GO to **P3**. **No** REPAIR the circuit. TEST the system for normal operation.
P3	**CHECK LEFT THIRD ROW SEAT RELAY**	
	• Key in OFF position. • Carry out the component test on the left third row seat relay. Refer to Wiring Diagrams Cell 149 for component testing. • **Did the relay pass?**	**Yes** GO to **P4**. **No** INSTALL the left third row seat relay. TEST the system for normal operation.
P4	**CHECK CIRCUIT 1951 (TN) FOR AN OPEN**	
	• Key in ON position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

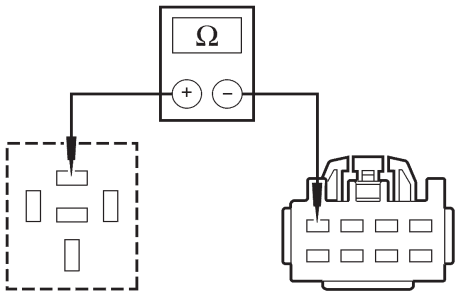
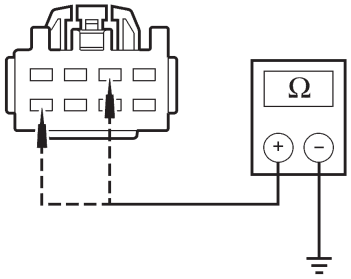
PINPOINT TEST P: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — LEFT— VEHICLES BUILT 2/2003 ONWARD (Continued)

Test Step		Result / Action to Take
P4	**CHECK CIRCUIT 1951 (TN) FOR AN OPEN (Continued)**	
	• Measure the resistance between left third row seat relay C4183-85, circuit 1951 (TN), harness side and ground.  A0050609 • **Is the resistance less than 5 ohms?**	**Yes** GO to **P5**. **No** REPAIR the circuit. TEST the system for normal operation.
P5	**CHECK CIRCUIT 51 (BK/WH) FOR A SHORT TO POWER**	
	• Key in OFF position. • Disconnect: Left Rear Third Row Seat Switch C4179. • Key in ON position. • Measure the voltage between left rear third row seat relay C4183-87, circuit 51 (BK/WH), harness side and ground.  A0050614 • **Is voltage present?**	**Yes** REPAIR the circuit. TEST the system for normal operation. **No** GO to **P6**.
P6	**CHECK CIRCUIT 51 (BK/WH) FOR A SHORT TO GROUND**	
	• Key in OFF position. • Measure the resistance between left third row seat relay C4183-87, circuit 51 (BK/WH), harness side and ground.  A0050615 • **Is the resistance greater than 10,000 ohms?**	**Yes** GO to **P7**. **No** REPAIR the circuit. TEST the system for normal operation.

(Continued)

DIAGNOSIS AND TESTING (Continued)

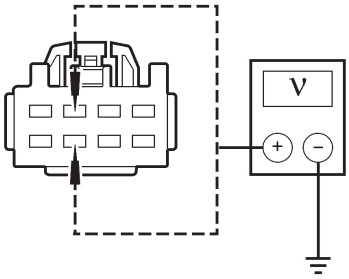
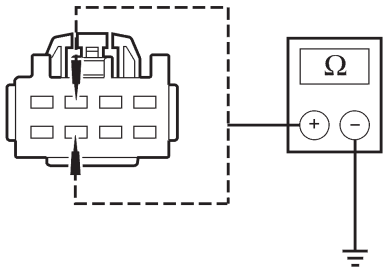
PINPOINT TEST P: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — LEFT— VEHICLES BUILT 2/2003 ONWARD (Continued)

Test Step		Result / Action to Take
P7	**CHECK CIRCUIT 51 (BK/WH) FOR AN OPEN**	
	• Key in OFF position. • Measure the resistance between left third row seat relay C4183-87, circuit 51 (BK/WH), harness side and left rear third row seat switch C4179-4, circuit 51 (BK/WH), harness side.  A0050612 • **Is the resistance less than 5 ohms?**	**Yes** GO to **P8**. **No** REPAIR the circuit. TEST the system for normal operation.
P8	**CHECK CIRCUIT 57 (BK) FOR AN OPEN**	
	• Key in OFF position. • Measure the resistance between left rear third row seat switch C4179-8, circuit 57 (BK), and C4179-2 circuit 57 (BK), harness side and ground.  A0050617 • **Is the resistance less than 5 ohms?**	**Yes** GO to **P9**. **No** REPAIR the circuit. TEST the system for normal operation.
P9	**CHECK LEFT REAR THIRD ROW SEAT SWITCH**	
	• Carry out the component test on the switch. Refer to Wiring Diagrams Cell 149 for component testing. • **Did the switch PASS?**	**Yes** GO to **P10**. **No** INSTALL a new switch. TEST the system for normal operation.
P10	**CHECK CIRCUIT 1948 (LB/WH) AND 1947 (DG/WH) FOR A SHORT TO POWER**	
	• Disconnect: Left Third Row Seat Switch C4179. • Key in ON position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

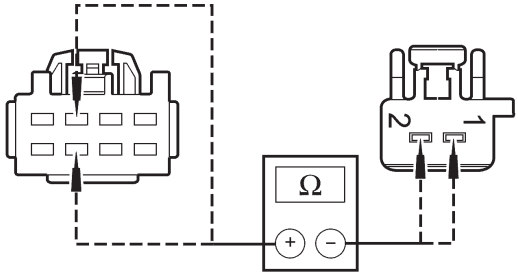
PINPOINT TEST P: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — LEFT— VEHICLES BUILT 2/2003 ONWARD (Continued)

Test Step		Result / Action to Take
P10	**CHECK CIRCUIT 1948 (LB/WH) AND 1947 (DG/WH) FOR A SHORT TO POWER (Continued)**	
	• Measure the voltage between left third row seat switch C4179-3, circuit 1948 (LB/WH), and C4179-7, circuit 1947 (DG/WH) harness side and ground.  A0050628 • **Is voltage present?**	**Yes** REPAIR the circuit(s). TEST the system for normal operation. **No** GO to **P11**.
P11	**CHECK CIRCUIT 1948 (LB/WH) AND 1947 (DG/WH) FOR A SHORT TO GROUND**	
	• Key in OFF position. • Measure the resistance between left rear third row seat switch C4179-3, circuit 1948 (LB/WH), and C4179-7, circuit 1947 (DG/WH) harness side and ground.  A0050629 • **Is the resistance greater than 10,000 ohms?**	**Yes** GO to **P12**. **No** REPAIR the circuit(s). TEST the system for normal operation.
P12	**CHECK CIRCUIT 1948 (LB/WH) AND 1947 (DG/WH) FOR AN OPEN**	
	• Key in OFF position.	

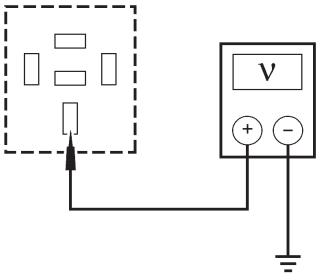
(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST P: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — LEFT— VEHICLES BUILT 2/2003 ONWARD (Continued)

Test Step		Result / Action to Take
P12	**CHECK CIRCUIT 1948 (LB/WH) AND 1947 (DG/WH) FOR AN OPEN (Continued)**	
	• Measure the resistance between left rear third row seat switch C4179-3, circuit 1948 (LB/WH), harness side and left third row seat motor C4181-2, circuit 1948 (LB/WH) harness side; and between left rear third row seat switch, C4179-7, circuit 1947 (DG/WH), harness side and left third row seat motor C4181-1, circuit 1947 (DG/WH), harness side.  A0050630 • **Is the resistance less than 5 ohms?**	**Yes** INSTALL a new left third row power seat motor. TEST the system for normal operation. **No** REPAIR the circuit(s). TEST the system for normal operation.

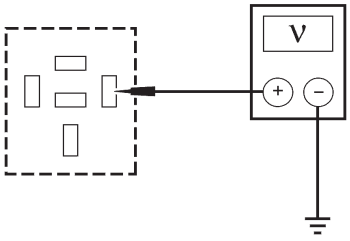
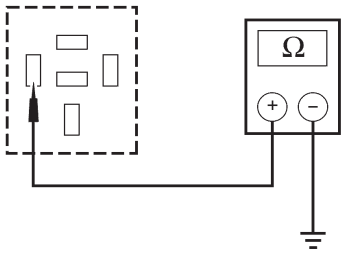
PINPOINT TEST Q: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — RIGHT— VEHICLES BUILT 2/2003 ONWARD

Test Step		Result / Action to Take
Q1	**CHECK CIRCUIT 2116 (YE) FOR AN OPEN**	
	• Key in ON position. • Measure the voltage between right third row seat relay C4184-30, circuit 2116 (YE), harness side and ground.  A0050613 • **Is the voltage greater than 10 volts?**	**Yes** GO to **Q2**. **No** REPAIR the circuit. TEST the system for normal operation.

(Continued)

DIAGNOSIS AND TESTING (Continued)

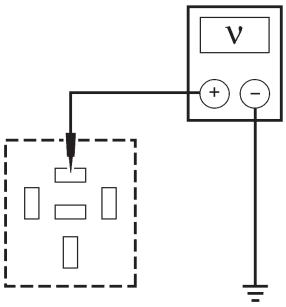
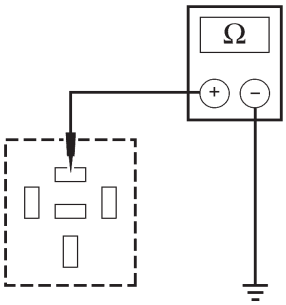
PINPOINT TEST Q: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — RIGHT— VEHICLES BUILT 2/2003 ONWARD (Continued)

Test Step		Result / Action to Take
Q2	**CHECK CIRCUIT 729 (RD/WH) FOR AN OPEN**	
	• Measure the voltage between right third row seat relay C4184-86, circuit 729 (RD/WH), harness side and ground.  A0050607 • **Is the voltage greater than 10 volts?**	**Yes** GO to **Q3**. **No** REPAIR the circuit. TEST the system for normal operation.
Q3	**CHECK RIGHT THIRD ROW SEAT RELAY**	
	• Key in OFF position. • Carry out component test on the right third row seat relay. Refer to Wiring Diagrams Cell 149 for component testing. • **Did the relay pass?**	**Yes** GO to **Q4**. **No** REPLACE the right third row seat relay. TEST the system for normal operation.
Q4	**CHECK CIRCUIT 1951 (TN) FOR AN OPEN**	
	• Key in ON position. • Measure the resistance between right third row seat relay C4184-85, circuit 1951 (TN), harness side and ground.  A0050609 • **Is the resistance less than 5 ohms?**	**Yes** GO to **Q5**. **No** REPAIR the circuit. TEST the system for normal operation.
Q5	**CHECK CIRCUIT 1946 (OG/LB) FOR A SHORT TO POWER**	
	• Key in OFF position. • Disconnect: Right Rear Third Row Seat Switch C4180. • Key in ON position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

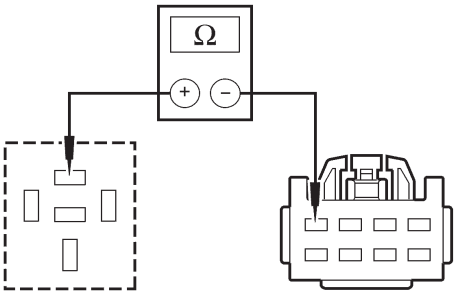
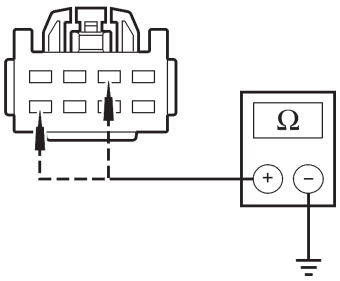
PINPOINT TEST Q: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — RIGHT— VEHICLES BUILT 2/2003 ONWARD (Continued)

Test Step		Result / Action to Take
Q5	**CHECK CIRCUIT 1946 (OG/LB) FOR A SHORT TO POWER (Continued)**	
	• Measure the voltage between right rear third row seat relay C4184-87, circuit 1946 (OG/LB), harness side and ground.  A0050614 • **Is voltage present?**	**Yes** REPAIR the circuit. TEST the system for normal operation. **No** GO to **Q6**.
Q6	**CHECK CIRCUIT 1946 (OG/LB) FOR A SHORT TO GROUND**	
	• Key in OFF position. • Measure the resistance between right third row seat relay C4184-87, circuit 1946 (OG/LB), harness side and ground.  A0050615 • **Is the resistance greater than 10,000 ohms?**	**Yes** GO to **Q7**. **No** REPAIR the circuit. TEST the system for normal operation.
Q7	**CHECK CIRCUIT 1946 (OG/LB) FOR AN OPEN**	
	• Key in OFF position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

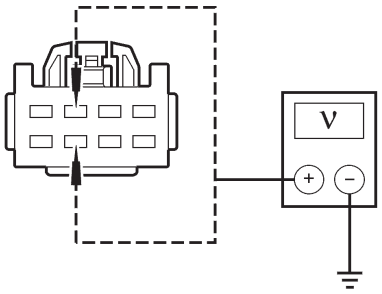
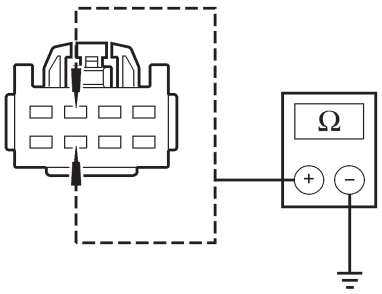
PINPOINT TEST Q: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — RIGHT— VEHICLES BUILT 2/2003 ONWARD (Continued)

Test Step		Result / Action to Take
Q7	**CHECK CIRCUIT 1946 (OG/LB) FOR AN OPEN (Continued)**	
	• Measure the resistance between right third row seat relay C4184-87, circuit 1946 (OG/LB), harness side and right rear third row seat switch C4180-4, circuit 1946 (OG/LB), harness side.  A0050616 • **Is the resistance less than 5 ohms?**	**Yes** GO to **Q8**. **No** REPAIR the circuit. TEST the system for normal operation.
Q8	**CHECK CIRCUIT 57 (BK) FOR AN OPEN**	
	• Key in OFF position. • Measure the resistance between right rear third row seat switch C4180-8, circuit 57 (BK), and C4180-2 circuit 57 (BK), harness side and ground.  A0050619 • **Is the resistance less than 5 ohms?**	**Yes** GO to **Q9**. **No** REPAIR the circuit. TEST the system for normal operation.
Q9	**CHECK RIGHT REAR THIRD ROW SEAT SWITCH**	
	• Carry out the component test on the switch. Refer to Wiring Diagrams Cell 149 for component testing. • **Did the switch PASS?**	**Yes** GO to **Q10**. **No** INSTALL a new switch. TEST the system for normal operation.
Q10	**CHECK CIRCUIT 1949 (OG/BK) AND 1950 (PK/DB) FOR A SHORT TO POWER**	
	• Disconnect: Right Rear Third Row Seat Switch C4180. • Key in ON position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

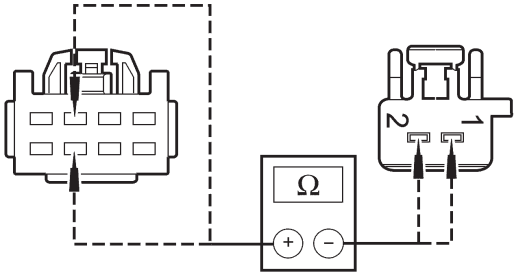
PINPOINT TEST Q: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — RIGHT— VEHICLES BUILT 2/2003 ONWARD (Continued)

Test Step		Result / Action to Take
Q10	**CHECK CIRCUIT 1949 (OG/BK) AND 1950 (PK/DB) FOR A SHORT TO POWER (Continued)**	
	• Measure the voltage between right rear third row seat switch C4180-3, circuit 1949 (OG/BK), and C4180-7, circuit 1950 (PK/DB) harness side and ground.  A0050622 • **Is voltage present?**	**Yes** REPAIR the circuit(s). TEST the system for normal operation. **No** GO to **Q11**.
Q11	**CHECK CIRCUIT 1949 (OG/BK) AND 1950 (PK/DB) FOR A SHORT TO GROUND**	
	• Key in OFF position. • Measure the resistance between right rear third row seat switch C4180-3, circuit 1949 (OG/BK), and C4180-7, circuit 1950 (PK/DB) harness side and ground.  A0050623 • **Is the resistance greater than 10,000 ohms?**	**Yes** GO to **Q12**. **No** REPAIR the circuit(s). TEST the system for normal operation.
Q12	**CHECK CIRCUIT 1949 (OG/BK) AND 1950 (PK/DB) FOR AN OPEN**	
	• Key in OFF position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST Q: THE THIRD ROW POWER FOLD SEAT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY — RIGHT— VEHICLES BUILT 2/2003 ONWARD (Continued)

Test Step		Result / Action to Take
Q12	**CHECK CIRCUIT 1949 (OG/BK) AND 1950 (PK/DB) FOR AN OPEN (Continued)**	
	• Measure the resistance between right rear third row seat switch C4180-3, circuit 1949 (OG/BK), harness side and right third row seat motor C4182-1, circuit 1949 (OG/BK) harness side; and between right rear third row seat switch, C4180-7, circuit 1950 (PK/DB), harness side and right third row seat motor C4182-2, circuit 1950 (PK/DB), harness side.  A0050624 • **Is the resistance less than 5 ohms?**	**Yes** INSTALL a new right third row power seat motor. TEST the system for normal operation. **No** REPAIR the circuit(s). TEST the system for normal operation.

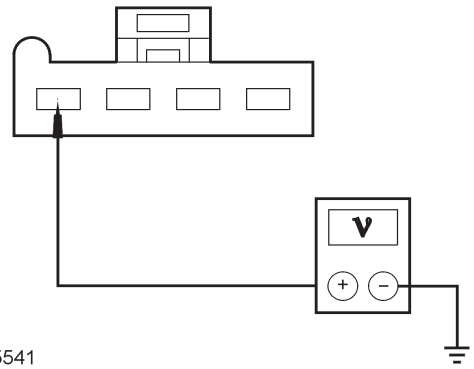
PINPOINT TEST R: DTC B1358 — IGNITION SWITCH OR BLOWER ELECTRONICS CIRCUIT SHORT TO GROUND/DTC B2521 — TACH CIRCUIT FAILURE

Test Step		Result / Action to Take
R1	**CHECK CIRCUIT 1153 (RD/BK)**	
	⚠ **WARNING: The restraint system diagnostic tool is for restraint system service only. Remove from vehicle prior to road use. Failure to remove could result in injury and possible violation of vehicle safety standards.** **NOTE:** If a seat equipped with a seat mounted side air bag and/or a safety belt pretensioner (if equipped) system is being serviced, **the supplemental restraint system (SRS) must be depowered.** Refer to Section 501-20B. **NOTE:** The SRS must be fully operational and free of faults before releasing the vehicle to the customer. • Depower the SRS. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in the General Procedures portion of Section 501-20B. • Disconnect the affected seat safety belt buckle pretensioner C3201 (driver) or C3202 (passenger). • Connect restraint system diagnostic tool 418-133 to the affected seat safety belt buckle pretensioner C3201 (driver) or C3202 (passenger). • ⚠ **WARNING: Be sure that nobody is in the vehicle and that there is nothing blocking or set in front of any air bag module when the battery ground cable is connected.** Connect the battery ground cable. • Disconnect: Driver CCSM C3031b or Passenger CCSM C3036b. • Key in ON position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

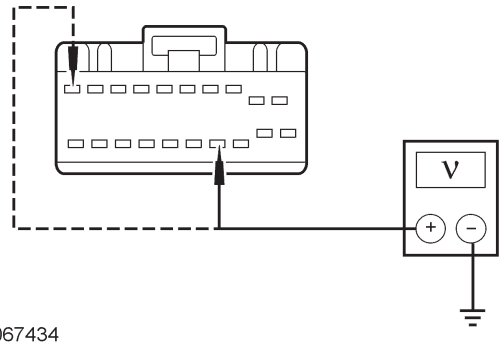
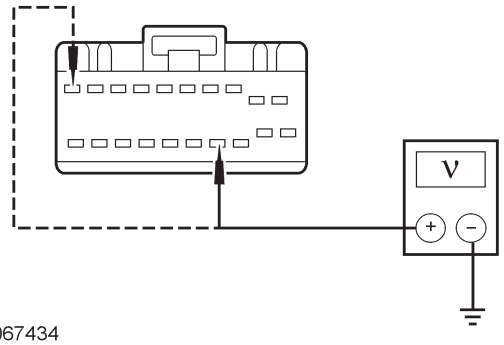
PINPOINT TEST R: DTC B1358 — IGNITION SWITCH OR BLOWER ELECTRONICS CIRCUIT SHORT TO GROUND/DTC B2521 — TACH CIRCUIT FAILURE (Continued)

Test Step		Result / Action to Take
R1	**CHECK CIRCUIT 1153 (RD/BK) (Continued)**	
	• Measure the voltage between driver CCSM C3031b-4 (or passenger CCSM C3036b-4), circuit 1153 (RD/BK), harness side and ground.  A0055541 • **Is the voltage greater than 10 volts?**	**Yes** GO to **R2**. **No** REPAIR circuit 1153 (RD/BK). CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
R2	**CHECK THE FAN MOTOR RPM INPUT**	
	• Key in OFF position. • Connect: Driver CCSM C3031b or Passenger CCSM C3036b. • Key in ON position. • Enter the following diagnostic mode on the scan tool: CCSM Active Command Menu TURN BLOWER FULL POWER. **NOTE:** After the active command FULL BLOW is commanded to the ON state, the climate controlled seat blower fan will operate for 15 seconds, then turn off. **NOTE:** The CCSM is not the source of the fault if the active command mode is operational. Monitor the PID BLWRRPM while commanding the FULL BLOW active command ON then OFF. • **Does the PID value change when the climate controlled seat blower fan was commanded ON and OFF?**	**Yes** CHECK for causes of the intermittent fault. INSPECT the connectors, terminals and wiring. ATTEMPT to recreate the hard fault by flexing the wire harness and cycling the ignition key frequently. REPAIR any intermittent concerns found. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **R3**.
R3	**VERIFY THE CLIMATE CONTROLLED SEAT BLOWER FAN OPERATION**	
	• **NOTE:** After the active command FULL BLOW is commanded to the ON state, the climate controlled seat blower fan will operate for 15 seconds, then turn off. **NOTE:** The CCSM is not the source of the fault if the active command mode is operational. Command the FULL BLOW active command ON then OFF and note the climate controlled seat blower fan operation. • **Does the climate controlled seat blower fan operate?**	**Yes** GO to **R4**. **No** GO to **R9**.
R4	**CHECK CIRCUIT 1554 (WH) AND CIRCUIT 1565 (VT) FOR A SHORT TO VOLTAGE**	
	• Key in OFF position. • Disconnect: Driver CCSM C3031a or Passenger CCSM C3036a. • Key in ON position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

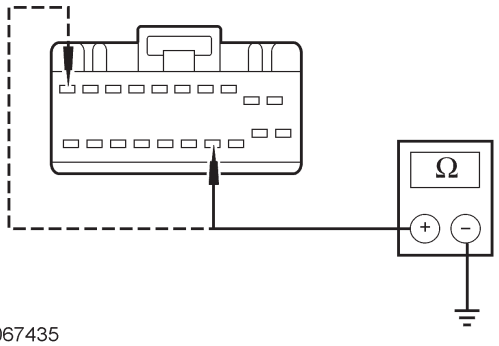
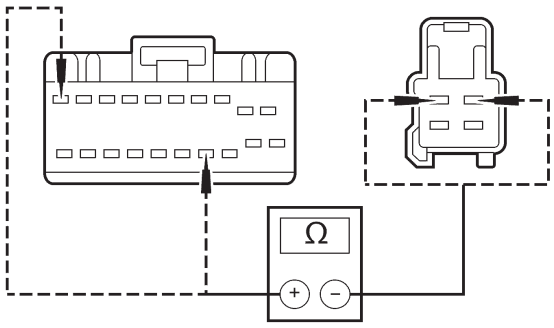
PINPOINT TEST R: DTC B1358 — IGNITION SWITCH OR BLOWER ELECTRONICS CIRCUIT SHORT TO GROUND/DTC B2521 — TACH CIRCUIT FAILURE (Continued)

Test Step		Result / Action to Take
R4	**CHECK CIRCUIT 1554 (WH) AND CIRCUIT 1565 (VT) FOR A SHORT TO VOLTAGE (Continued)**	
	• Measure the voltage between driver CCSM C3031a-10 (or passenger CCSM C3036a-10), circuit 1565 (VT), harness side and ground; and between driver CCSM C3031a-14 (or passenger CCSM C3036a-14), circuit 1554 (WH), harness side and ground.  A0067434 • **Are the voltages less than 0.2 volt?**	**Yes** GO to **R6**. **No** GO to **R5**.
R5	**CHECK CIRCUIT 1554 (WH) AND CIRCUIT 1565 (VT) FOR A SHORT TO VOLTAGE**	
	• Key in OFF position. • Disconnect: Driver Climate Controlled Seat Blower Fan C3033 or Passenger Climate Controlled Seat Blower Fan C3038. • Key in ON position. • Measure the voltage between driver CCSM C3031a-10 (or passenger CCSM C3036a-10), circuit 1565 (VT), harness side and ground; and between driver CCSM C3031a-14 (or passenger CCSM C3036a-14), circuit 1554 (WH), harness side and ground.  A0067434 • **Are the voltages less than 0.2 volt?**	**Yes** INSTALL a new climate controlled seat blower fan. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR the affected circuits. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
R6	**CHECK CIRCUIT 1554 (WH) AND CIRCUIT 1565 (VT) FOR SHORT TO GROUND**	
	• Key in OFF position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

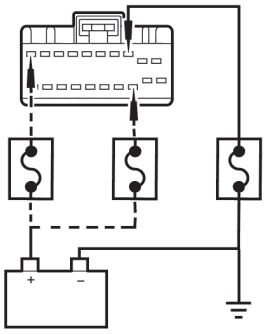
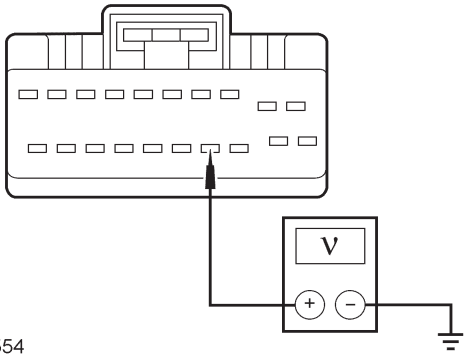
PINPOINT TEST R: DTC B1358 — IGNITION SWITCH OR BLOWER ELECTRONICS CIRCUIT SHORT TO GROUND/DTC B2521 — TACH CIRCUIT FAILURE (Continued)

Test Step		Result / Action to Take
R6	**CHECK CIRCUIT 1554 (WH) AND CIRCUIT 1565 (VT) FOR SHORT TO GROUND (Continued)**	
	• Measure the resistance between driver CCSM C3031a-10 (or passenger CCSM C3036a-10), circuit 1565 (VT), harness side and ground; and between driver CCSM C3031a-14 (or passenger CCSM C3036a-14), circuit 1554 (WH), harness side and ground.  A0067435 • **Are the resistances greater than 10,000 ohms?**	**Yes** GO to **R7**. **No** REPAIR the affected circuit(s). CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
R7	**CHECK CIRCUIT 1554 (WH) AND CIRCUIT 1565 (VT) FOR AN OPEN**	
	• Measure the resistance between driver CCSM C3031a-10 (or passenger CCSM C3036a-10), circuit 1565 (VT), harness side and driver climate controlled seat blower fan C3033-1 (or passenger climate controlled seat blower fan C3038-1), circuit 1565 (VT), harness side; and between driver CCSM C3031a-14 (or passenger CCSM C3036a-14), circuit 1554 (WH), harness side and driver climate controlled seat blower fan C3033-2 (or passenger climate controlled seat blower fan C3038-2), circuit 1554 (WH), harness side.  A0067436 • **Are the resistances less than 5 ohms?**	**Yes** GO to **R8**. **No** REPAIR the affected circuit. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
R8	**CHECK THE CLIMATE CONTROLLED SEAT BLOWER FAN OUTPUT**	
	• Connect: Driver Climate Controlled Seat Blower Fan C3033 or Passenger Climate Controlled Seat Blower Fan C3038.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

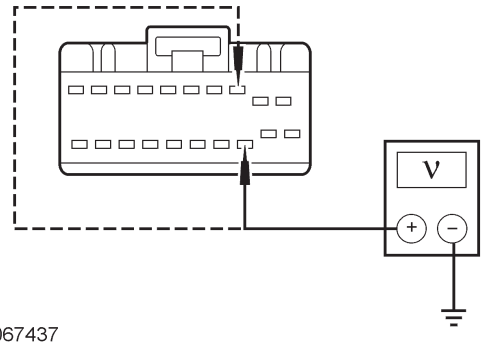
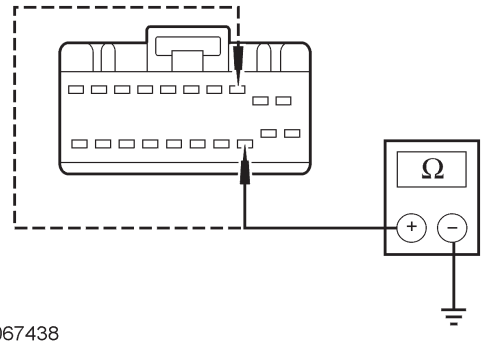
PINPOINT TEST R: DTC B1358 — IGNITION SWITCH OR BLOWER ELECTRONICS CIRCUIT SHORT TO GROUND/DTC B2521 — TACH CIRCUIT FAILURE (Continued)

<table>
<tr><th colspan="2">Test Step</th><th>Result / Action to Take</th></tr>
<tr><td>R8</td><td>CHECK THE CLIMATE CONTROLLED SEAT BLOWER FAN OUTPUT (Continued)</td><td rowspan="2">Yes
INSTALL a new CCSM and CARRY OUT programmable module installation (PMI). REFER to Climate Controlled Seat Module. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
No
INSTALL a new climate controlled seat blower fan. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.</td></tr>
<tr><td colspan="2">• Connect fused (5A) jumper leads between driver CCSM C3031a (or passenger CCSM C3036a) as follows:
— Driver CCSM C3031a-10 (or passenger CCSM C3036a-10), circuit 1565 (VT), harness side and battery positive.
— Driver CCSM C3031a-13 (or passenger CCSM C3036a-13), circuit 1552 (RD), harness side and battery positive.
— Driver CCSM C3031a-3 (or passenger CCSM C3036a-3), circuit 1553 (BK), harness side and ground.
 
A0055558
• Measure the voltage between driver CCSM C3031a-14 (or passenger CCSM C3036a-14), circuit 1554 (WH), harness side and ground.
 
A0055554
• Is voltage present?</td></tr>
<tr><td>R9</td><td>CHECK CIRCUIT 1553 (BK) AND CIRCUIT 1552 (RD) FOR A SHORT TO VOLTAGE</td><td rowspan="2"></td></tr>
<tr><td colspan="2">• Key in OFF position.
• Disconnect: Driver CCSM C3031a or Passenger CCSM C3036a.
• Disconnect: Driver Climate Controlled Seat Blower Fan C3033 or Passenger Climate Controlled Seat Blower Fan C3038.
• Key in ON position.</td></tr>
</table>

(Continued)

DIAGNOSIS AND TESTING (Continued)

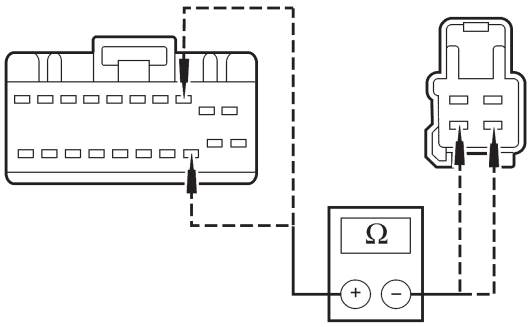
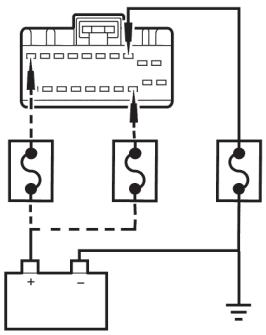
PINPOINT TEST R: DTC B1358 — IGNITION SWITCH OR BLOWER ELECTRONICS CIRCUIT SHORT TO GROUND/DTC B2521 — TACH CIRCUIT FAILURE (Continued)

Test Step		Result / Action to Take
R9	**CHECK CIRCUIT 1553 (BK) AND CIRCUIT 1552 (RD) FOR A SHORT TO VOLTAGE (Continued)**	
	• Measure the voltage between driver CCSM C3031a-3 (or passenger CCSM C3036a-3), circuit 1553 (BK), harness side and ground; and between driver CCSM C3031a-13 (or passenger CCSM C3036a-13), circuit 1552 (RD), harness side and ground.  A0067437 • **Are the voltages less than 0.2 volt?**	**Yes** GO to **R10**. **No** REPAIR the affected circuits. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
R10	**CHECK CIRCUIT 1553 (BK) AND CIRCUIT 1552 (RD) FOR A SHORT TO GROUND**	
	• Key in OFF position. • Measure the resistance between driver CCSM C3031a-3 (or passenger CCSM C3036a-3), circuit 1553 (BK), harness side and ground; and between driver CCSM C3031a-13 (or passenger CCSM C3036a-13), circuit 1552 (RD), harness side and ground.  A0067438 • **Are the resistances greater than 10,000 ohms?**	**Yes** GO to **R11**. **No** REPAIR the affected circuit(s). CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

(Continued)

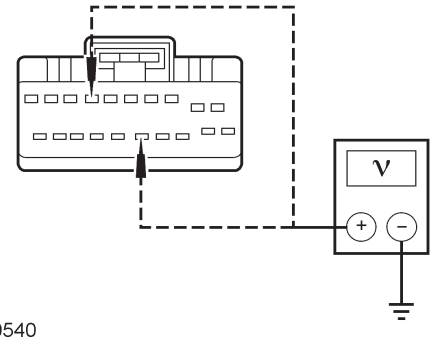
DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST R: DTC B1358 — IGNITION SWITCH OR BLOWER ELECTRONICS CIRCUIT SHORT TO GROUND/DTC B2521 — TACH CIRCUIT FAILURE (Continued)

Test Step		Result / Action to Take
R11	**CHECK CIRCUIT 1553 (BK) AND CIRCUIT 1552 (RD) FOR AN OPEN**	
	• Measure the resistance between driver CCSM C3031a-3 (or passenger CCSM C3036a-3), circuit 1553 (BK), harness side and driver climate controlled seat blower fan C3033-4 (or passenger climate controlled seat blower fan C3038-4), circuit 1553 (BK), harness side; and between driver CCSM C3031a-13 (or passenger CCSM C3036a-13), circuit 1552 (RD), harness side and driver climate controlled seat blower fan C3033-3 (or passenger climate controlled seat blower fan C3038-3), circuit 1552 (RD), harness side.  A0067439 • **Are the resistances less than 5 ohms?**	**Yes** GO to **R12**. **No** REPAIR the affected circuit. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
R12	**CHECK THE CLIMATE CONTROLLED BLOWER FAN OPERATION**	
	• Connect: Driver Climate Controlled Seat Blower Fan C3033 or Passenger Climate Controlled Seat Blower Fan C3038. • Connect fused (5A) jumper leads between driver CCSM C3031a (or passenger CCSM C3036a) as follows: — Driver CCSM C3031a-10 (or passenger CCSM C3036a-10), circuit 1565 (VT), harness side and battery positive. — Driver CCSM C3031a-13 (or passenger CCSM C3036a-13), circuit 1552 (RD), harness side and battery positive. — Driver CCSM C3031a-3 (or passenger CCSM C3036a-3), circuit 1553 (BK), harness side and ground.  A0055558 • **Does the climate controlled seat blower fan operate?**	**Yes** INSTALL a new CCSM and CARRY OUT programmable module installation (PMI). REFER to Climate Controlled Seat Module. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** INSTALL a new climate controlled seat blower fan. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST S: DTC B2488 — THUMBWHEEL SWITCH VOLTAGE OUT OF RANGE HIGH

Test Step		Result / Action to Take
S1	**CHECK CIRCUITS 1018 (LG/OG) AND 1019 (TN/LB) FOR A SHORT TO VOLTAGE**	
	WARNING: The restraint system diagnostic tool is for restraint system service only. Remove from vehicle prior to road use. Failure to remove could result in injury and possible violation of vehicle safety standards. **NOTE:** If a seat equipped with a seat mounted side air bag and/or a safety belt pretensioner (if equipped) system is being serviced, **the supplemental restraint system (SRS) must be depowered.** Refer to Section 501-20B. **NOTE:** The SRS must be fully operational and free of faults before releasing the vehicle to the customer. • Depower the SRS. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in the General Procedures portion of Section 501-20B. • Disconnect the affected seat safety belt buckle pretensioner C3201 (driver) or C3202 (passenger). • Connect restraint system diagnostic tool 418-133 to the affected seat safety belt buckle pretensioner C3201 (driver) or C3202 (passenger). • **WARNING: Be sure that nobody is in the vehicle and that there is nothing blocking or set in front of any air bag module when the battery ground cable is connected.** Connect the battery ground cable. • Disconnect: Driver CCSM C3031a or Passenger CCSM C3036a. • Disconnect: Driver Climate Controlled Seat Switch C3032 or Passenger Climate Controlled Seat Switch C3037. • Key in ON position. • Measure the voltage between the driver CCSM C3031a-7 (or passenger CCSM C3036a-7), circuit 1018 (LG/OG), harness side and ground; and between driver CCSM C3031a-15 (or passenger CCSM C3036a-15), circuit 1019 (TN/LB), harness side and ground.  A0080540 • **Are the voltages less than 0.2 volt?**	**Yes** GO to **S2**. **No** REPAIR the affected circuit. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
S2	**CHECK THE CLIMATE CONTROLLED SET SWITCH THUMBWHEEL RESISTANCE**	
	• Key in OFF position. • Measure the resistance between the driver climate controlled seat switch C3032 (or passenger climate controlled seat switch C3037) pin 9 and pin 10, component side. Set the thumbwheel at each position and compare the resistance values to the following table.	

(Continued)

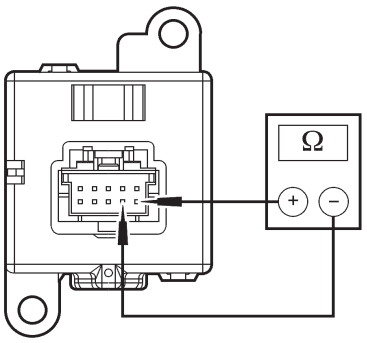
DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST S: DTC B2488 — THUMBWHEEL SWITCH VOLTAGE OUT OF RANGE HIGH (Continued)

Test Step		Result / Action to Take
S2	CHECK THE CLIMATE CONTROLLED SET SWITCH THUMBWHEEL RESISTANCE (Continued)	

Position	Resistance [a]
1	2,370 ohms
2	1,100 ohms
3	619 ohms
4	392 ohms
5	237 ohms

a Acceptable tolerance is ± 5%.



A0080541

- **Is the resistance for each thumbwheel position within the tolerance?**

Yes
INSTALL a new CCSM and CARRY OUT programmable module installation (PMI). REFER to Climate Controlled Seat Module. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

No
INSTALL a new climate controlled seat switch. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

PINPOINT TEST T: DTC B2729 — CUSHION OVERTEMP DETECTED/DTC B2730 — BACK OVERTEMP DETECTED/DTC B2731 — DIFFERENTIAL TEMPERATURE FAULT

NOTE: The presence of overtemp faults (DTCs B2729 and B2730) can be induced by incorrect operation of the climate controlled seat system after an initial HEAT setting has been attained. If a HEAT setting is repeatedly turned OFF and ON in an attempt to increase the seat temperature, an overtemp condition can result and the DTC(s) will be set.

Test Step		Result / Action to Take
T1	CHECK THE SEAT CUSHION TED EXHAUST NOZZLE FOR WASTE AIRFLOW	

⚠ **WARNING: The restraint system diagnostic tool is for restraint system service only. Remove from vehicle prior to road use. Failure to remove could result in injury and possible violation of vehicle safety standards.**

NOTE: If a seat equipped with a seat mounted side air bag and/or a safety belt pretensioner (if equipped) system is being serviced, **the supplemental restraint system (SRS) must be depowered.** Refer to Section 501-20B.

NOTE: The SRS must be fully operational and free of faults before releasing the vehicle to the customer.

- Depower the SRS. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in the General Procedures portion of Section 501-20B.
- Disconnect the affected seat safety belt buckle pretensioner C3201 (driver) or C3202 (passenger).
- Connect restraint system diagnostic tool 418-133 to the affected seat safety belt buckle pretensioner C3201 (driver) or C3202 (passenger).

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST T: DTC B2729 — CUSHION OVERTEMP DETECTED/DTC B2730 — BACK OVERTEMP DETECTED/DTC B2731 — DIFFERENTIAL TEMPERATURE FAULT (Continued)

Test Step		Result / Action to Take
T1	**CHECK THE SEAT CUSHION TED EXHAUST NOZZLE FOR WASTE AIRFLOW (Continued)**	
	• ⚠ **WARNING: Be sure that nobody is in the vehicle and that there is nothing blocking or set in front of any air bag module when the battery ground cable is connected.** Connect the battery ground cable. • Key in ON position. • Set both front seats to COOL 1 at the climate controlled seat switches. • Check for air exhausting from the seat cushion TED exhaust nozzle and compare it to the air exhausting from the opposite seat. • **Is air exhausting from the seat cushion TED exhaust nozzle comparable to the air exhausting from the opposite seat?**	**Yes** GO to **T4**. **No** GO to **T2**.
T2	**INSPECT THE SEAT CUSHION DUCTS**	
	• Key in OFF position. • Inspect the seat cushion ducts for damaged, restricted or disconnected ducts. • **Are any duct(s) damaged, restricted or disconnected?**	**Yes** REPAIR or INSTALL new duct(s) as needed. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **T3**.

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST T: DTC B2729 — CUSHION OVERTEMP DETECTED/DTC B2730 — BACK OVERTEMP DETECTED/DTC B2731 — DIFFERENTIAL TEMPERATURE FAULT (Continued)

Test Step		Result / Action to Take
T3	**INSPECT THE SEAT CUSHION TED FOR CORRECT INSTALLATION**	
	• Inspect the TED for correct installation to the seat cushion. • **Is the seat cushion TED correctly installed?**	**Yes** REMOVE the seat and the seat cushion trim cover. INSPECT for a worn, damaged or incorrectly installed foam wedge, cushion foam, or seat cushion trim cover. INSPECT for collapsed airflow channels in the seat cushion foam. REPAIR or INSTALL a new foam wedge, seat cushion foam or seat cushion trim cover as needed. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** INSTALL the seat cushion TED correctly. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
T4	**CHECK THE SEAT BACKREST TED EXHAUST NOZZLE FOR WASTE AIRFLOW**	
	• Set both front seats to COOL 1 at the climate controlled seat switches. • Check for air exhausting from the seat backrest TED exhaust nozzle and compare it to the air exhausting from the opposite seat. • **Is air exhausting from the seat backrest TED exhaust nozzle comparable to the air exhausting from the opposite seat?**	**Yes** GO to **T7**. **No** GO to **T5**.
T5	**INSPECT THE SEAT BACKREST DUCTS**	
	• Inspect the seat backrest ducts for damaged, restricted or disconnected ducts. • **Are any duct(s) damaged, restricted or disconnected?**	**Yes** REPAIR or INSTALL new duct(s) as needed. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** GO to **T6**.

(Continued)

DIAGNOSIS AND TESTING (Continued)

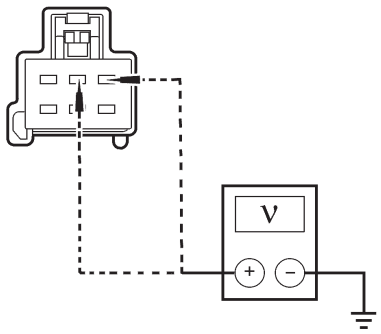
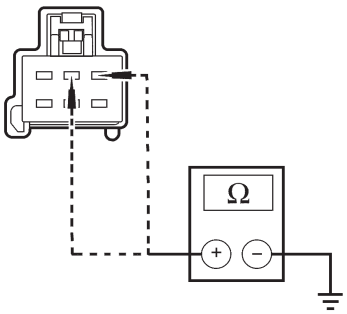
PINPOINT TEST T: DTC B2729 — CUSHION OVERTEMP DETECTED/DTC B2730 — BACK OVERTEMP DETECTED/DTC B2731 — DIFFERENTIAL TEMPERATURE FAULT (Continued)

Test Step		Result / Action to Take
T6	**INSPECT THE SEAT BACKREST TED FOR CORRECT INSTALLATION**	
	• Inspect the TED for correct installation to the seat cushion. • **Is the seat backrest TED correctly installed?**	**Yes** REMOVE the seat and the seat backrest trim cover. INSPECT for a worn, damaged or incorrectly installed foam wedge, backrest foam, or seat backrest trim cover. INSPECT for collapsed airflow channels in the seat backrest foam. REPAIR or INSTALL a new foam wedge, seat backrest foam or seat backrest trim cover as needed. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** INSTALL the seat backrest TED correctly. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
T7	**CHECK THE SEAT CUSHION AND SEAT BACKREST TEMPERATURE PIDS**	
	• Enter the following diagnostic mode on the scan tool: CCSM Active Command Menu TED HEAT MODE. **NOTE:** After the active command TED HEAT is commanded to the ON state, the climate controlled seat TED will operate for 15 seconds, then turn off. **NOTE:** The CCSM is not the source of the fault if the active command mode is operational. Monitor PIDs CSHTEMP and BK_TEMP while commanding the TED HEAT active command ON. • **Is either PID greater than 185°F (85°C)?**	**Yes** If PID CSHTEMP is greater than 185°F (85°C), GO to **T8**. If PID BK_TEMP is greater than 185°F (85°C), GO to **T17**. **No** GO to **T12**.
T8	**CHECK THE SEAT CUSHION TED TEMPERATURE SENSOR CIRCUITS 1548 (DG/LG) AND 1060 (BK/LB) FOR A SHORT TO VOLTAGE**	
	• Key in OFF position. • Disconnect: Driver Seat Cushion TED C3035 or Passenger Seat Cushion TED C3040. • Disconnect: Driver CCSM C3031a or Passenger CCSM C3036a. • Key in ON position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

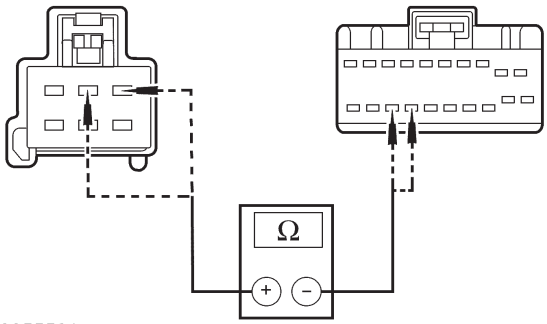
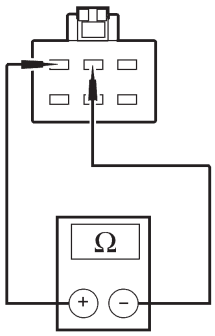
PINPOINT TEST T: DTC B2729 — CUSHION OVERTEMP DETECTED/DTC B2730 — BACK OVERTEMP DETECTED/DTC B2731 — DIFFERENTIAL TEMPERATURE FAULT (Continued)

Test Step		Result / Action to Take
T8	**CHECK THE SEAT CUSHION TED TEMPERATURE SENSOR CIRCUITS 1548 (DG/LG) AND 1060 (BK/LB) FOR A SHORT TO VOLTAGE (Continued)**	
	• Measure the voltage between driver seat cushion TED C3035-3 (or passenger seat cushion TED C3040-3), circuit 1548 (DG/LG), harness side and ground; and between driver seat cushion TED C3035-2 (or passenger seat cushion TED C3040-2), circuit 1060 (BK/LB), harness side and ground.  A0055559 • **Are the voltages less than 0.2 volt?**	**Yes** GO to **T9**. **No** REPAIR the affected circuits. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
T9	**CHECK THE SEAT CUSHION TED TEMPERATURE SENSOR CIRCUITS 1548 (DG/LG) AND 1060 (BK/LB) FOR A SHORT TO GROUND**	
	• Key in OFF position. • Measure the resistance between driver seat cushion TED C3035-3 (or passenger seat cushion TED C3040-3), circuit 1548 (DG/LG), harness side and ground; and between driver seat cushion TED C3035-2 (or passenger seat cushion TED C3040-2), circuit 1060 (BK/LB), harness side and ground.  A0055560 • **Is the resistance greater than 10,000 ohms?**	**Yes** GO to **T10**. **No** REPAIR the affected circuit(s). CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

(Continued)

DIAGNOSIS AND TESTING (Continued)

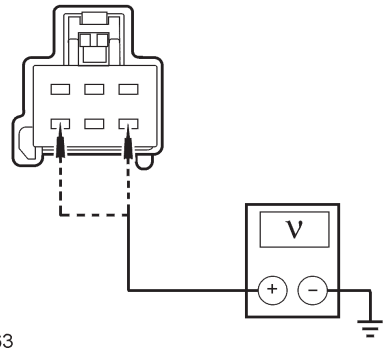
PINPOINT TEST T: DTC B2729 — CUSHION OVERTEMP DETECTED/DTC B2730 — BACK OVERTEMP DETECTED/DTC B2731 — DIFFERENTIAL TEMPERATURE FAULT (Continued)

Test Step		Result / Action to Take
T10	**CHECK THE SEAT CUSHION TED TEMPERATURE SENSOR CIRCUITS 1548 (DG/LG) AND 1060 (BK/LB) FOR AN OPEN**	
• Measure the resistance between driver seat cushion TED C3035-3 (or passenger seat cushion TED C3040-3), circuit 1548 (DG/LG), harness side and driver CCSM C3031a-18 (or passenger CCSM C3036a-18), circuit 1548 (DG/LG), harness side; and between driver seat cushion TED C3035-2 (or passenger seat cushion TED C3040-2), circuit 1060 (BK/LB), harness side and driver CCSM C3031a-17 (or passenger CCSM C3036a-17), circuit 1060 (BK/LB), harness side.  A0055561 • **Are the resistances less than 5 ohms?**		**Yes** GO to **T11**. **No** REPAIR the affected circuit. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
T11	**CHECK THE SEAT CUSHION TEMPERATURE SENSOR**	
• At room temperature, measure the resistance between the seat cushion TED pin 3 and pin 2, component side.  A0055562 • **Is the resistance between 1200 and 3600 ohms?**		**Yes** INSTALL a new CCSM and CARRY OUT programmable module installation (PMI). REFER to Climate Controlled Seat Module. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** INSTALL a new seat cushion TED. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

(Continued)

DIAGNOSIS AND TESTING (Continued)

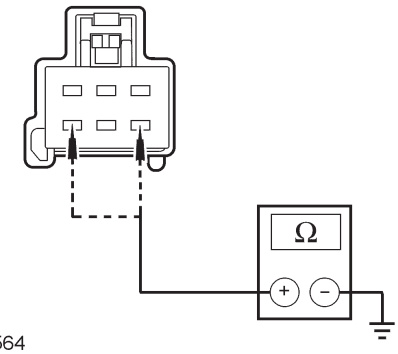
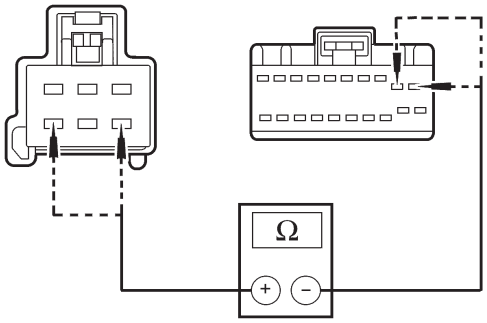
PINPOINT TEST T: DTC B2729 — CUSHION OVERTEMP DETECTED/DTC B2730 — BACK OVERTEMP DETECTED/DTC B2731 — DIFFERENTIAL TEMPERATURE FAULT (Continued)

Test Step		Result / Action to Take
T12	**CHECK THE SEAT CUSHION AND SEAT BACKREST TEMPERATURE PIDS**	
	• Enter the following diagnostic mode on the scan tool: CCSM Active Command Menu TED HEAT MODE. **NOTE:** After the active command TED HEAT is commanded to the ON state, the climate controlled seat TED will operate for 15 seconds, then turn off. **NOTE:** The CCSM is not the source of the fault if the active command mode is operational. Monitor PIDs CSHTEMP and BK_TEMP while commanding the TED HEAT active command ON. • **Did the PID values change?**	**Yes** REPAIR the climate controlled seat for airflow leaks. INSPECT the fan, TEDs, ducts, foam wedges, foam pads, trim covers and their connection points and REPAIR as needed. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** If PID CSHTEMP does not change, GO to **T13**. If PID BK_TEMP does not change, GO to **T21**.
T13	**CHECK THE SEAT CUSHION TED HEATING ELEMENT CIRCUITS 1065 (WH/LB) AND 1064 (YE/LB) FOR A SHORT TO VOLTAGE**	
	• Key in OFF position. • Disconnect: Driver Seat Cushion TED C3035 or Passenger Seat Cushion TED C3040. • Disconnect: Driver CCSM C3031a or Passenger CCSM C3036a. • Key in ON position. • Measure the voltage between driver seat cushion TED C3035-4 (or passenger seat cushion TED C3040-4), circuit 1065 (WH/LB), harness side and ground; and between driver seat cushion TED C3035-6 (or passenger seat cushion TED C3040-6), circuit 1064 (YE/LB), harness side and ground.  A0055563 • **Are the voltages less than 0.2 volt?**	**Yes** GO to **T14**. **No** REPAIR the affected circuits. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
T14	**CHECK THE SEAT CUSHION TED HEATING ELEMENT CIRCUITS 1065 (WH/LB) AND 1064 (YE/LB) FOR A SHORT TO GROUND**	
	• Key in OFF position.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

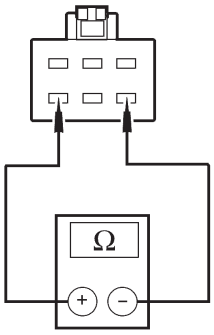
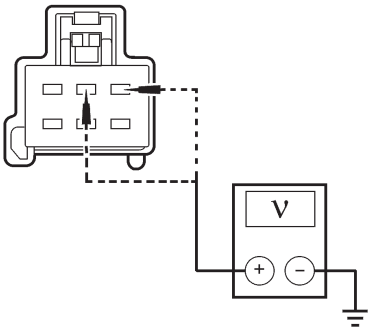
PINPOINT TEST T: DTC B2729 — CUSHION OVERTEMP DETECTED/DTC B2730 — BACK OVERTEMP DETECTED/DTC B2731 — DIFFERENTIAL TEMPERATURE FAULT (Continued)

Test Step		Result / Action to Take
T14	**CHECK THE SEAT CUSHION TED HEATING ELEMENT CIRCUITS 1065 (WH/LB) AND 1064 (YE/LB) FOR A SHORT TO GROUND (Continued)**	
	• Measure the resistance between driver seat cushion TED C3035-4 (or passenger seat cushion TED C3040-4), circuit 1065 (WH/LB), harness side and ground; and between driver seat cushion TED C3035-6 (or passenger seat cushion TED C3040-6), circuit 1064 (YE/LB), harness side and ground.  A0055564 • **Are the resistances greater than 10,000 ohms?**	**Yes** GO to **T15**. **No** REPAIR the affected circuit(s). CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
T15	**CHECK THE SEAT CUSHION TED HEATING ELEMENT CIRCUITS 1065 (WH/LB) AND 1064 (YE/LB) FOR AN OPEN**	
	• Measure the resistance between driver seat cushion TED C3035-4 (or passenger seat cushion TED C3040-4), circuit 1065 (WH/LB), harness side and driver CCSM C3031a-2 (or passenger CCSM C3036a-2), circuit 1065 (WH/LB), harness side; and between driver seat cushion TED C3035-6 (or passenger seat cushion TED C3040-6), circuit 1064 (YE/LB), harness side and driver CCSM C3031a-1 (or passenger CCSM C3036a-1), circuit 1064 (YE/LB), harness side.  A0055565 • **Are the resistances less than 5 ohms?**	**Yes** GO to **T16**. **No** REPAIR the affected circuit. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

(Continued)

DIAGNOSIS AND TESTING (Continued)

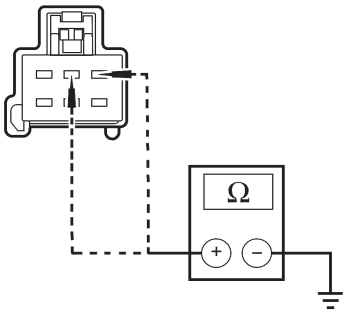
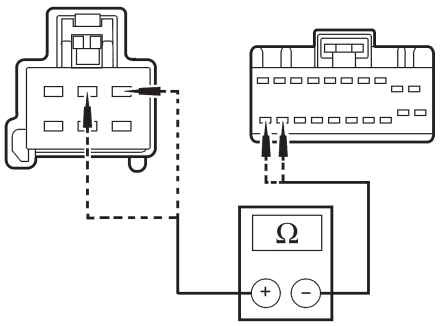
PINPOINT TEST T: DTC B2729 — CUSHION OVERTEMP DETECTED/DTC B2730 — BACK OVERTEMP DETECTED/DTC B2731 — DIFFERENTIAL TEMPERATURE FAULT (Continued)

Test Step		Result / Action to Take
T16	**CHECK THE SEAT CUSHION TED**	
	• At room temperature, measure the resistance between the seat cushion TED pin 4 and pin 6, component side.  A0055566 • **Is the resistance between 0.5 and 7 ohms?**	**Yes** INSTALL a new CCSM and CARRY OUT programmable module installation (PMI). REFER to Climate Controlled Seat Module. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** INSTALL a new seat cushion TED. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
T17	**CHECK THE SEAT BACKREST TED TEMPERATURE SENSOR CIRCUITS 1549 (DB/OG) AND 1062 (RD/LB) FOR A SHORT TO VOLTAGE**	
	• Key in OFF position. • Disconnect: Driver Seat Backrest TED C3034 or Passenger Seat Backrest TED C3039. • Disconnect: Driver CCSM C3031a or Passenger CCSM C3036a. • Key in ON position. • Measure the voltage between driver seat backrest TED C3034-3 (or passenger seat backrest TED C3039-3), circuit 1549 (DB/OG), harness side and ground; and between driver seat backrest TED C3034-2 (or passenger seat backrest TED C3039-2), circuit 1062 (RD/LB), harness side and ground.  A0055567 • **Are the voltages less than 0.2 volt?**	**Yes** GO to **T18**. **No** REPAIR the affected circuits. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST T: DTC B2729 — CUSHION OVERTEMP DETECTED/DTC B2730 — BACK OVERTEMP DETECTED/DTC B2731 — DIFFERENTIAL TEMPERATURE FAULT (Continued)

Test Step		Result / Action to Take
T18	**CHECK THE SEAT BACKREST TED TEMPERATURE SENSOR CIRCUITS 1549 (DB/OG) AND 1062 (RD/LB) FOR A SHORT TO GROUND**	
	• Measure the resistance between driver seat backrest TED C3034-3 (or passenger seat backrest TED C3039-3), circuit 1549 (DB/OG), harness side and ground; and between driver seat backrest TED C3034-2 (or passenger seat backrest TED C3039-2), circuit 1062 (RD/LB), harness side and ground.  A0055560 • **Are the resistances greater than 10,000 ohms?**	**Yes** GO to **T19**. **No** REPAIR the affected circuit(s). CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
T19	**CHECK THE SEAT BACKREST TED TEMPERATURE SENSOR CIRCUITS 1549 (DB/OG) AND 1062 (RD/LB) FOR AN OPEN**	
	• Measure the resistance between driver seat backrest TED C3034-3 (or passenger seat backrest TED C3039-3), circuit 1549 (DB/OG), harness side and driver CCSM C3031a-19 (or passenger CCSM C3036a-19), circuit 1549 (DB/OG), harness side; and between driver seat backrest TED C3034-2 (or passenger seat backrest TED C3039-2), circuit 1062 (RD/LB), harness side and driver CCSM C3031a-20 (or passenger CCSM C3036a-20), circuit 1062 (RD/LB), harness side.  A0055568 • **Are the resistances less than 5 ohms?**	**Yes** GO to **T20**. **No** REPAIR the affected circuit. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

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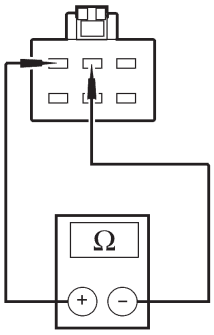
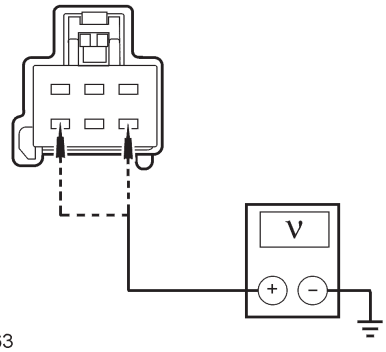
DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST T: DTC B2729 — CUSHION OVERTEMP DETECTED/DTC B2730 — BACK OVERTEMP DETECTED/DTC B2731 — DIFFERENTIAL TEMPERATURE FAULT (Continued)

Test Step		Result / Action to Take
T20	**CHECK THE SEAT BACKREST TEMPERATURE SENSOR**	
	• At room temperature, measure the resistance between the seat backrest TED pin 2 and pin 3, component side.  A0055562 • **Is the resistance between 1200 and 3600 ohms?**	**Yes** INSTALL a new CCSM and CARRY OUT programmable module installation (PMI). REFER to Climate Controlled Seat Module. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** INSTALL a new seat backrest TED. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
T21	**CHECK THE SEAT BACKREST TED HEATING ELEMENT CIRCUITS 1067 (VT/LB) AND 1066 (GY/LB) FOR A SHORT TO VOLTAGE**	
	• Key in OFF position. • Disconnect: Driver Seat Backrest TED C3034 or Passenger Seat Backrest TED C3039. • Disconnect: Driver CCSM C3031a or Passenger CCSM C3036a. • Key in ON position. • Measure the voltage between driver seat backrest TED C3034-4 (or passenger seat backrest TED C3039-4), circuit 1067 (VT/LB), harness side and ground; and between driver seat backrest TED C3034-6 (or passenger seat backrest TED C3039-6), circuit 1066 (GY/LB), harness side and ground.  A0055563 • **Are the voltages less than 0.2 volt?**	**Yes** GO to **T22**. **No** REPAIR the affected circuits. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

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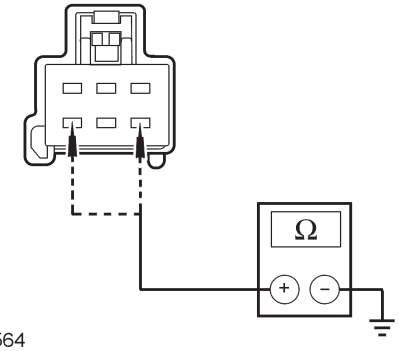
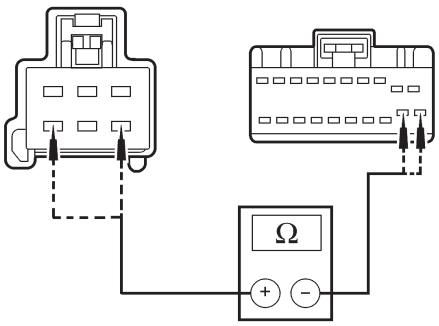
DIAGNOSIS AND TESTING (Continued)

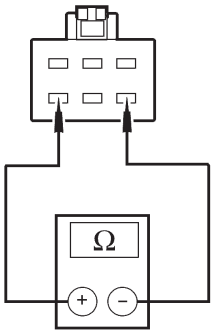
PINPOINT TEST T: DTC B2729 — CUSHION OVERTEMP DETECTED/DTC B2730 — BACK OVERTEMP DETECTED/DTC B2731 — DIFFERENTIAL TEMPERATURE FAULT (Continued)

Test Step		Result / Action to Take
T22	**CHECK THE SEAT BACKREST TED HEATING ELEMENT CIRCUITS 1067 (VT/LB) AND 1066 (GY/LB) FOR A SHORT TO GROUND**	
	• Measure the resistance between driver seat backrest TED C3034-4 (or passenger seat backrest TED C3039-4), circuit 1067 (VT/LB), harness side and ground; and between driver seat backrest TED C3034-6 (or passenger seat backrest TED C3039-6), circuit 1066 (GY/LB), harness side and ground.  A0055564 • **Are the resistances greater than 10,000 ohms?**	**Yes** GO to **T23**. **No** REPAIR the affected circuit(s). CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
T23	**CHECK THE SEAT BACKREST TED HEATING ELEMENT CIRCUITS 1067 (VT/LB) AND 1066 (GY/LB) FOR AN OPEN**	
	• Measure the resistance between driver seat backrest TED C3034-4 (or passenger seat backrest TED C3039-4), circuit 1067 (VT/LB), harness side and driver CCSM C3031a-12 (or passenger CCSM C3036a-12), circuit 1067 (VT/LB), harness side; and between driver seat backrest TED C3034-6 (or passenger seat backrest TED C3039-6), circuit 1066 (GY/LB), harness side and driver CCSM C3031a-11 (or passenger CCSM C3036a-11), circuit 1066 (GY/LB), harness side.  A0055569 • **Are the resistances less than 5 ohms?**	**Yes** GO to **T24**. **No** REPAIR the affected circuit. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST T: DTC B2729 — CUSHION OVERTEMP DETECTED/DTC B2730 — BACK OVERTEMP DETECTED/DTC B2731 — DIFFERENTIAL TEMPERATURE FAULT (Continued)

Test Step		Result / Action to Take
T24	CHECK THE SEAT BACKREST TED	
	• At room temperature, measure the resistance between the seat backrest TED pin 4 and pin 6, component side.  A0055566 • **Is the resistance between 0.5 and 7 ohms?**	**Yes** INSTALL a new CCSM and CARRY OUT programmable module installation (PMI). REFER to Climate Controlled Seat Module. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** INSTALL a new seat backrest TED. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

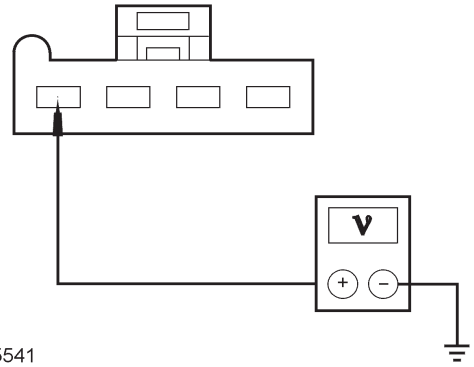
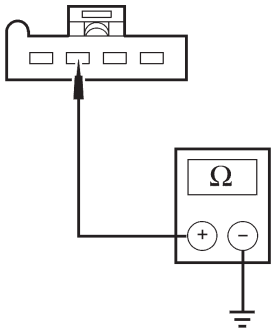
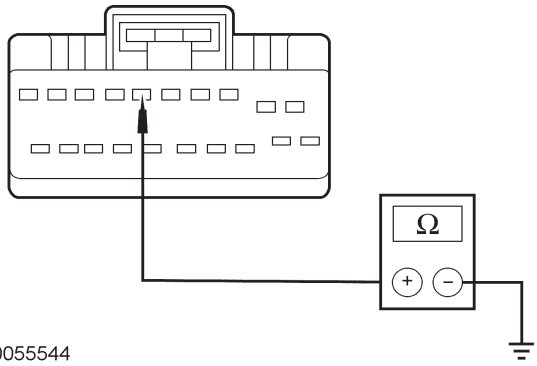
PINPOINT TEST U: A SINGLE CLIMATE CONTROLLED SEAT DOES NOT OPERATE/DOES NOT OPERATE CORRECTLY

Test Step		Result / Action to Take
U1	CHECK CIRCUIT 1153 (RD/BK)	
	⚠ WARNING: The restraint system diagnostic tool is for restraint system service only. Remove from vehicle prior to road use. Failure to remove could result in injury and possible violation of vehicle safety standards. **NOTE:** If a seat equipped with a seat mounted side air bag and/or a safety belt pretensioner (if equipped) system is being serviced, **the supplemental restraint system (SRS) must be depowered.** Refer to Section 501-20B. **NOTE:** The SRS must be fully operational and free of faults before releasing the vehicle to the customer. • Depower the SRS. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in the General Procedures portion of Section 501-20B. • Disconnect the affected seat safety belt buckle pretensioner C3201 (driver) or C3202 (passenger). • Connect restraint system diagnostic tool 418-133 to the affected seat safety belt buckle pretensioner C3201 (driver) or C3202 (passenger). • **⚠ WARNING: Be sure that nobody is in the vehicle and that there is nothing blocking or set in front of any air bag module when the battery ground cable is connected.** Connect the battery ground cable. • Disconnect: Driver CCSM C3031b or Passenger CCSM C3036b.	

(Continued)

DIAGNOSIS AND TESTING (Continued)

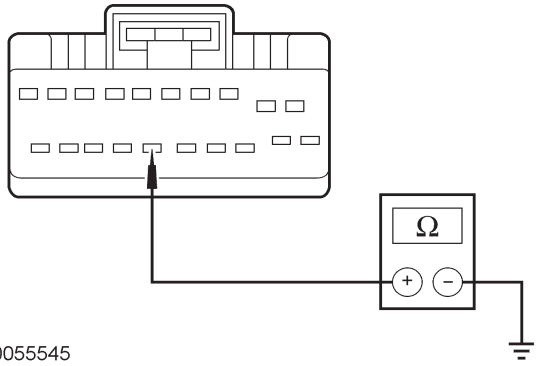
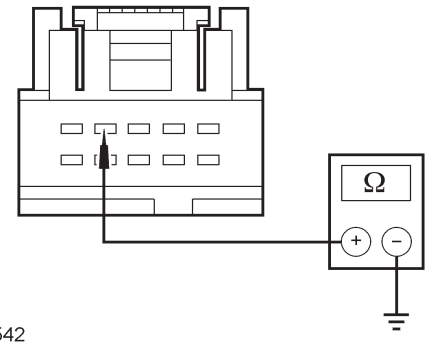
PINPOINT TEST U: A SINGLE CLIMATE CONTROLLED SEAT DOES NOT OPERATE/DOES NOT OPERATE CORRECTLY (Continued)

Test Step		Result / Action to Take
U1	**CHECK CIRCUIT 1153 (RD/BK) (Continued)**	
	• Measure the voltage between driver CCSM C3031b-4 (or passenger CCSM C3036b-4), circuit 1153 (RD/BK), harness side an ground.  A0055541 • **Is the voltage greater than 10 volts?**	**Yes** GO to **U2**. **No** REPAIR circuit 1153 (RD/BK). CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
U2	**CHECK CIRCUIT 57 (BK) TO THE CCSM**	
	• Measure the resistance between driver CCSM C3031b-3 (or passenger CCSM C3036b-3), circuit 57 (BK), harness side and ground.  A0067452 • **Is the resistance less than 5 ohms?**	**Yes** GO to **U3**. **No** REPAIR circuit 57 (BK). CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
U3	**CHECK THE CLIMATE CONTROLLED SEAT SWITCH OUTPUTS**	
	• Measure the resistance between driver CCSM C3031a-6 (or passenger C3036a-6), circuit 1551 (VT/WH), harness side and ground while pressing the HEAT button.  A0055544	

(Continued)

DIAGNOSIS AND TESTING (Continued)

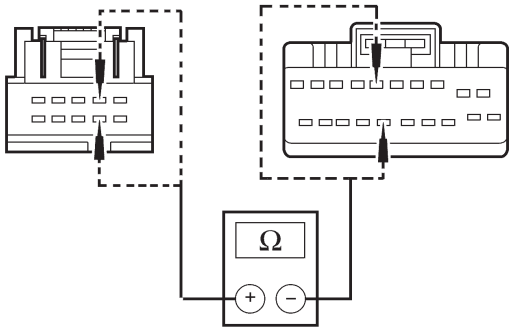
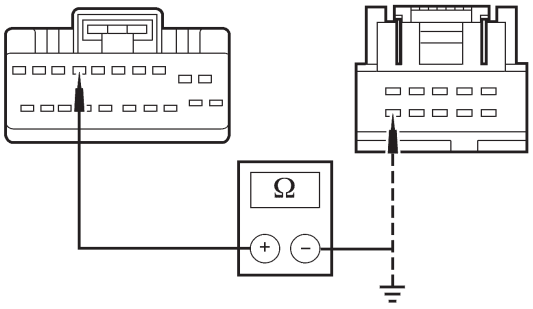
PINPOINT TEST U: A SINGLE CLIMATE CONTROLLED SEAT DOES NOT OPERATE/DOES NOT OPERATE CORRECTLY (Continued)

Test Step		Result / Action to Take
U3	**CHECK THE CLIMATE CONTROLLED SEAT SWITCH OUTPUTS (Continued)**	
	• Measure the resistance between driver CCSM C3031a-16 (or passenger C3036a-16), circuit 1550 (WH/OG), harness side and ground while pressing the COOL button.  A0055545 • **Are the resistances less than 5 ohms when a button is pressed and greater than 10,000 ohms when a button is released?**	**Yes** GO to **U6**. **No** GO to **U4**.
U4	**CHECK CIRCUIT 57 (BK) TO THE CLIMATE CONTROLLED SEAT SWITCH**	
	• Disconnect: Driver Climate Controlled Seat Switch C3032 or Passenger Climate Controlled Seat Switch C3037. • Measure the resistance between the driver climate controlled seat switch C3032-4 (or passenger climate controlled seat switch C3037-4), circuit 57 (BK), harness side and ground.  A0080542 • **Is the resistance less than 5 ohms?**	**Yes** GO to **U5**. **No** REPAIR circuit 57 (BK). CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

(Continued)

DIAGNOSIS AND TESTING (Continued)

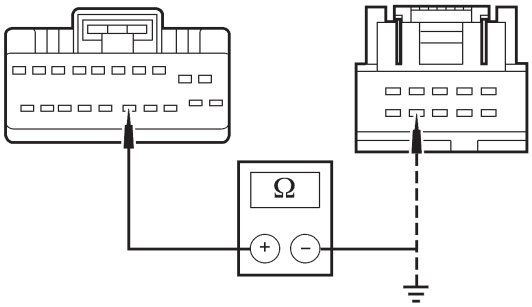
PINPOINT TEST U: A SINGLE CLIMATE CONTROLLED SEAT DOES NOT OPERATE/DOES NOT OPERATE CORRECTLY (Continued)

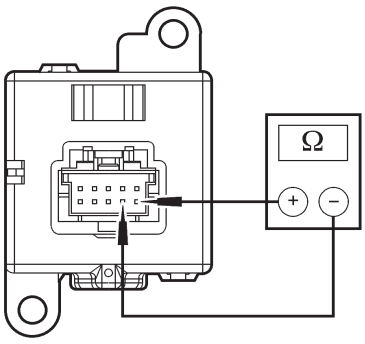
Test Step		Result / Action to Take
U5	**CHECK CIRCUITS 1550 (WH/OG) AND 1551 (VT/WH) FOR AN OPEN**	
	• Measure the resistance between driver CCSM C3031a-16 (or passenger CCSM C3036a-16), circuit 1550 (WH/OG), harness side and driver climate controlled seat switch C3032-7 (or passenger climate controlled seat switch C3037-7), circuit 1550 (WH/OG), harness side; and between driver CCSM C3031a-6 (or passenger CCSM C3036a-6), circuit 1551 (VT/WH), harness side and driver climate controlled seat switch C3032-2 (or passenger climate controlled seat switch C3037-2), circuit 1551 (VT/WH), harness side.  A0055546 • **Are the resistances less than 5 ohms?**	**Yes** INSTALL a new climate controlled seat switch. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR circuit 1550 (WH/OG) or 1551 (VT/WH). CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
U6	**CHECK CIRCUIT 1018 (LG/OG) FOR AN OPEN OR SHORT TO GROUND**	
	• Measure the resistance between driver CCSM C3031a-7 (or passenger CCSM C3036a-7), circuit 1018 (LG/OG), harness side and driver climate controlled seat switch C3032-10 (or passenger climate controlled seat switch C3037-10), circuit 1018 (LG/OG), harness side; and between driver CCSM C3031a-7 (or passenger CCSM C3036a-7), circuit 1018 (LG/OG), harness side and ground.  A0080543 • **Is the resistance less than 5 ohms between the CCSM and the climate controlled seat switch and greater than 10,000 ohms between the CCSM and ground?**	**Yes** GO to **U7**. **No** REPAIR circuit 1018 (LG/OG). CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST U: A SINGLE CLIMATE CONTROLLED SEAT DOES NOT OPERATE/DOES NOT OPERATE CORRECTLY (Continued)

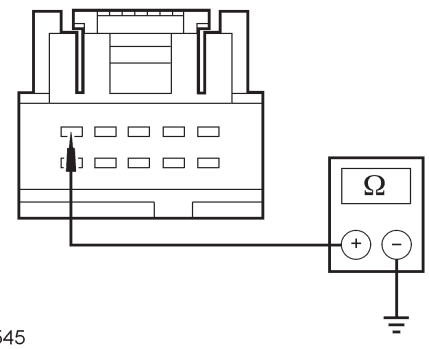
<table>
<tr><th colspan="2">Test Step</th><th>Result / Action to Take</th></tr>
<tr><td>U7</td><td>CHECK CIRCUIT 1019 (TN/LB) FOR AN OPEN OR SHORT TO GROUND</td><td rowspan="2">Yes
GO to U8.
No
REPAIR circuit 1019 (TN/LB). CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.</td></tr>
<tr><td colspan="2">• Measure the resistance between driver CCSM C3031a-15 (or passenger CCSM C3036a-15), circuit 1019 (TN/LB), harness side and driver climate controlled seat switch C3032-9 (or passenger climate controlled seat switch C3037-9), circuit 1019 (TN/LB), harness side; and between driver CCSM C3031a-15 (or passenger CCSM C3036a-15), circuit 1019 (TN/LB), harness side and ground.
 

A0080544
• Is the resistance less than 5 ohms between the CCSM and the climate controlled seat switch and greater than 10,000 ohms between the CCSM and ground?</td></tr>
<tr><td>U8</td><td>CHECK THE CLIMATE CONTROLLED SET SWITCH THUMBWHEEL RESISTANCE</td><td rowspan="2">Yes
INSTALL a new CCSM and CARRY OUT programmable module installation (PMI). REFER to Climate Controlled Seat Module. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
No
INSTALL a new climate controlled seat switch. CLEAR the DTCs. REPEAT the self test. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.</td></tr>
<tr><td colspan="2">• Measure the resistance between the driver climate controlled seat switch C3032 (or passenger climate controlled seat switch C3037) pin 9 and pin 10, component side. Set the thumbwheel at each position and compare the resistance values to the following table.
<table><tr><th>Position</th><th>Resistance [a]</th></tr><tr><td>1</td><td>2,370 ohms</td></tr><tr><td>2</td><td>1,100 ohms</td></tr><tr><td>3</td><td>619 ohms</td></tr><tr><td>4</td><td>392 ohms</td></tr><tr><td>5</td><td>237 ohms</td></tr></table>a Acceptable tolerance is ± 5%.
 

A0080541
• Is the resistance for each thumbwheel position within the tolerance?</td></tr>
</table>

DIAGNOSIS AND TESTING (Continued)

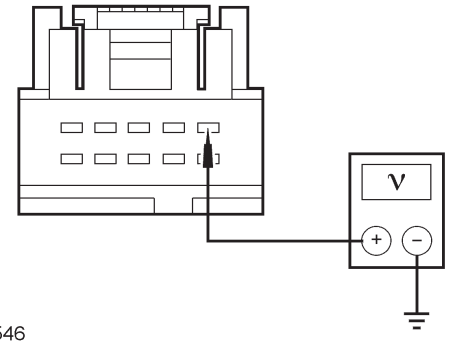
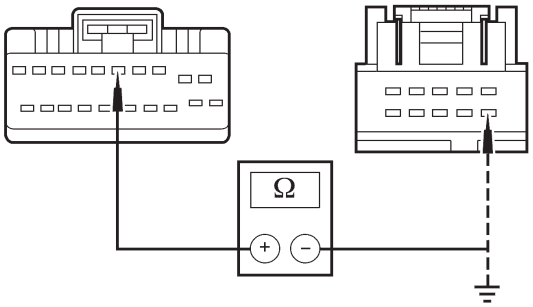
PINPOINT TEST V: A SINGLE CLIMATE CONTROLLED SEAT DOES NOT OPERATE CORRECTLY — ONE OR MORE CLIMATE CONTROLLED SEAT SWITCH LEDS ARE INOPERATIVE

Test Step		Result / Action to Take
V1	**CHECK THE CLIMATE CONTROLLED SEAT SWITCH LEDS**	
	WARNING: The restraint system diagnostic tool is for restraint system service only. Remove from vehicle prior to road use. Failure to remove could result in injury and possible violation of vehicle safety standards. **NOTE:** If a seat equipped with a seat mounted side air bag and/or a safety belt pretensioner (if equipped) system is being serviced, **the supplemental restraint system (SRS) must be depowered.** Refer to Section 501-20B. **NOTE:** The SRS must be fully operational and free of faults before releasing the vehicle to the customer. • Key in OFF position. • Depower the SRS. Refer to Supplemental Restraint System (SRS) Depowering and Repowering in the General Procedures portion of Section 501-20B. • Disconnect the affected seat safety belt buckle pretensioner C3201 (driver) or C3202 (passenger). • Connect restraint system diagnostic tool 418-133 to the affected seat safety belt buckle pretensioner C3201 (driver) or C3202 (passenger). • **WARNING: Be sure that nobody is in the vehicle and that there is nothing blocking or set in front of any air bag module when the battery ground cable is connected.** Connect the battery ground cable. • Key in ON position. • To check the affected climate controlled seat switch LEDs: — turn on the headlamps and note if the climate controlled seat switch is backlit. — press the COOL button and note if the COOL indicator on the climate controlled seat switch illuminates. — press the HEAT button and note if the HEAT indicator on the climate controlled seat switch illuminates. • **Are all three climate controlled seat switch LEDs inoperative?**	**Yes** GO to V2. **No** If the climate controlled seat switch did not backlight, GO to V3. If the climate controlled seat switch COOL indicator did not illuminate, GO to V4. If the climate controlled seat switch HEAT indicator did not illuminate, GO to V6.
V2	**CHECK CIRCUIT 57 (BK)**	
	• Key in OFF position. • Disconnect: Driver Climate Controlled Seat Switch C3032 or Passenger Climate Controlled Seat Switch C3037. • Measure the resistance between driver climate controlled seat switch C3032-5 (or passenger climate controlled seat switch C3037-5), circuit 57 (BK), harness side and ground.  A0080545 • **Is the resistance less than 5 ohms?**	**Yes** INSTALL a new climate controlled seat switch. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR circuit 57 (BK). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

(Continued)

DIAGNOSIS AND TESTING (Continued)

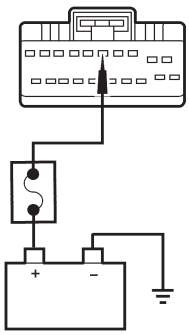
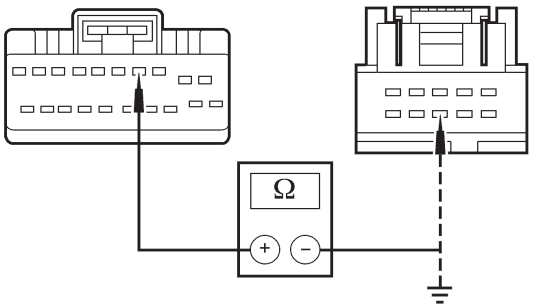
PINPOINT TEST V: A SINGLE CLIMATE CONTROLLED SEAT DOES NOT OPERATE CORRECTLY — ONE OR MORE CLIMATE CONTROLLED SEAT SWITCH LEDS ARE INOPERATIVE (Continued)

Test Step		Result / Action to Take
V3	**CHECK CIRCUIT 19 (LB/RD)**	
	• Key in OFF position. • Disconnect: Driver Climate Controlled Seat Switch C3032 or Passenger Climate Controlled Seat Switch C3037. • Key in ON position. • With the headlamps ON, measure the voltage between driver climate controlled seat switch C3032-1 (or passenger climate controlled seat switch C3037-1), circuit 19 (LB/RD), harness side and ground.  A0080546 • **Is the voltage greater than 10 volts?**	**Yes** INSTALL a new climate controlled seat switch. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** REPAIR circuit 19 (LB/RD). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
V4	**CHECK CIRCUIT 1974 (LB) FOR AN OPEN OR SHORT TO GROUND**	
	• Key in OFF position. • Disconnect: Driver CCSM C3031a or Passenger CCSM C3036a. • Disconnect: Driver Climate Controlled Seat Switch C3032 or Passenger Climate Controlled Seat Switch C3037. • Measure the resistance between driver CCSM C3031a-5 (or passenger CCSM C3036a-5), circuit 1974 (LB), harness side and driver climate controlled seat switch C3032-6 (or passenger climate controlled seat switch C3037-6), circuit 1974 (LB), harness side; and between driver CCSM C3031a-5 (or passenger CCSM C3036a-5), circuit 1974 (LB), harness side and ground.  A0080547 • **Is the resistance less than 5 ohms between the CCSM and the climate controlled seat switch and greater than 10,000 ohms between the CCSM and ground?**	**Yes** GO to **V5**. **No** REPAIR circuit 1974 (LB). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

(Continued)

DIAGNOSIS AND TESTING (Continued)

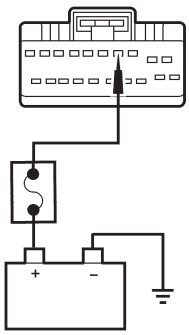
PINPOINT TEST V: A SINGLE CLIMATE CONTROLLED SEAT DOES NOT OPERATE CORRECTLY — ONE OR MORE CLIMATE CONTROLLED SEAT SWITCH LEDS ARE INOPERATIVE (Continued)

Test Step		Result / Action to Take
V5	**CHECK THE CLIMATE CONTROLLED SEAT SWITCH COOL LED**	
	• Connect: Driver Climate Controlled Seat Switch C3032 or Passenger Climate Controlled Seat Switch C3037. • Connect a fused jumper lead between the driver CCSM C3031a-5 (or passenger CCSM C3036a-5), circuit 1974 (LB), harness side and battery positive.  A0080548 • **Does the climate controlled seat switch COOL LED indicator illuminate?**	**Yes** INSTALL a new CCSM and CARRY OUT programmable module installation (PMI). REFER to Climate Controlled Seat Module. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** INSTALL a new climate controlled seat switch. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.
V6	**CHECK CIRCUIT 1973 (RD) FOR AN OPEN OR SHORT TO GROUND**	
	• Key in OFF position. • Disconnect: Driver CCSM C3031a or Passenger CCSM C3036a. • Disconnect: Driver Climate Controlled Seat Switch C3032 or Passenger Climate Controlled Seat Switch C3037. • Measure the resistance between driver CCSM C3031a-4 (or passenger CCSM C3036a-4), circuit 1973 (RD), harness side and driver climate controlled seat switch C3032-8 (or passenger climate controlled seat switch C3037-8), circuit 1973 (RD), harness side; and between driver CCSM C3031a-4 (or passenger CCSM C3036a-4), circuit 1973 (RD), harness side and ground.  A0080549 • **Is the resistance less than 5 ohms between the CCSM and the climate controlled seat switch and greater than 10,000 ohms between the CCSM and ground?**	**Yes** GO to **V7**. **No** REPAIR circuit 1973 (RD). TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST V: A SINGLE CLIMATE CONTROLLED SEAT DOES NOT OPERATE CORRECTLY — ONE OR MORE CLIMATE CONTROLLED SEAT SWITCH LEDS ARE INOPERATIVE (Continued)

Test Step		Result / Action to Take
V7	**CHECK THE CLIMATE CONTROLLED SEAT SWITCH COOL LED**	
	• Connect: Driver Climate Controlled Seat Switch C3032 or Passenger Climate Controlled Seat Switch C3037. • Connect a fused jumper lead between the driver CCSM C3031a-4 (or passenger CCSM C3036a-4), circuit 1973 (RD), harness side and battery positive.  A0080550 • **Does the climate controlled seat switch HEAT LED indicator illuminate?**	**Yes** INSTALL a new CCSM and CARRY OUT programmable module installation (PMI). REFER to Climate Controlled Seat Module. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B. **No** INSTALL a new climate controlled seat switch. TEST the system for normal operation. DISCONNECT the battery ground cable. DISCONNECT the restraint system diagnostic tool from driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. CONNECT driver seat safety belt buckle pretensioner C3201 or passenger seat safety belt buckle pretensioner C3202. REPOWER the supplemental restraint system (SRS). REFER to Section 501-20B.

PINPOINT TEST W: EASY EXIT/EASY ENTRY IS INOPERATIVE/NOT OPERATING CORRECTLY

Test Step		Result / Action to Take
W1	**CHECK THE DRIVER POWER SEAT OPERATION**	
	• Key in ON position. • Verify the driver power seat operates forward and rearward. • **Does the power seat operate forward and rearward correctly?**	**Yes** GO to **W2**. **No** REFER to the Symptom Chart for diagnosis of inoperative driver power seat horizontal movement.
W2	**CHECK THE EASY EXIT OPERATION**	
	• Position the driver seat at least two inches from the rear stop point. • Key in OFF position. • Remove the key from the ignition switch. • **Does the driver power seat move rearward approximately two inches?**	**Yes** GO to **W5**. **No** GO to **W3**.
W3	**CHECK THE DRIVER SEAT MODULE (DSM) FOR CORRECT INPUTS**	
	• Connect the scan tool. • Key in ON position. • Enter the following diagnostic mode on the scan tool: Instrument Cluster Module (ICM) PID IGN__KEY. • Monitor the instrument cluster module (ICM) PID IGN__KEY with the ignition key in and with the key removed. • **Does the ICM PID IGN__KEY read IN with the ignition key in and OUT when the key is removed?**	**Yes** GO to **W4**. **No** To diagnose the key-in-ignition warning switch fault, REFER to Section 413-09.

(Continued)

DIAGNOSIS AND TESTING (Continued)

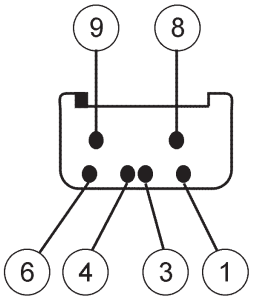
PINPOINT TEST W: EASY EXIT/EASY ENTRY IS INOPERATIVE/NOT OPERATING CORRECTLY (Continued)

Test Step		Result / Action to Take
W4	CHECK FOR DTCS FROM THE DSM	
	• Enter the following diagnostic mode on the scan tool: DSM On-Demand Self Test. • **Are any DSM DTCs present?**	**Yes** REFER to the Driver Seat Module (DSM) DTC Index for DSM DTC diagnosis. **No** INSTALL a new DSM. REFER to Section 419-10. TEST the system for normal operation.
W5	CHECK THE EASY ENTRY OPERATION	
	• Insert the ignition key. • **Does the driver power seat move forward approximately two inches?**	**Yes** The system is operating correctly at this time. RETEST the system for intermittent operation. If no fault is found, INSTRUCT the customer on the correct operation of the system. **No** GO to **W6**.
W6	CHECK FOR DTCS FROM THE INSTRUMENT CLUSTER MODULE (ICM)	
	• Connect the scan tool. • Key in ON position. • Enter the following diagnostic mode on the scan tool: ICM On-Demand Self Test. • **Are any ICM DTCs present?**	**Yes** REFER to Section 413-01 for ICM DTC diagnosis. **No** GO to **W7**.
W7	CHECK FOR DSM DTCS	
	• Enter the following diagnostic mode on the scan tool: DSM On-Demand Self Test. • **Are any DSM DTCs present?**	**Yes** REFER to the Driver Seat Module (DSM) DTC Index for DSM DTC diagnosis. **No** INSTALL a new DSM. REFER to Section 419-10. TEST the system for normal operation.

Component Test

Switch — Memory Set

Memory Set Switch



GR2675-A

Remove the memory set switch.

Measure the resistance between the following indicated terminals while pressing the requested switches.

Switch	Terminals
Memory Switch 1	6 and 4
Memory Switch 2	6 and 3
Memory Set Switch	6 and 1

The resistance should be less than 5 ohms for each switch position.

If the resistance is not less than 5 ohms for each switch, install a new switch; otherwise, return to the calling pinpoint test.

Switch	Terminals
Memory Switch LED	8 and 9

NOTE: Refer to multimeter user's manual for testing diodes.

To check the memory set switch LED, connect the positive meter lead to terminal 8 and the negative lead to terminal 9. The meter should indicate greater than 0.3 volts. Reversing the leads, the meter should read O L.

DIAGNOSIS AND TESTING (Continued)

If the meter readings are not as indicated above, install a new switch; otherwise, return to the calling pinpoint test.