Power Locks: Testing and Inspection
Pinpoint Tests

Test A: The Door Locks Do Not Operate Correctly From One Switch
PINPOINT TEST A: THE DOOR LOCKS DO NOT OPERATE CORRECTLY FROM ONE SWITCH

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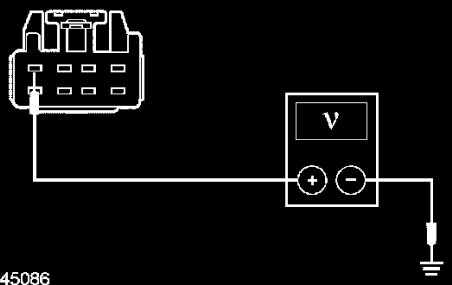
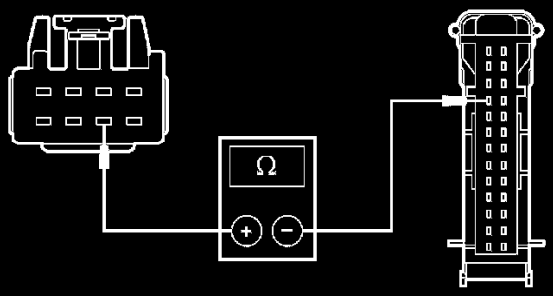
⚠ CAUTION: Use the correct probe adaptor(s) when making measurements. Failure to use the correct probe adaptor(s) may damage the connector.

	Test Step	Result / Action to Take
A1	**CHECK THE SUSPECT DOOR LOCK CONTROL SWITCH FOR CORRECT OPERATION** • Key in OFF position. • Disconnect: Suspect Door Lock Control Switch. • Carry out the door lock control switch component test. Refer to Power Door Lock Switch. • **Is the door lock control switch OK?**	**Yes** GO to **A2**. **No** INSTALL a new door lock control switch. TEST the system for normal operation.
A2	**CHECK CIRCUIT 1524 (DB) FOR AN OPEN** • Measure the voltage between the LH door lock control switch C505-4, circuit 1524 (DB), harness side and ground, or the RH door lock control switch C605-4, circuit 1524 (DB), harness side and ground.  A0045086 • **Is the voltage greater than 10 volts?**	**Yes** GO to **A3**. **No** REPAIR the circuit. TEST the system for normal operation.

(Continued)

A1-A2

PINPOINT TEST A: THE DOOR LOCKS DO NOT OPERATE CORRECTLY FROM ONE SWITCH (Continued)

	Test Step	Result / Action to Take
A3	**CHECK CIRCUIT 120 (PK/LG) FOR AN OPEN** • Disconnect: Driver Door Module (DDM) C501a. • Measure the resistance between the DDM C501a-10, circuit 120 (PK/LG), harness side and the LH door lock control switch C505-6, circuit 120 (PK/LG), harness side, or the DDM C501a-10, circuit 120 (PK/LG), harness side and the RH door lock control switch C605-6, circuit 120 (PK/LG), harness side.  N0027092 • **Is the resistance less than 5 ohms?**	**Yes** REPAIR circuit 119 (PK/YE). TEST the system for normal operation. **No** REPAIR circuit 120 (PK/LG). TEST the system for normal operation.

A3

Normal Operation

The central junction box (CJB) supplies voltage to the LH door lock control switch and the RH door lock control switch through circuit 1524 (DB). The driver door module (DDM) receives lock or unlock requests from the door lock control switches on circuits 119 (PK/YE) and circuit 120 (PK/LG).

Possible Causes

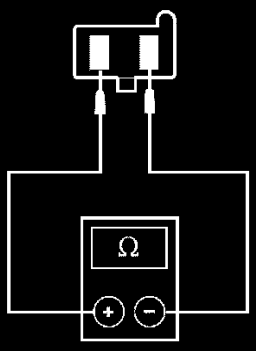
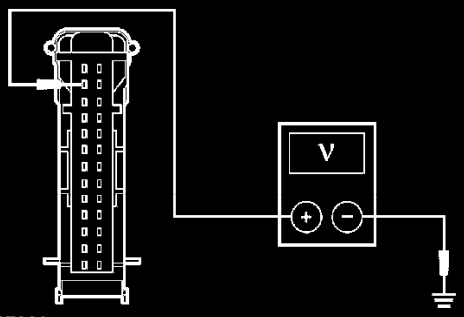
- circuit 119 (PK/YE) open
- circuit 120 (PK/LG) open
- circuit 1524 (DB) open
- door lock control switch

Test B: The Luggage Compartment Lid Is Inoperative

PINPOINT TEST B: THE LUGGAGE COMPARTMENT LID IS INOPERATIVE

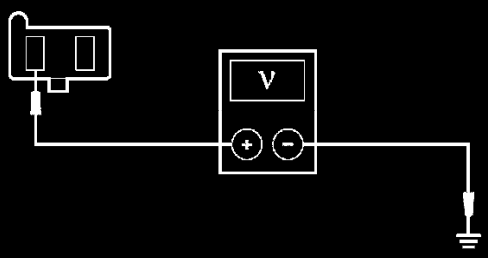
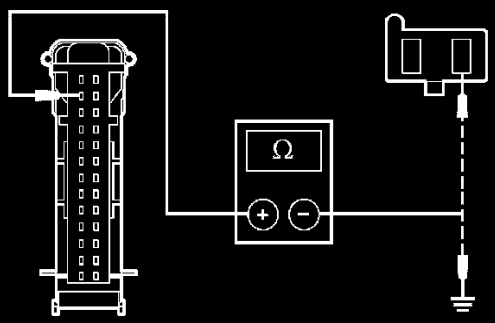
PINPOINT TEST B: THE LUGGAGE COMPARTMENT LID IS INOPERATIVE

⚠ CAUTION: Use the correct probe adaptor(s) when making measurements. Failure to use the correct probe adaptor(s) may damage the connector.

Test Step		Result / Action to Take
B1	**CHECK THE LUGGAGE COMPARTMENT LID RELEASE SWITCH FOR CORRECT OPERATION**	
	• Measure the resistance between the luggage compartment lid release switch C534-1, circuit 1524 (DB), component side and luggage compartment lid release switch C534-2, circuit 26 (WH/VT), component side while pressing and releasing the luggage compartment lid release switch.  N0027094 • **Is the resistance greater than 10,000 ohms with the luggage compartment lid release switch released, and less than 5 ohms with the luggage compartment lid release switch pressed?**	**Yes** GO to **B2**. **No** INSTALL a new luggage compartment lid release switch. CLEAR the DTCs. REPEAT the self-test.
B2	**CHECK THE DDM DIAGNOSTIC TROUBLE CODES (DTCs)**	
	• Refer to the results from the previous DDM self-test. • **Is DTC B1553 recorded?**	**Yes** GO to **B3**. **No** GO to **B4**.
B3	**CHECK CIRCUIT 26 (WH/VT) FOR A SHORT TO VOLTAGE.**	
	• Measure the voltage between the DDM C501a-12, circuit 26 (WH/VT), harness side and ground.  N0027096 • **Is the voltage greater than 10 volts?**	**Yes** REPAIR the circuit. TEST the system for normal operation. **No** GO to **B10**.
B4	**CHECK CIRCUIT 1524 (DB) FOR VOLTAGE**	
	• Disconnect: Luggage Compartment Lid Release Switch C534.	

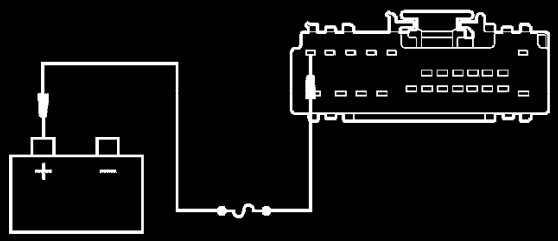
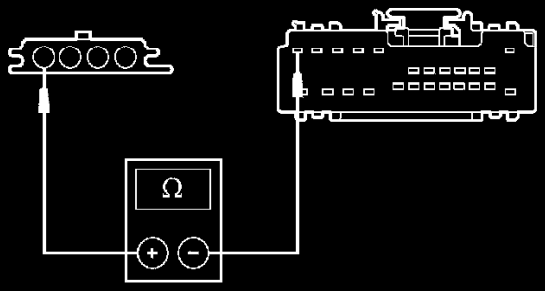
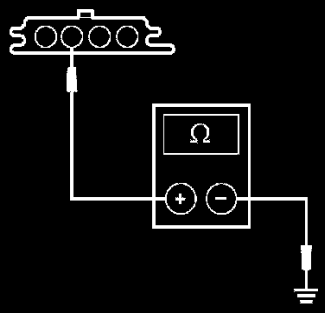
(Continued)

PINPOINT TEST B: THE LUGGAGE COMPARTMENT LID IS INOPERATIVE (Continued)

Test Step		Result / Action to Take
B4	**CHECK CIRCUIT 1524 (DB) FOR VOLTAGE (Continued)**	
	• Measure the voltage between the luggage compartment lid release switch C534-1, circuit 1524 (DB), harness side and ground.  N0027093 • **Is the voltage greater than 10 volts?**	**Yes** GO to **B5**. **No** VERIFY the CJB fuse 19 (10A) is OK. If OK, REPAIR the circuit. TEST the system for normal operation.
B5	**CHECK CIRCUIT 26 (WH/VT) FOR AN OPEN OR A SHORT TO GROUND**	
	• Disconnect: DDM C501a. • Measure the resistance between the DDM C501a-12, circuit 26 (WH/VT), harness side and the luggage compartment lid release switch C534-2, circuit 26 (WH/VT), harness side; and between DDM C501a-12, circuit 26 (WH/VT), harness side and ground.  N0027095 • **Is the resistance less than 5 ohms between the DDM and the luggage compartment lid release switch, and greater than 10,000 ohms between the DDM and ground?**	**Yes** GO to **B6**. **No** REPAIR the circuit. TEST the system for normal operation.

(Continued)

PINPOINT TEST B: THE LUGGAGE COMPARTMENT LID IS INOPERATIVE (Continued)

Test Step		Result / Action to Take
B6	CHECK THE LUGGAGE COMPARTMENT LID RELEASE SOLENOID CIRCUITRY	
	• Momentarily connect a fused (10A) jumper wire between the positive battery post and the DDM C501b-12, circuit 605 (RD), harness side.  N0027097 • **Does the luggage compartment lid open?**	**Yes** GO to **B10**. **No** GO to **B7**.
B7	CHECK CIRCUIT 605 (RD) FOR AN OPEN	
	• Disconnect: Luggage Compartment Lid Release Solenoid C430. • Measure the resistance between the DDM C501b-12, circuit 605 (RD), harness side and the luggage compartment lid release solenoid C430-A, circuit 605 (RD), harness side.  N0027630 • **Is the resistance less than 5 ohms?**	**Yes** GO to **B8**. **No** REPAIR the circuit. TEST the system for normal operation.
B8	CHECK CIRCUIT 57 (BK) FOR AN OPEN	
	• Measure the resistance between the luggage compartment lid release solenoid C430-B, circuit 57 (BK), harness side and ground.  N0027631 • **Is the resistance less than 5 ohms?**	**Yes** GO to **B9**. **No** REPAIR the circuit. TEST the system for normal operation.

(Continued)

PINPOINT TEST B: THE LUGGAGE COMPARTMENT LID IS INOPERATIVE (Continued)

Test Step		Result / Action to Take
B9	CHECK CIRCUIT 605 (RD) FOR VOLTAGE	
	• Connect: Connect: Luggage Compartment Lid Release Switch C534. • Connect: DDM C501a. • Connect: DDM C501b. • Measure the voltage between the luggage compartment lid latch C430-A, circuit 605 (RD), harness side and ground while pressing the luggage compartment lid release switch. • **Is the voltage greater than 10 volts?**	**Yes** INSTALL a new luggage compartment lid latch. TEST the system for normal operation. **No** GO to **B10**.
B10	CHECK THE DDM FOR CORRECT OPERATION	

	• Disconnect all DDM connectors.
	• Check for:
	  • corrosion
	  • pushed-out pins
	• Connect all DDM connectors and make sure they seat correctly.
	• Operate the system and verify the concern is still present.
	• **Is the concern still present?**
		Yes
		INSTALL a new DDM. PROGRAM all the remote keyless entry (RKE) transmitters. REFER to Remote Keyless Entry Transmitter Programming. CLEAR the DTCs. REPEAT the self-test.
		
		No
		The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. CLEAR the DTCs. REPEAT the self-test.

B9-B10

Normal Operation

The luggage compartment lid release switch receives voltage from the central junction box (CJB) through circuit 1524 (DB). When the luggage compartment release switch is pressed, voltage is supplied through the switch to the driver door module (DDM) through circuit 26 (WH/VT). The DDM supplies voltage to the luggage compartment release solenoid through circuit 605 (RD) releasing the luggage compartment lid. The luggage compartment lid release solenoid is grounded through circuit 57 (BK).

Possible Causes

- fuse
- communication lines
- circuit 26 (WH/VT) open, short to voltage, or short to ground
- circuit 57 (BK) open
- circuit 605 (RD) open, short to voltage, or short to ground
- circuit 1524 (DB) open
- luggage compartment lid release switch
- luggage compartment release solenoid (part of the luggage compartment lid latch)
- trunk pull down module (vehicles with power luggage compartment.
- DDM

Test C: All Door Locks Are Inoperative

PINPOINT TEST C: ALL DOOR LOCKS ARE INOPERATIVE

PINPOINT TEST C: ALL DOOR LOCKS ARE INOPERATIVE

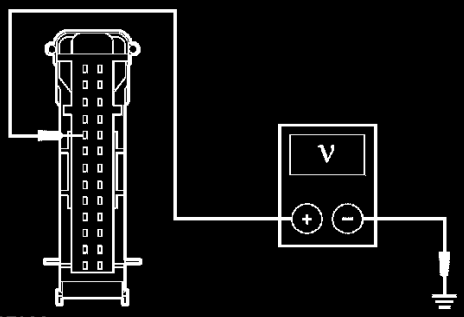
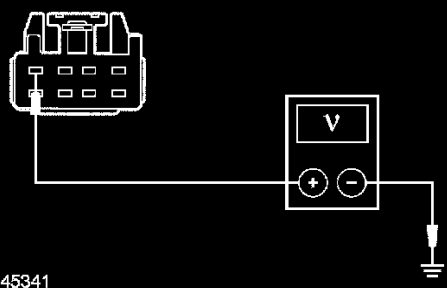
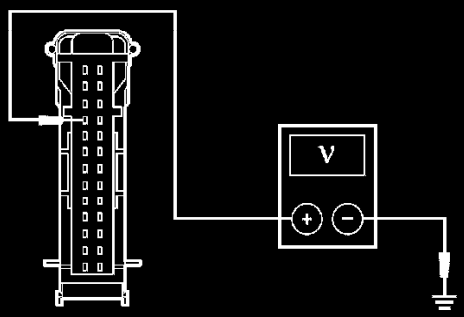
⚠ CAUTION: Use the correct probe adaptor(s) when making measurements. Failure to use the correct probe adaptor(s) may damage the connector.

Test Step		Result / Action to Take
C1	CHECK THE DOOR LOCK CONTROL SWITCHES FOR CORRECT OPERATION	
	• Carry out the LH and RH door lock control switch component tests. Refer to Power Door Lock Switch. • **Are the door lock control switches OK?**	**Yes** If DTC B1396 was previously retrieved, GO to **C2**. If DTC B1397 was retrieved GO to **C4**. If no DTCs were previously retrieved, GO to **C3**. **No** INSTALL a new door lock control switch. CLEAR the DTCs. REPEAT the self-test.
C2	CHECK CIRCUIT 119 (PK/YE) FOR A SHORT TO VOLTAGE	
	• Disconnect: DDM C501a. • Key in ON position.	

(Continued)

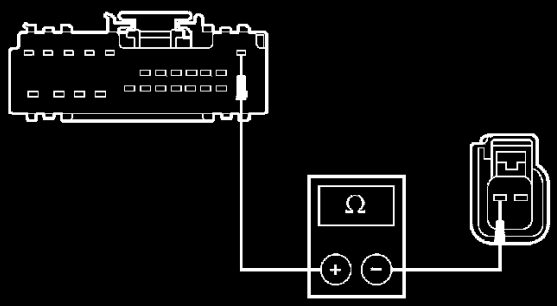
C1-C2

PINPOINT TEST C: ALL DOOR LOCKS ARE INOPERATIVE (Continued)

Test Step		Result / Action to Take
C2	**CHECK CIRCUIT 119 (PK/YE) FOR A SHORT TO VOLTAGE (Continued)**	
	• Measure the voltage between the DDM C501a-9, circuit 119 (PK/YE), harness side and ground.  N0027099 • **Is any voltage present?**	**Yes** REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test. **No** GO to **C6**.
C3	**CHECK CIRCUIT 1524 (DB) FOR AN OPEN**	
	• Measure the voltage between the LH door lock control switch C505-4, circuit 1524 (DG), harness side and ground.  A0045341 • **Is the voltage greater than 10 volts?**	**Yes** GO to **C5**. **No** VERIFY the CJB fuse 25 (10A) is OK. If OK, REPAIR the circuit. TEST the system for normal operation.
C4	**CHECK CIRCUIT 120 (PK/LG) FOR A SHORT TO VOLTAGE**	
	• Disconnect: DDM C501a. • Measure the voltage between the DDM C501a-10, circuit 120 (PK/LG), harness side and ground.  N0027100 • **Is the voltage greater than 10 volts?**	**Yes** REPAIR the circuit. TEST the system for normal operation. **No** GO to **C6**.
C5	**CHECK CIRCUIT 117 (PK/BK) FOR AN OPEN**	
	• Key in OFF position.	

(Continued)

PINPOINT TEST C: ALL DOOR LOCKS ARE INOPERATIVE (Continued)

Test Step		Result / Action to Take
C5	CHECK CIRCUIT 117 (PK/BK) FOR AN OPEN (Continued)	
	• Disconnect: LH Front Door Lock Actuator C525. • Measure the resistance between the DDM C501b-1, circuit 117 (PK/BK), harness side and the LH front door lock actuator C525-2, circuit 117 (PK/BK), harness side.  N0027101 • **Is the resistance less than 5 ohms?**	**Yes** GO to **C6**. **No** REPAIR the circuit. TEST the system for normal operation.
C6	CHECK THE DDM FOR CORRECT OPERATION	

	• Disconnect all DDM connectors.
	• Check for:
	  • corrosion
	  • pushed-out pins
	• Connect all DDM connectors and make sure they seat correctly.
	• Operate the system and verify the concern is still present.
	• **Is the concern still present?**
		Yes
		INSTALL a new DDM. PROGRAM all the remote keyless entry (RKE) transmitters. REFER to Remote Keyless Entry Transmitter Programming. CLEAR the DTCs. REPEAT the self-test.
		No
		The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. CLEAR the DTCs. REPEAT the self-test.

C5-C6

Normal Operation

The central junction box (CJB) supplies voltage to the LH door lock control switch and the RH door lock control switch through circuit 1524 (DB). The driver door module (DDM) receives lock or unlock requests from the door lock control switches on circuits 119 (PK/YE) and circuit 120 (PK/LG). The DDM supplies voltage on circuit 117 (PK/BK) to the door lock actuators if a lock command is received and ground if an unlock command is received.

Possible Causes

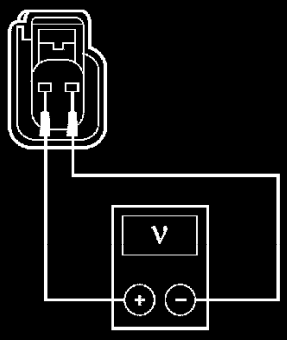
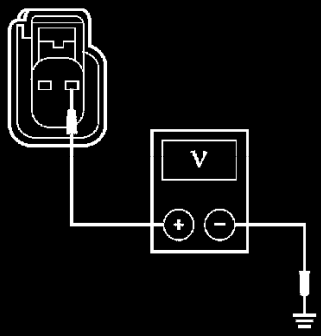
- fuse
- circuit 117 (PK/BK) open
- circuit 119 (PK/YE) short to voltage or short to ground
- circuit 120 (PK/LG) short to voltage or short to ground
- circuit 1524 (DB) open
- door lock control switch
- DDM

Test D: A Single/More Than One Door Lock Is Inoperative

PINPOINT TEST D: A SINGLE/MORE THAN ONE DOOR LOCK IS INOPERATIVE

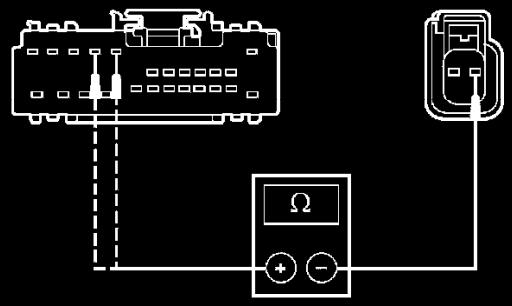
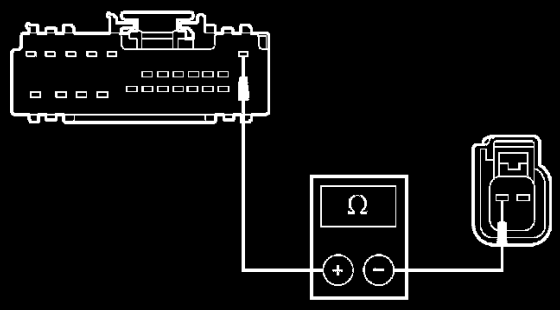
PINPOINT TEST D: A SINGLE/MORE THAN ONE DOOR LOCK IS INOPERATIVE

⚠ CAUTION: Use the correct probe adaptor(s) when making measurements. Failure to use the correct probe adaptor(s) may damage the connector.

Test Step		Result / Action to Take
D1	**CHECK THE LH DOOR LOCK FOR CORRECT OPERATION**	
	• Check the LH door lock for correct operation. • **Does the LH door lock operate correctly?**	**Yes** GO to **D6**. **No** GO to **D2**.
D2	**CHECK THE LH FRONT DOOR LOCK ACTUATOR FOR CORRECT OPERATION**	
	• Key in OFF position. • Disconnect: LH Front Door Lock Actuator C525. • Key in ON position. • Measure the voltage between the LH front door lock actuator C525-2, circuit 117 (PK/BK), harness side and the LH front door lock actuator C525-1, circuit 163 (RD/OG), harness side, while pressing the door lock control switch to the lock and then unlock positions.  A0079873 • **Does the voltage indicate positive 10 volts in the 1 position and negative 10 volts in the opposing position?**	**Yes** INSTALL a new LH front door lock actuator. TEST the system for normal operation. **No** GO to **D3**.
D3	**CHECK CIRCUIT 163 (RD/OG) FOR VOLTAGE**	
	• Measure the voltage between the LH front door lock actuator C525-1, circuit 163 (RD/OG), harness side and ground, while pressing the door lock control switch in the unlock position.  A0079874 • **Is the voltage greater than 10 volts?**	**Yes** GO to **D5**. **No** GO to **D4**.

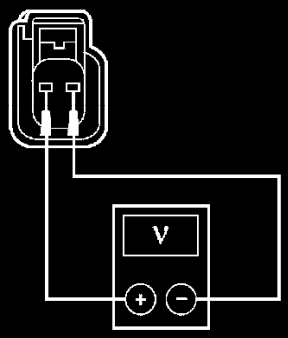
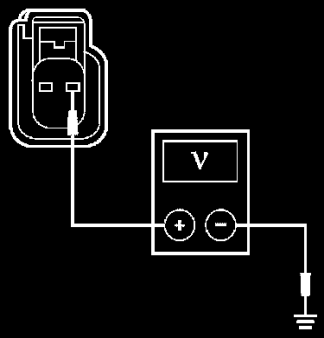
(Continued)

PINPOINT TEST D: A SINGLE/MORE THAN ONE DOOR LOCK IS INOPERATIVE (Continued)

Test Step		Result / Action to Take
D4	**CHECK CIRCUIT 163 (RD/OG) FOR AN OPEN**	
	• Measure the resistance between the LH front door lock actuator C525-1, circuit 163 (RD/OG), harness side and the DDM C501b-8, circuit 163 (RD/OG), harness side and between the LH front door lock actuator C525-1, circuit 163 (RD/OG), harness side and the DDM C501b-9, circuit 163 (RD/OG), harness side.  N0027394 • **Are the resistances less than 5 ohms?**	**Yes** GO to **D9**. **No** REPAIR the circuit. TEST the system for normal operation.
D5	**CHECK DDM CIRCUIT 117 (PK/BK) FOR AN OPEN**	
	• Key in OFF position. • Disconnect: DDM C501b. • Measure the resistance between the DDM C501b-1, circuit 117 (PK/BK), harness side and the LH front door lock actuator C525-2, circuit 117 (PK/BK), harness side.  N0027101 • **Is the resistance less than 5 ohms?**	**Yes** GO to **D9**. **No** REPAIR the circuit. TEST the system for normal operation.
D6	**CHECK THE OUTPUT FROM THE DDM**	
	• Key in OFF position. • Disconnect: Suspect Door Lock Actuator. • Key in ON position.	

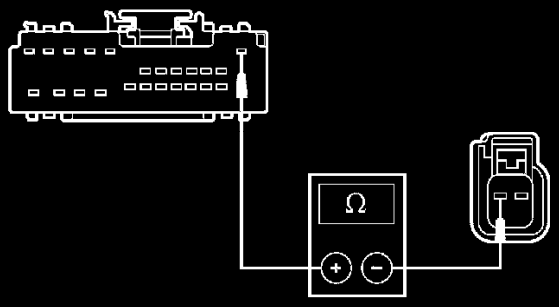
(Continued)

PINPOINT TEST D: A SINGLE/MORE THAN ONE DOOR LOCK IS INOPERATIVE (Continued)

Test Step		Result / Action to Take
D6	**CHECK THE OUTPUT FROM THE DDM (Continued)**	
	• Measure the voltage between the suspect door lock actuator pin 2, circuit 117 (PK/BK), harness side and the suspect door lock actuator pin 1, circuit 118 (PK/OG), harness side, while pressing the door lock control switch to the lock and then unlock positions.  A0079873 • **Does the voltage indicate positive 10 volts in the 1 position, and negative 10 volts in the opposing position?**	**Yes** INSTALL a new door lock actuator. TEST the system for normal operation. **No** GO to **D7**.
D7	**CHECK CIRCUIT 118 (PK/OG) FOR VOLTAGE**	
	• Measure the voltage between the suspect door lock actuator pin 1, circuit 118 (PK/OG), harness side and ground, while pressing the door lock control switch in the unlock position.  A0079874 • **Is the voltage greater than 10 volts?**	**Yes** GO to **D8**. **No** REPAIR the circuit. TEST the system for normal operation.
D8	**CHECK CIRCUIT 117 (PK/BK) FOR AN OPEN**	
	• Key in OFF position. • Disconnect: DDM C501b.	

(Continued)

PINPOINT TEST D: A SINGLE/MORE THAN ONE DOOR LOCK IS INOPERATIVE (Continued)

Test Step		Result / Action to Take
D8	CHECK CIRCUIT 117 (PK/BK) FOR AN OPEN (Continued)	
	• Measure the resistance between the DDM C501b-1, circuit 117 (PK/BK), harness side and the suspect door lock actuator pin 2, circuit 117 (PK/BK), harness side.  N0027101 • **Is the resistance less than 5 ohms?**	**Yes** GO to **D9**. **No** REPAIR the circuit. TEST the system for normal operation.
D9	CHECK THE DDM FOR CORRECT OPERATION	

	• Disconnect all the DDM connectors.
	• Check for:
	  • corrosion
	  • pushed-out pins
	• Connect all the DDM connectors and make sure they seat correctly.
	• Operate the system and verify the concern is still present.
	• **Is the concern still present?**
		Yes
		INSTALL a new DDM. PROGRAM all the remote keyless entry (RKE) transmitters. CLEAR the DTCs. REPEAT the self-test.
		No
		The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. CLEAR the DTCs. REPEAT the self-test.

D8-D9

Normal Operation

The driver door module (DDM) receives lock or unlock requests from the door lock control switches on circuits 119 (PK/YE) and circuit 120 (PK/LG). The door lock actuators contain a bi-directional motor that locks and unlocks the door depending on the position of the door lock control switch. When the switch is positioned to lock, voltage is supplied to circuit 117 (PK/BK) and ground is provided through circuit 163 (RD/OG) for the LH door and 118 (PK/LG) for all other doors, locking the doors. When the switch is positioned to unlock, voltage is supplied to circuit 118 (PK/OG) and ground provided through circuit 117 (PK/BK), unlocking the driver door. and voltage is supplied to the actuators on circuit 163 (RD/OG) and ground on circuit 117 (PK/BK), unlocking the passenger doors.

Possible Causes

- circuit 117 (PK/BK) open
- circuit 118 (PK/OG) open
- circuit 163 (RD/OG) open
- door lock control switch
- door lock actuator
- DDM

Test E: The Doors Do Not Lock/Unlock Using The Remote Keyless Entry (RKE) Keypad

PINPOINT TEST E: THE DOORS DO NOT LOCK/UNLOCK USING THE REMOTE KEYLESS ENTRY (RKE) KEYPAD

PINPOINT TEST E: THE DOORS DO NOT LOCK/UNLOCK USING THE REMOTE KEYLESS ENTRY (RKE) KEYPAD

⚠ **CAUTION: Use the correct probe adaptor(s) when making measurements. Failure to use the correct probe adaptor(s) may damage the connector.**

Test Step		Result / Action to Take
E1	CHECK THE RKE KEYPAD PIDS	
	• Enter the following diagnostic mode on the diagnostic tool: DDM PID. • Press each keypad button while viewing keypad PID. • **Do the DDM PID values agree with the keypad button positions?**	**Yes** GO to **E6**. **No** GO to **E2**.

(Continued)

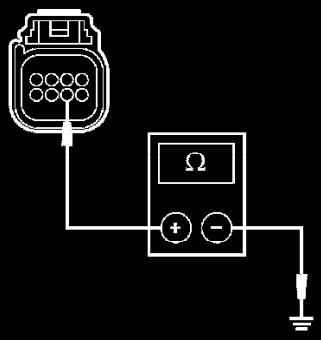
E1

PINPOINT TEST E: THE DOORS DO NOT LOCK/UNLOCK USING THE REMOTE KEYLESS ENTRY (RKE) KEYPAD (Continued)

Test Step		Result / Action to Take
E2	**CHECK CIRCUITS 78 (LB/YE), 79 (LG/RD), 121 (YE/BK) FOR RESISTANCE TO GROUND** • Key in OFF position. • Disconnect: DDM C501a. • Measure the resistance between the DDM C501a, harness side and ground as follows: **DDM Connector/Pin** / **Circuit** C501a-7 — 78 (LB/YE) C501a-2 — 79 (LG/RD) C501a-3 — 121 (YE/BK) • **Is any resistance less than 10,000 ohms?**	**Yes** GO to **E3**. **No** GO to **E4**.
E3	**CHECK CIRCUITS 78 (LB/YE), 79 (LG/RD), 121 (YE/BK) FOR A SHORT TO GROUND** • Disconnect: RKE Keypad C530. • Measure the resistance between the DDM C501a, harness side and ground as follows: **DDM Connector/Pin** / **Circuit** C501a-7 — 78 (LB/YE) C501a-2 — 79 (LG/RD) C501a-3 — 121 (YE/BK) • **Is any resistance less than 10,000 ohms?**	**Yes** REPAIR the circuit(s). CLEAR the DTCs. REPEAT the self-test. **No** INSTALL a new RKE keypad. TEST the system for normal operation.
E4	**CHECK CIRCUITS 78 (LB/YE), 79 (LG/RD), 121 (YE/BK) FOR AN OPEN** • Disconnect: RKE Keypad C500. • Measure the resistance between the DDM C501a, harness side and the RKE keypad C500, harness side as follows: **DDM** / **Circuit** / **RKE Keypad** C501a-7 — 78 (LB/YE) — C500-1 C501a-2 — 79 (LG/RD) — C500-3 C501a-3 — 121 (YE/BK) — C500-7 • **Are the resistances less than 5 ohms?**	**Yes** GO to **E5**. **No** REPAIR the circuit(s). CLEAR the DTCs. REPEAT the self-test.

(Continued)

PINPOINT TEST E: THE DOORS DO NOT LOCK/UNLOCK USING THE REMOTE KEYLESS ENTRY (RKE) KEYPAD (Continued)

Test Step		Result / Action to Take
E5	CHECK CIRCUIT 57 (BK) FOR AN OPEN	
	• Measure the resistance between the RKE keypad C500-6, circuit 57 (BK), harness side and ground.  N0027632 • **Is the resistance less than 5 ohms?**	**Yes** INSTALL a new RKE keypad. TEST the system for normal operation. **No** REPAIR the circuit(s). CLEAR the DTCs. REPEAT the self-test.
E6	CHECK FOR CORRECT DDM OPERATION	

	• Disconnect all the DDM connectors.
	• Check for:
	  • corrosion
	  • pushed-out pins
	• Connect all the DDM connectors and make sure they seat correctly.
	• Operate the system and verify the concern is still present.
	• **Is the concern still present?**
		Yes
		INSTALL a new DDM. PROGRAM all the RKE transmitters. REFER to Remote Keyless Entry Transmitter Programming. CLEAR the DTCs. REPEAT the self-test.
		No
		The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. CLEAR the DTCs. REPEAT the self-test.

E5-E6

Normal Operation

The driver door module (DDM) monitors the RKE keypad through circuits 78 (LB/YE), 79 (LG/RD) and 121 (YE/BK). The RKE keypad is grounded through circuit 57 (BK). As each button is pressed a connection to ground through individual resistors occurs. The DDM receives the ground signals from the RKE keypad and operates the locks accordingly.

Possible Causes

- circuit 57 (BK)
- circuit 78 (LB/YE) open or short to ground
- circuit 79 (LG/RD) open or short to ground
- circuit 121 (YE/BK) open or short to ground
- RKE keypad
- DDM

Test F: The Doors Do Not Lock/Unlock Using The Remote Keyless Entry (RKE) Transmitter

PINPOINT TEST F: THE DOORS DO NOT LOCK/UNLOCK USING THE REMOTE KEYLESS ENTRY (RKE) TRANSMITTER

PINPOINT TEST F: THE DOORS DO NOT LOCK/UNLOCK USING THE REMOTE KEYLESS ENTRY (RKE) TRANSMITTER

NOTE: All RKE transmitters must be present to begin diagnosis of the RKE system.

NOTE: Aftermarket or dealer-installed systems may adversely affect the RKE system operation. These systems should be disconnected before diagnosing any RKE concern.

Test Step		Result / Action to Take
F1	**CHECK FOR THE CORRECT RKE TRANSMITTERS**	
	• Check that the correct RKE transmitters are used with the vehicle. • Make sure the RKE transmitters are provided with the original equipment manufacturer (OEM) system and not from an aftermarket system, or a dealer-installed system that may have been installed on the vehicle. • **Are all the correct RKE transmitters present?**	**Yes** GO to **F2**. **No** The system cannot be tested without the correct RKE transmitters. INFORM the customer that all the correct RKE transmitters need to be present to proceed with diagnosis of the system.
F2	**CHECK THE OPERATION OF THE RKE TRANSMITTER WITH THE KEY IN THE OFF POSITION**	
	• Key in OFF position. • Check the operation of the RKE transmitter. • **Does the system operate correctly now?**	**Yes** The system is operating as designed. INFORM the customer of the correct vehicle operation. **No** GO to **F3**.
F3	**CHECK THE POWER DOOR LOCK SYSTEM FOR CORRECT OPERATION**	
	• Verify the door lock/unlock operation by actuating the driver door lock control switch. • **Do all the doors lock and unlock correctly?**	**Yes** GO to **F4**. **No** To diagnose the inoperative door locks, GO to Pinpoint Test C.
F4	**CHECK FOR THE COMPLETE FUNCTIONALITY OF THE RKE TRANSMITTER(S)**	
	• Check all the RKE transmitter buttons for correct operation. • **Does any button operate correctly?**	**Yes** REPLACE the inoperative RKE transmitter. PROGRAM all RKE transmitters. REFER to Remote Keyless Entry Transmitter Programming. INFORM the customer that any RKE transmitters not present need to be programmed. CLEAR the DTCs. TEST the system for normal operation. **No** GO to **F5**.
F5	**MAKE SURE THE RKE TRANSMITTER SIGNAL IS BEING RECEIVED**	
	• Connect the diagnostic tool. • Enter the following diagnostic mode on the diagnostic tool: DDM function tests. • Select the transmitter test or program transmitter menu selection. • Monitor the RKE transmitter identification code (TIC) through the diagnostic tool menus. • **NOTE:** The vehicle must be electronically unlocked prior to using any diagnostic tools (through the RKE transmitter or door lock control switch). Verify the RKE transmitter signal is being received. Press a button on the RKE transmitter while observing the diagnostic tool. • **Does the TIC show up on the diagnostic tool screen when a button is pressed?**	**Yes** GO to **F6**. **No** GO to **F7**.

(Continued)

PINPOINT TEST F: THE DOORS DO NOT LOCK/UNLOCK USING THE REMOTE KEYLESS ENTRY (RKE) TRANSMITTER (Continued)

Test Step		Result / Action to Take
F6	CHECK IF THE RKE TRANSMITTERS ARE PROGRAMMED	
	• Monitor the RKE transmitter TIC/DATA through the diagnostic tool menus. • Verify the RKE transmitters are programmed to the vehicle. • **Does the TIC displayed under current RKE transmitter match any of the TICs stored in memory?**	**Yes** GO to **F8.** **No** PROGRAM all of the RKE transmitters. REFER to Remote Keyless Entry Transmitter Programming. INFORM the customer that any RKE transmitters not present need to be programmed. CLEAR the DTCs. TEST the system for normal operation.
F7	CHECK THE RKE TRANSMITTER BATTERY	
	• Using a thin coin, open the RKE transmitter. • Do not clean off any grease from the battery terminals on the back surface of the circuit board. • Verify the correct battery is used (CR2032). • Remove the RKE transmitter battery and measure the voltage. • **Is the voltage greater than 2.5 volts?**	**Yes** GO to **F9.** **No** INSTALL a new battery (be sure the battery is seated correctly). DO NOT program the RKE transmitters (faulty or dead batteries do not erase TICs from memory). CLEAR the DTCs. TEST the system for normal operation.
F8	CHECK IF THE RKE TRANSMITTER IS OUT OF SYNCHRONIZATION WITH THE DDM	
	• The vehicle must be electronically unlocked prior to using any diagnostic tools (through the RKE transmitter or the door lock control switch). • Enter the following diagnostic mode on the diagnostic tool: Retrieve continuous DTCs. • **Is continuous DTC B2425 stored in the DDM?**	**Yes** To diagnose the RKE transmitter out of synchronization, GO to Pinpoint Test M. **No** GO to **F9.**
F9	CHECK FOR NORMAL OPERATION WITH A KNOWN GOOD RKE TRANSMITTER	
	• Enter the following diagnostic mode on the diagnostic tool: DDM function tests. • Select the transmitter test or program transmitter menu selection. • Monitor the RKE transmitter TIC/DATA through the diagnostic tool menus. • Using the customer's second RKE transmitter or a known good RKE transmitter that is correct for the vehicle, verify the RKE transmitter signal is being received by the DDM. • **Does the TIC show up on the diagnostic tool when a button is pressed on the RKE transmitter?**	**Yes** REPLACE the inoperative RKE transmitter. PROGRAM all RKE transmitter(s). REFER to Remote Keyless Entry Transmitter Programming. INFORM the customer that any RKE transmitters not present need to be programmed. CLEAR the DTCs. TEST the system for normal operation. **No** GO to Pinpoint Test N.

F6-F9

Normal Operation

Remote locking and unlocking of the doors is accomplished by the driver door module (DDM) receiving a command message from the RKE transmitter. The DDM processes the command and sends a signal directly to the door lock actuators. All RKE transmitters must be present to begin diagnosis of the RKE system.

Aftermarket or dealer-installed systems may adversely affect the RKE system operation. These systems should be disconnected before diagnosing any RKE concerns.

Possible Causes

- RKE transmitter battery
- RKE transmitter programming
- RKE transmitter
- DDM

Test G: The Auto-Lock Does Not Operate Correctly

PINPOINT TEST G: THE AUTO-LOCK DOES NOT OPERATE CORRECTLY

PINPOINT TEST G: THE AUTO-LOCK DOES NOT OPERATE CORRECTLY

Test Step		Result / Action to Take
G1	CHECK FOR THE AUTO-LOCK FEATURE BEING DISABLED	
	• Toggle the auto-lock feature. Refer to Autolock and Horn Chirp Programming. • Drive the vehicle. • **Does the auto-lock feature work?**	**Yes** The system is operating normally at this time **No** GO to **G2**.
G2	CHECK FOR THE AUTO-LOCK FEATURE BEING ENABLED	
	• Toggle the auto-lock feature. REFER to Autolock and Horn Chirp Programming. • Drive the vehicle. • **Does the auto-lock feature work?**	**Yes** The system is operating normally at this time **No** GO to **G3**.
G3	CHECK THE DRIVER DOOR AJAR PID	
	• Key in OFF position. • Connect the diagnostic tool. • Key in ON position. • Close all the doors and the luggage compartment lid. • Enter the following diagnostic mode on the diagnostic tool: DDM Driver Door Ajar PID. • **Does the DDM driver door ajar PID read AJAR?**	**Yes** REFER to Lighting and Horns to diagnose the door ajar switch. **No** GO to **G4**.
G4	CHECK THE PASSENGER DOOR AJAR PID	
	NOTE: Make sure that all the doors are still closed. • Enter the following diagnostic mode on the diagnostic tool: DDM Passenger Door Ajar PID. • **Does the DDM passenger door ajar PID read AJAR?**	**Yes** REFER to Lighting and Horns to diagnose the door ajar switch. **No** GO to **G5**.
G5	CHECK THE IGNITION SWITCH POSITION STATUS	
	• Enter the following diagnostic mode on the diagnostic tool: Lighting Control Module (LCM) Ignition Switch Position PID. • Enter the following diagnostic mode on the diagnostic tool: LCM VSS PID. • Enter the following diagnostic mode on the diagnostic tool: Powertrain Control Module (PCM) Digital TR Sensor PID. • **Are the LCM and PCM PIDs correct?**	**Yes** GO to **G6**. **No** If the LCM ignition switch position PID is incorrect, REFER to Ignition Switch to diagnose the ignition switch. If the instrument cluster VSS PID is incorrect, REFER to Antilock Brakes / Traction Control Systems to diagnose the VSS signal. If the PCM digital TR sensor PID is incorrect, REFER to Computers and Control Systems to diagnose the digital TR sensor.
G6	CHECK FOR CORRECT DDM OPERATION	

	• Disconnect all the DDM connectors.
	• Check for:
	  • corrosion
	  • pushed-out pins
	• Connect all the DDM connectors and make sure they seat correctly.
	• Operate the system and verify the concern is still present.
	• **Is the concern still present?**
		Yes
		INSTALL a new DDM. PROGRAM all the remote keyless entry (RKE) transmitters. REFER to Remote Keyless Entry Transmitter Programming. CONFIRM that the auto-lock feature operates correctly. If the auto-lock feature still does not operate correctly, toggle the auto-lock feature. REFER to Autolock and Horn Chirp Programming. CLEAR the DTCs. REPEAT the self-test.
		No
		The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. CLEAR the DTCs. REPEAT the self-test.

G1-G6

Normal Operation

The auto-locking function automatically locks all doors when all of the following conditions are concurrently met during the current key cycle:

- all the doors are closed
- the auto-locking function is active
- the ignition switch is in the ON position
- the transmission is in DRIVE or REVERSE
- the vehicle speed exceeds **5 km/h (3 mph)**

After the initial activation of auto-locking and at least one door has been opened, auto-locking is activated again if the following conditions are concurrently met:

- all the doors are closed
- the auto-locking function is active

- the ignition switch is in the ON position
- the transmission is in DRIVE or REVERSE
- the vehicle speed exceeds **5 km/h (3 mph)**

Possible Causes
- door ajar switches
- vehicle speed sensor (VSS) message from the instrument cluster
- digital transmission range (TR) sensor message from the instrument cluster
- driver door module (DDM)

Test H: The Smart Lock Does Not Operate Correctly

PINPOINT TEST H: THE SMART LOCK DOES NOT OPERATE CORRECTLY

PINPOINT TEST H: THE SMART LOCK DOES NOT OPERATE CORRECTLY

⚠ CAUTION: Use the correct probe adaptor(s) when making measurements. Failure to use the correct probe adaptor(s) may damage the connector.

Test Step		Result / Action to Take
H1	CHECK THE KEY-IN-IGNITION SWITCH OPERATION	
	• Insert the key in the ignition. • Key in OFF position. • Open the driver door. • **Does the chime sound?**	**Yes** GO to **H2**. **No** REFER to Instrument Panel, Gauges and Warning Indicators to continue diagnosis of the key-in-ignition warning system.
H2	CHECK THE INTERIOR LIGHTS FOR CORRECT OPERATION	
	• Open and close each door and the luggage compartment lid. • **Do the interior lamps operate correctly**	**Yes** GO to **H3**. **No** REFER to Lighting and Horns to diagnose the interior lights.
H3	CHECK THE DDM FOR CORRECT OPERATION	

	• Disconnect all DDM connectors.
	• Check for:
	  • corrosion
	  • pushed-out pins
	• Connect all DDM connectors and make sure they seat correctly.
	• Operate the system and verify the concern is still present.
	• **Is the concern still present?**
		Yes
		INSTALL a new DDM. PROGRAM all the remote keyless entry (RKE) transmitters. REFER to Remote Keyless Entry Transmitter Programming. CLEAR the DTCs. REPEAT the self-test.
		No
		The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. CLEAR the DTCs. REPEAT the self-test.

H1-H3

Normal Operation

The lighting control module (LCM) sends a network message to the driver door module (DDM) that the key is in the ignition. The DDM monitors the network message, the door lock control switch and the LH front door ajar switch. If the key is in the ignition and the LH front door is open when the vehicle is locked with a door lock control switch, the DDM unlocks the LH front door. The smart locking feature unlocks the LH front door **1 second** after these conditions arise. The smart lock feature unlocks the LH front door only if the keycode programming and transmitter identification code (TIC) programming modes are not active.

Possible Causes
- key-in-ignition warning system
- LCM
- DDM

Test I: The Luggage Compartment Lid Is Inoperative Using The Remote Keyless Entry (RKE) Transmitter

PINPOINT TEST I: THE LUGGAGE COMPARTMENT LID IS INOPERATIVE USING THE REMOTE KEYLESS ENTRY (RKE) TRANSMITTER

PINPOINT TEST I: THE LUGGAGE COMPARTMENT LID IS INOPERATIVE USING THE REMOTE KEYLESS ENTRY (RKE) TRANSMITTER

Test Step		Result / Action to Take
I1	**CHECK THE LUGGAGE COMPARTMENT LID RELEASE SWITCH OPERATION**	
	• Press the luggage compartment lid release switch. • **Does the luggage compartment lid open?**	**Yes** GO to I2. **No** GO to Pinpoint Test B.
I2	**CHECK FOR COMPLETE FUNCTIONALITY OF THE RKE TRANSMITTER(S)**	
	• Check all the RKE transmitter buttons for correct operation. • **Does the panic alarm button operate correctly?**	**Yes** REPLACE the inoperative RKE transmitter. REPROGRAM all the RKE transmitters. REFER to Remote Keyless Entry Transmitter Programming. INFORM the customer any RKE transmitters not present need to be reprogrammed. CLEAR the DTCs. TEST the system for normal operation. **No** GO to I3.
I3	**MAKE SURE THE RKE TRANSMITTER SIGNAL IS BEING RECEIVED**	
	• Connect the diagnostic tool. • Enter the following diagnostic mode on the diagnostic tool: FUNCTION TESTS. • Monitor the RKE transmitter identification code (TIC) through the diagnostic tool menus. • **NOTE:** The vehicle must be electronically unlocked prior to using any diagnostic tools (through the RKE transmitter or door lock control switch). Verify the RKE transmitter signal is being received. Using a diagnostic tool, press a button on the RKE transmitter while observing the diagnostic tool. • **Does the TIC show up on the diagnostic tool screen when a button is pressed?**	**Yes** GO to I4. **No** GO to I5.
I4	**CHECK IF THE RKE TRANSMITTERS ARE PROGRAMMED**	
	• Enter the following diagnostic mode on the diagnostic tool: FUNCTION TESTS. • Monitor the RKE transmitter TIC/DATA through the diagnostic tool menus. • Verify the RKE transmitters are programmed to the vehicle. • **Does the TIC displayed under current RKE transmitter match any of the TICs stored in memory?**	**Yes** GO to I6. **No** PROGRAM all the RKE transmitters. REFER to Remote Keyless Entry Transmitter Programming. INFORM the customer that any RKE transmitters not present need to be reprogrammed. CLEAR the DTCs. TEST the system for normal operation.

(Continued)

PINPOINT TEST I: THE LUGGAGE COMPARTMENT LID IS INOPERATIVE USING THE REMOTE KEYLESS ENTRY (RKE) TRANSMITTER (Continued)

Test Step		Result / Action to Take
I5	**CHECK THE RKE TRANSMITTER BATTERY**	
	• Using a thin coin, open the RKE transmitter. • Do not clean off any grease from the battery terminals on the back surface of the circuit board. • Verify the correct battery is used (CR2032). • Remove the RKE transmitter battery and measure the voltage. • **Is the voltage greater than 2.5 volts?**	**Yes** GO to **I7**. **No** INSTALL a new battery (be sure the battery is seated correctly). DO NOT reprogram the RKE transmitters (faulty or dead batteries do not erase TICs from memory). CLEAR the DTCs. TEST the system for normal operation.
I6	**CHECK IF THE RKE TRANSMITTER IS OUT OF SYNCHRONIZATION WITH THE GEM**	
	• The vehicle must be electronically unlocked prior to using any diagnostic tools (through the RKE transmitter or the door lock control switch). • Enter the following diagnostic mode on the diagnostic tool: RETRIEVE DTCs. • **Is continuous DTC B2425 stored in the DDM?**	**Yes** To diagnose the RKE transmitter out of synchronization, GO to Pinpoint Test M. **No** GO to **I7**.
I7	**CHECK FOR NORMAL OPERATION WITH A KNOWN GOOD RKE TRANSMITTER**	
	• Use the customer's second RKE transmitter or a known good RKE transmitter that is correct for the vehicle and lock and unlock the doors. • **Do the locks lock and unlock correctly?**	**Yes** REPLACE the inoperative RKE transmitter. PROGRAM all the RKE transmitter(s). REFER to Remote Keyless Entry Transmitter Programming. INFORM the customer any RKE transmitters not present need to be reprogrammed. CLEAR the DTCs. TEST the system for normal operation. **No** GO to **I8**.
I8	**CHECK THE DDM FOR CORRECT OPERATION**	

	• Disconnect all DDM connectors.
	• Check for:
	  • corrosion
	  • pushed-out pins
	• Connect all DDM connectors and make sure they seat correctly.
	• Operate the system and verify the concern is still present.
	• **Is the concern still present?**
		Yes
		INSTALL a new DDM. PROGRAM all the RKE transmitters. CLEAR the DTCs. REPEAT the self-test.
		No
		The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. CLEAR the DTCs. REPEAT the self-test.

I5-I8

Normal Operation

The driver door module (DDM) receives a signal from the RKE transmitter to open the luggage compartment. The DDM supplies voltage to the luggage compartment release solenoid through circuit 84 (VT/YE) releasing the luggage compartment lid.

Possible Causes

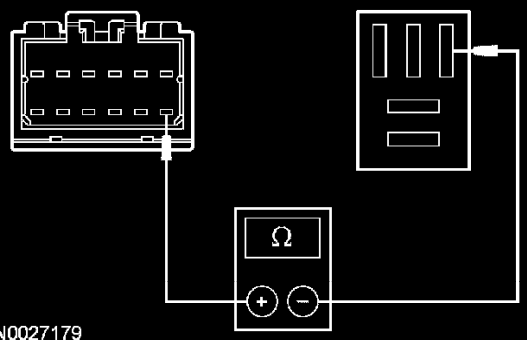
- RKE transmitter
- DDM

Test J: Panic Feature Is Inoperative/Does Not Operate Correctly

PINPOINT TEST J: PANIC FEATURE IS INOPERATIVE/DOES NOT OPERATE CORRECTLY

PINPOINT TEST J: PANIC FEATURE IS INOPERATIVE/DOES NOT OPERATE CORRECTLY

⚠ CAUTION: Use the correct probe adaptor(s) when making measurements. Failure to use the correct probe adaptor(s) may damage the connector.

	Test Step	Result / Action to Take
J1	**CHECK THE PANIC FEATURE FROM THE RKE TRANSMITTERS** • Press the panic button on the RKE transmitters • **Does the horn sound?**	**Yes** GO to **J2**. **No** GO to **J3**.
J2	**CHECK THE DOOR LOCK OPERATION FROM THE RKE TRANSMITTERS** • Press the lock and unlock buttons on the RKE transmitters. • **Do the locks lock and unlock?**	**Yes** GO to **J6**. **No** GO to Pinpoint Test N.
J3	**CHECK THE HORN OPERATION** • Press the horn switch. • **Does the horn sound?**	**Yes** GO to **J4**. **No** REFER to Horn to continue diagnosis of the horn.
J4	**CHECK THE HORN CIRCUIT OUTPUT FROM THE LCM** • Key in ON position. • Enter the following diagnostic mode on the diagnostic tool: LCM Active Commands. • Trigger the LCM active command horn on. • **Does the horn sound?**	**Yes** GO to **J7**. **No** GO to **J5**.
J5	**CHECK CIRCUIT 1 (DB) FOR AN OPEN** • Key in OFF position. • Disconnect: LCM C2145b. • Disconnect: Horn Relay. • Measure the resistance between the LCM C2145b-7, circuit 1 (DB), harness side and horn relay pin 1, circuit 1 (DB), harness side.  N0027179 • **Is the resistance less than 5 ohms?**	**Yes** GO to **J6**. **No** REPAIR the circuit. TEST the system for normal operation.

J6	**CHECK THE LCM FOR CORRECT OPERATION**
	• Disconnect all LCM connectors.
	• Check for:
	  • corrosion
	  • pushed-out pins
	• Connect all LCM connectors and make sure they seat correctly.
	• Operate the system and verify the concern is still present.
	• **Is the concern still present?**
		Yes
		INSTALL a new LCM. CLEAR the DTCs. REPEAT the self-test.
		No
		The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. CLEAR the DTCs. REPEAT the self-test.

(Continued)

PINPOINT TEST J: PANIC FEATURE IS INOPERATIVE/DOES NOT OPERATE CORRECTLY (Continued)

Test Step		Result / Action to Take
J7	CHECK THE DDM FOR CORRECT OPERATION	

	• Disconnect all DDM connectors.
	• Check for:
	  • corrosion
	  • pushed-out pins
	• Connect all DDM connectors and make sure they seat correctly.
	• Operate the system and verify the concern is still present.
	• **Is the concern still present?**
		Yes
		INSTALL a new DDM. PROGRAM all the RKE transmitters. REFER to Remote Keyless Entry Transmitter Programming. CLEAR the DTCs. REPEAT the self-test.
		No
		The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. CLEAR the DTCs. REPEAT the self-test.

J7

Normal Operation

A network message is supplied to the lighting control module (LCM) from the driver door module (DDM) to sound the horn and flash the parking lamps. When the panic feature is activated, the LCM grounds circuit 1 (DB), energizing the horn relay, and flashing the parking lamps.

Possible Causes

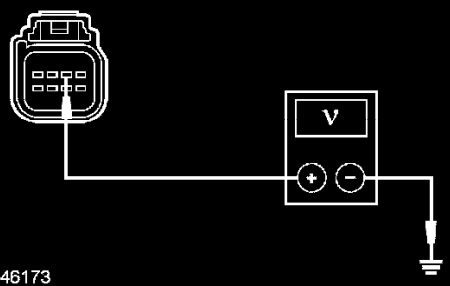
- circuit 1 (DB) open
- RKE transmitter
- LCM
- DDM

Test K: The Remote Keyless Entry (RKE) Keypad Illumination Is Inoperative

PINPOINT TEST K: THE REMOTE KEYLESS ENTRY (RKE) KEYPAD ILLUMINATION IS INOPERATIVE

PINPOINT TEST K: THE REMOTE KEYLESS ENTRY (RKE) KEYPAD ILLUMINATION IS INOPERATIVE

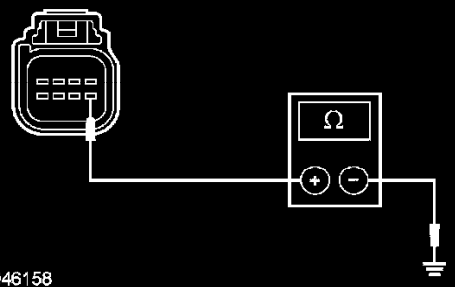
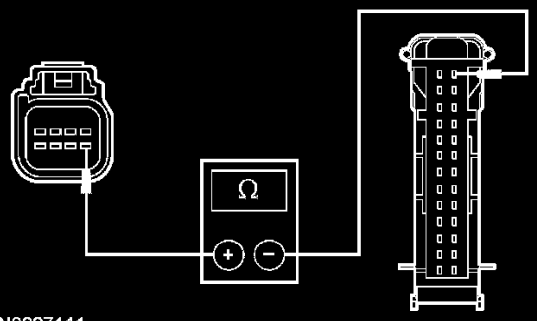
⚠ CAUTION: Use the correct probe adaptor(s) when making measurements. Failure to use the correct probe adaptor(s) may damage the connector.

Test Step		Result / Action to Take
K1	CHECK FOR VOLTAGE TO THE RKE KEYPAD	
	• Disconnect: RKE Keypad C500. • Measure the voltage between the RKE keypad C500-2, circuit 1524 (DB), harness side and ground.  A0046173 • **Is the voltage greater than 10 volts?**	**Yes** GO to **K2**. **No** REPAIR the circuit. TEST the system for normal operation.
K2	CHECK CIRCUIT 66 (LB) FOR CORRECT OPERATION	
	• Enter the following diagnostic mode on the diagnostic tool: DDM Active Command. • Select the DDM active command for keypad backlighting.	

(Continued)

K1-K2

PINPOINT TEST K: THE REMOTE KEYLESS ENTRY (RKE) KEYPAD ILLUMINATION IS INOPERATIVE (Continued)

Test Step		Result / Action to Take
K2	**CHECK CIRCUIT 66 (LB) FOR CORRECT OPERATION (Continued)** • Measure the resistance between the RKE keypad C500-5, circuit 66 (LB), harness side and ground.  A0046158 • Trigger the DDM active command for keypad backlighting on while observing the resistance reading. • **Is the resistance less than 5 ohms?**	**Yes** INSTALL a new RKE keypad. **No** GO to **K3**.
K3	**CHECK CIRCUIT 66 (LB) FOR AN OPEN** • Disconnect: DDM C501a. • Measure the resistance between the DDM C501a-26, circuit 66 (LB), harness side and the RKE keypad C500-5, circuit 66 (LB), harness side.  N0027111 • **Is the resistance less than 5 ohms?**	**Yes** GO to **K4**. **No** REPAIR the circuit. TEST the system for normal operation.

K4	**CHECK THE DDM FOR CORRECT OPERATION**
	• Disconnect all DDM connectors.
	• Check for:
	  • corrosion
	  • pushed-out pins
	• Connect all DDM connectors and make sure they seat correctly.
	• Operate the system and verify the concern is still present.
	• **Is the concern still present?**
		Yes
		INSTALL a new DDM. PROGRAM all the RKE transmitters. REFER to Remote Keyless Entry Transmitter Programming. CLEAR the DTCs. REPEAT the self-test.
		No
		The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. CLEAR the DTCs. REPEAT the self-test.

K2-K4

Normal Operation

The RKE keypad receives voltage through circuit 1524 (DB). With the RKE keypad illumination activated, the driver door module (DDM) grounds circuit 66 (LB) to illuminate the RKE keypad.

Possible Causes

- fuse
- circuit 66 (LB) open
- circuit 1524 (DB) open
- RKE keypad
- DDM

Test L: The Auto-Unlock Does Not Operate Correctly

PINPOINT TEST L: THE AUTO-UNLOCK DOES NOT OPERATE CORRECTLY

PINPOINT TEST L: THE AUTO-UNLOCK DOES NOT OPERATE CORRECTLY

Test Step		Result / Action to Take
L1	CHECK FOR THE AUTO-UNLOCK FEATURE BEING DISABLED	
	• Toggle the auto-unlock feature. Refer to Autolock and Horn Chirp Programming. • Drive the vehicle. • **Does the auto-unlock feature work?**	**Yes** The system is operating normally at this time **No** GO to **L2**.
L2	CHECK FOR THE AUTO-UNLOCK FEATURE BEING ENABLED	
	• Toggle the auto-unlock feature. Refer to Autolock and Horn Chirp Programming. • Drive the vehicle. • **Does the auto-unlock feature work?**	**Yes** The system is operating normally at this time **No** GO to **L3**.
L3	CHECK THE DRIVER DOOR AJAR PID	
	• Key in OFF position. • Connect the diagnostic tool. • Key in ON position. • Close all the doors and the luggage compartment lid. • Enter the following diagnostic mode on the diagnostic tool: DDM Driver Door Ajar PID. • **Does the DDM driver door ajar PID read ajar?**	**Yes** REFER to Lighting and Horns to diagnose the door ajar switch. **No** GO to **L4**.
L4	CHECK THE PASSENGER DOOR AJAR PID	
	NOTE: Make sure that all the doors are still closed. • Enter the following diagnostic mode on the diagnostic tool: DDM Passenger Door Ajar PID. • **Does the DDM passenger door ajar PID read ajar?**	**Yes** REFER to Lighting and Horns to diagnose the door ajar switch. **No** GO to **L5**.
L5	CHECK THE IGNITION SWITCH POSITION STATUS	
	• Enter the following diagnostic mode on the diagnostic tool: Lighting Control Module (LCM) Ignition Switch Position PID. • Enter the following diagnostic mode on the diagnostic tool: LCM VSS PID. • Enter the following diagnostic mode on the diagnostic tool: Powertrain Control Module (PCM) Digital TR Sensor PID. • **Are the LCM and PCM PIDs correct?**	**Yes** GO to **L6**. **No** If the LCM ignition switch position PID is incorrect, REFER to Ignition Switch to diagnose the ignition switch. If the instrument cluster VSS PID is incorrect, REFER to Antilock Brakes / Traction Control Systems to diagnose the VSS signal. If the PCM digital TR sensor PID is incorrect, REFER to Computers and Control Systems to diagnose the digital TR sensor.

(Continued)

L1-L5

PINPOINT TEST L: THE AUTO-UNLOCK DOES NOT OPERATE CORRECTLY (Continued)

Test Step		Result / Action to Take
L6	CHECK FOR CORRECT DDM OPERATION	

	• Disconnect all the DDM connectors.
	• Check for:
	  • corrosion
	  • pushed-out pins
	• Connect all the DDM connectors and make sure they seat correctly.
	• Operate the system and verify the concern is still present.
	• **Is the concern still present?**
		Yes
		INSTALL a new DDM. PROGRAM all the remote keyless entry (RKE) transmitters. REFER to Remote Keyless Entry Transmitter Programming. CONFIRM that the auto-unlock feature operates correctly. If the auto-unlock feature still does not operate correctly, toggle the auto-unlock feature. REFER to Autolock and Horn Chirp Programming. CLEAR the DTCs. REPEAT the self-test.
		No
		The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. CLEAR the DTCs. REPEAT the self-test.

L6

Normal Operation

The driver door module (DDM) energizes the unlock relay based on input from the door ajar switches and the vehicle speed signal. The DDM unlocks the doors when the following conditions are met:

- The vehicle speed has exceeded **5 km/h (3 mph)** then dropped to **0 km/h (0 mph)** (vehicle stopped).

- The key is turned to the OFF or ACCY position.
- The LH front door is opened within **10 minutes** of the key being turned to the OFF or ACCY position.

The auto unlock feature is cancelled if the doors are locked with the door lock control switch or the remote keyless entry (RKE) transmitter within the **10 minute** active window. After the **10-minute** active window expires the auto-unlock feature does not unlock the doors if the driver door is opened.

Possible Causes
- door ajar switch
- vehicle speed sensor (VSS) message
- driver door module (DDM)

Test M: The Remote Keyless Entry (RKE) Transmitter Is Out Of Synchronization

PINPOINT TEST M: THE REMOTE KEYLESS ENTRY (RKE) TRANSMITTER IS OUT OF SYNCHRONIZATION

PINPOINT TEST M: THE REMOTE KEYLESS ENTRY (RKE) TRANSMITTER IS OUT OF SYNCHRONIZATION

NOTE: All RKE transmitters must be present to begin diagnosis of the RKE system.

Test Step		Result / Action to Take
M1	RESYNCHRONIZE THE INOPERATIVE RKE TRANSMITTER	
	• Key in OFF position. • Press any button on the inoperative RKE transmitter 4 times consecutively within 30 seconds. • **Does the RKE transmitter operate correctly now?**	**Yes** The system is OK. CLEAR the DTCs. TEST the system for normal operation. **No** GO to **M2**.
M2	CHECK FOR A SECOND RKE TRANSMITTER	
	• Check for another RKE transmitter that operates with the vehicle. • **Is there another RKE transmitter that operates with the vehicle?**	**Yes** GO to **M3**. **No** GO to **M4**.
M3	RESYNCHRONIZE THE INOPERATIVE RKE TRANSMITTER USING THE SECOND RKE TRANSMITTER	
	• Key in OFF position. • Press any button on the operational RKE transmitter. • Within 30 seconds, press a button on the inoperative RKE transmitter. • Check the inoperative RKE transmitter for correct operation. • **Does the inoperative RKE transmitter operate now?**	**Yes** The system is OK. CLEAR the DTCs. TEST the system for normal operation. **No** GO to **M4**.

(Continued)

M1-M3

PINPOINT TEST M: THE REMOTE KEYLESS ENTRY (RKE) TRANSMITTER IS OUT OF SYNCHRONIZATION (Continued)

Test Step		Result / Action to Take
M4	PROGRAM THE INOPERATIVE RKE TRANSMITTER OR ALL THE RKE TRANSMITTERS	
	• Program the inoperative RKE transmitter individually using a diagnostic tool or program all RKE transmitters using the manual key cycle method. Refer to Remote Keyless Entry Transmitter Programming. • **Does the inoperative RKE transmitter operate now?**	**Yes** The system is OK. INFORM the customer that any RKE transmitters not present need to be programmed. CLEAR the DTCs. TEST the system for normal operation. **No** To diagnose the inoperative RKE transmitter, GO to Pinpoint Test F.

M4

Normal Operation

The RKE transmitter and the driver door module (DDM) use a rolling code to prevent the codes from being captured by a code grabber. The system advances the counter in the RKE transmitter and in the DDM every time a RKE transmitter button is pressed.

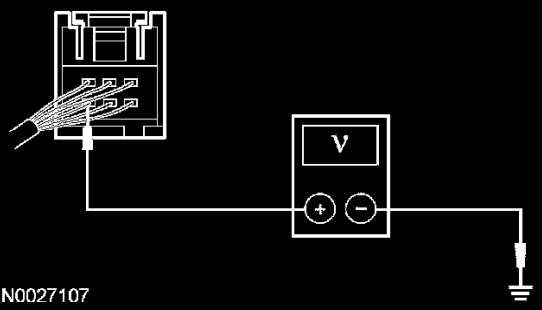
All RKE transmitters must be present to begin diagnosis of the RKE system.

Possible Causes
- RKE transmitter button pressed a substantial amount of times outside the range of the vehicle
- RKE transmitter

Test N: All Remote Keyless Entry (RKE) Transmitters Are Inoperative

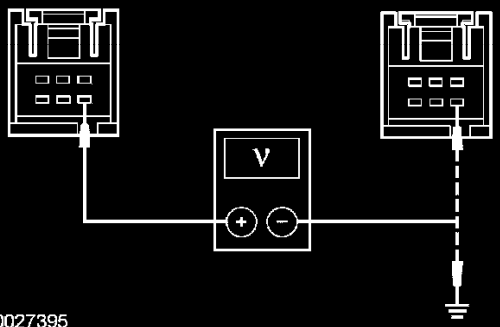
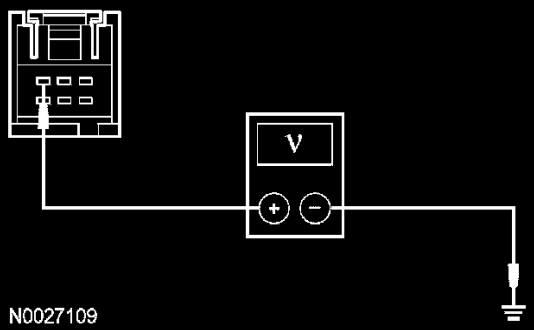
PINPOINT TEST N: ALL REMOTE KEYLESS ENTRY (RKE) TRANSMITTERS ARE INOPERATIVE

PINPOINT TEST N: ALL REMOTE KEYLESS ENTRY (RKE) TRANSMITTERS ARE INOPERATIVE

Test Step		Result / Action to Take
N1	CHECK THE FUNCTIONALITY OF ALL RKE TRANSMITTERS	
	• Press each button on all the transmitters. • **Does any button operate correctly?**	**Yes** GO to Symptom Chart to continue diagnosis of the RKE transmitter system. **No** GO to **N2**.
N2	CHECK CIRCUIT 2308 (RD/WH) FOR VOLTAGE	
	• Key in ON position. • Measure the voltage by back-probing the antenna C4321-4, circuit 2308 (RD/WH), harness side and ground.  N0027107 • **Is the voltage greater than 4.5 volts?**	**Yes** GO to **N4**. **No** GO to **N3**.

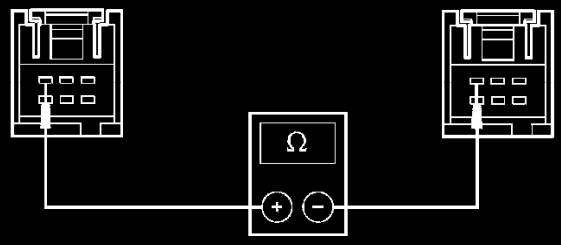
(Continued)

PINPOINT TEST N: ALL REMOTE KEYLESS ENTRY (RKE) TRANSMITTERS ARE INOPERATIVE (Continued)

Test Step		Result / Action to Take
N3	CHECK CIRCUIT 2308 (RD/WH) FOR AN OPEN OR A SHORT TO GROUND	
	• Disconnect: Antenna C4321. • Disconnect: DDM C501c. • Measure the resistance between the antenna C4321-4, circuit 2308 (RD/WH), harness side and the DDM C501c-4, circuit 2308 (RD/WH), harness side; and between the antenna C4321-4, circuit 2308 (RD/WH), harness side and ground.  N0027395 • **Are the resistances less than 5 ohms between the antenna and the DDM, and greater than 10,000 ohms between the antenna and ground?**	**Yes** GO to **N4**. **No** REPAIR the circuit. TEST the system for normal operation.
N4	CHECK CIRCUIT 2307 (BK/WH) FOR A SHORT TO VOLTAGE	
	• Disconnect: Antenna C4321. • Measure the voltage between the antenna C4321-3, circuit 2307 (BK/WH), harness side and ground.  N0027109 • **Is there any voltage present?**	**Yes** REPAIR the circuit. TEST the system for normal operation. **No** GO to **N5**.
N5	CHECK CIRCUIT 2307 (BK/WH) FOR AN OPEN	
	• Disconnect: DDM C501d.	

(Continued)

PINPOINT TEST N: ALL REMOTE KEYLESS ENTRY (RKE) TRANSMITTERS ARE INOPERATIVE (Continued)

Test Step		Result / Action to Take
N5	CHECK CIRCUIT 2307 (BK/WH) FOR AN OPEN (Continued)	
	• Measure the resistance between the antenna C3183-3, circuit 2307 (BK/WH), harness side and the DDM C501d-3, circuit 2307 (BK/WH), harness side.  N0027110 • **Is the resistance less than 5 ohms?**	**Yes** GO to **N6**. **No** REPAIR the circuit. TEST the system for normal operation.
N6	CHECK CIRCUITS 2305 (VT/LB), 2306 (GY/RD), AND 2309 (LB/BK) FOR A SHORT TO VOLTAGE	
	• Measure the voltage between the antenna connector, harness side and ground using the following table. Connector-Pin / Circuit: C3183-1 — 2305 (VT/LB) C3183-2 — 2306 (GY/RD) C3183-5 — 2309 (LB/BK) • **Is there any voltage present?**	**Yes** REPAIR the circuit. TEST the system for normal operation. **No** GO to **N7**.
N7	CHECK CIRCUITS 2305 (VT/LB), 2306 (GY/RD) AND 2309 (LB/BK) FOR AN OPEN	
	• Measure the resistance between the antenna connector, harness side and the DDM connector, harness side using the following table. Connector-Pin / Circuit / Connector-Pin: C4321-1 — 2305 (VT/LB) — C501c-1 C4321-2 — 2306 (GY/RD) — C501c-2 C4321-5 — 2309 (LB/BK) — C501c-5 • **Are the resistances less than 5 ohms?**	**Yes** GO to **N8**. **No** REPAIR the circuit. TEST the system for normal operation.
N8	CHECK CIRCUITS 2305 (VT/LB), 2306 (GY/RD) AND 2309 (LB/BK) FOR A SHORT TO GROUND	
	• Measure the resistance between the antenna connector and ground using the following table.	

(Continued)

PINPOINT TEST N: ALL REMOTE KEYLESS ENTRY (RKE) TRANSMITTERS ARE INOPERATIVE (Continued)

Test Step		Result / Action to Take
N8	CHECK CIRCUITS 2305 (VT/LB), 2306 (GY/RD) AND 2309 (LB/BK) FOR A SHORT TO GROUND (Continued) Connector-Pin / Circuit: C4321-1 — 2305 (VT/LB) C4321-2 — 2306 (GY/RD) C4321-5 — 2309 (LB/BK) • **Are the resistances greater than 10,000 ohms?**	**Yes** GO to **N9**. **No** REPAIR the circuit. TEST the system for normal operation.
N9	TEST THE SYSTEM WITH A KNOWN GOOD ANTENNA • Key in OFF position. • Install a new antenna. • Key in ON position. • Test the system for normal operation. • **Does the system operate correctly?**	**Yes** The system is OK. **No** GO to **N10**.

N10	CHECK THE DDM FOR CORRECT OPERATION
	• Disconnect all the DDM connectors.
	• Check for:
	  • corrosion
	  • pushed-out pins
	• Connect all the DDM connectors and make sure they seat correctly.
	• Operate the system and verify the concern is still present.
	• **Is the concern still present?**
		Yes
		INSTALL a new DDM. PROGRAM all RKE transmitters. REFER to Remote Keyless Entry Transmitter Programming. INFORM the customer that any RKE transmitters not present need to be programmed. CLEAR the DTCs. REPEAT the self-test.
		No
		The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. CLEAR the DTCs. REPEAT the self-test.

N8-N10

Normal Operation

The driver door module (DDM) sends voltage to the antenna on circuit 2308 (RD/WH) and provides ground on circuit 2307 (BK/WH). The antenna receives signals from the RKE transmitter and sends the signals to the DDM on circuits 2305 (VT/LB), 2306 (GY/RD), and 2309 (LB/BK). The DDM carries out the function requested by the RKE transmitter

Possible Causes

- circuit 2305 (VT/LB) open, short to ground or short to voltage
- circuit 2306 (GY/RD) open, short to ground or short to voltage
- circuit 2307 (BK/WH) open or short to voltage
- circuit 2308 (RD/WH) open or short to ground
- circuit 2309 (LB/BK) open, short to ground or short to voltage
- antenna
- DDM

Test O: The Remote Keyless Entry (RKE) Transmitter Has Poor Range Performance

PINPOINT TEST O: THE REMOTE KEYLESS ENTRY (RKE) TRANSMITTER HAS POOR RANGE PERFORMANCE

PINPOINT TEST O: THE REMOTE KEYLESS ENTRY (RKE) TRANSMITTER HAS POOR RANGE PERFORMANCE

NOTE: All RKE transmitters must be present to begin diagnosis of the RKE system.

NOTE: Aftermarket or dealer-installed systems may adversely affect the RKE system operation. These systems should be disconnected before diagnosing any RKE concerns.

Test Step		Result / Action to Take
O1	**CHECK FOR THE CORRECT RKE TRANSMITTERS**	
	• Check that the correct RKE transmitters are used with the vehicle. • Make sure the RKE transmitters are provided with the original equipment manufacturer (OEM) system and not from an aftermarket system, or a dealer-installed system, that may have been installed on the vehicle. • **Are all the correct RKE transmitters present?**	**Yes** GO to **O2**. **No** The system cannot be tested without the correct RKE transmitters. INFORM the customer that all the correct RKE transmitters need to be present to proceed with diagnosis of the system.
O2	**CHECK ALL RKE TRANSMITTERS FOR POOR RANGE PERFORMANCE**	
	NOTE: The 3 m (10 ft) measurement of range is not the standard but is a guideline that clearly indicates a vehicle is experiencing poor range performance. • Check all RKE transmitters for poor range performance (less than 3 m [10 ft]). • **Do all RKE transmitters experience poor range performance?**	**Yes** GO to **O3**. **No** REPLACE the inoperative RKE transmitter and PROGRAM the inoperative RKE transmitter using a diagnostic tool or all RKE transmitters using the ignition lock cylinder method. REFER to Remote Keyless Entry Transmitter Programming. INFORM the customer that any RKE transmitters not present need to be programmed. CLEAR the DTCs. TEST the system for normal operation.
O3	**CHECK THE LOCATION OF THE VEHICLE AND THE APPROACH ANGLES AROUND THE VEHICLE**	
	• Make sure the poor performance is consistent in nature and is not from 1 approaching angle. • If the vehicle is within 0.8 km (0.5 miles) of high-power devices or radio/TV towers, the operating distance of the RKE transmitters may be reduced. • **Is the poor range performance consistent around the vehicle?**	**Yes** INSTALL and new antenna. Test the system for normal operation. **No** The system is operating correctly at this time. CLEAR the DTCs. TEST the system for normal operation.

O1-O3

Normal Operation

Remote locking and unlocking of the doors is accomplished by the driver door module (DDM) receiving a command message from the RKE transmitter. The DDM processes the command and sends a signal directly to the door lock actuators. The RKE transmitter has a minimum operating range of **10 m (33 ft)**.

All RKE transmitters must be present to begin diagnosis of the RKE system.

An aftermarket or dealer-installed system may adversely affect the RKE system operation. These systems should be disconnected before diagnosing any RKE concerns.

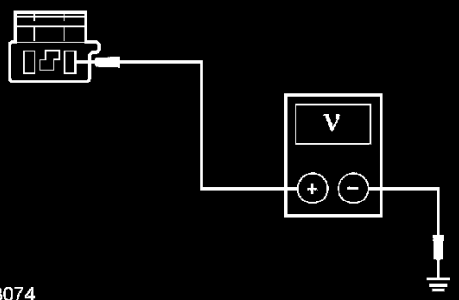
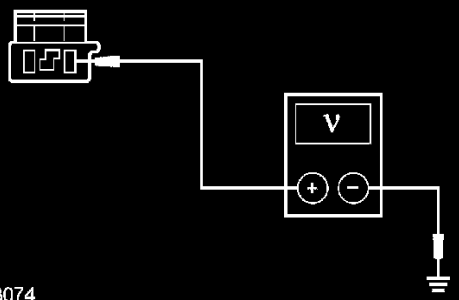
Possible Causes

- aftermarket systems
- high power devices
- TV/radio transmission towers
- RKE transmitter
- DDM

Test P: The Fuel Filler Door Is Inoperative

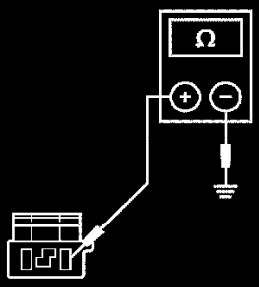
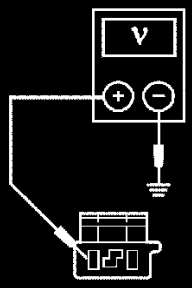
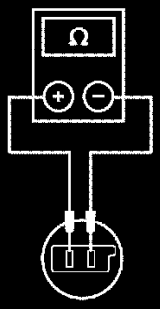
PINPOINT TEST P: THE FUEL FILLER DOOR IS INOPERATIVE

PINPOINT TEST P: THE FUEL FILLER DOOR IS INOPERATIVE

Test Step		Result / Action to Take
P1	CHECK THE FUEL FILLER DOOR OPERATION	
	• Check that the fuel filler door is closed and latched. • Pull the manual release cable in the luggage compartment to release the fuel filler door. • **Does the fuel filler door operate manually?**	**Yes** GO to **P2**. **No** INSTALL a new fuel filler door interlock catch. TEST the system for normal operation.
P2	CHECK CIRCUIT 482 (WH/PK) FOR A SHORT TO VOLTAGE	
	• Disconnect: Fuel Filler Interlock Catch C409. • Measure the voltage between the fuel filler interlock catch C409-1, circuit 482 (WH/PK), harness side and ground.  N0013074 • **Is any voltage present?**	**Yes** GO to **P3**. **No** GO to **P4**.
P3	CHECK FOR A SHORTED SWITCH	
	• Disconnect: Fuel Filler Door Release Switch C512. • Measure the voltage between the fuel filler door release switch C512-1, circuit 482 (WH/PK), harness side and ground.  N0013074 • **Is any voltage present?**	**Yes** REPAIR the circuit. TEST the system for normal operation. **No** INSTALL a new fuel filler door release switch. TEST the system for normal operation.
P4	CHECK CIRCUIT 482 (WH/PK) FOR A SHORT TO GROUND	
	• Disconnect: Fuel Filler Door Release Switch C512.	

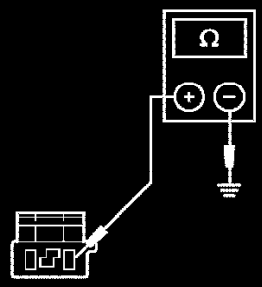
(Continued)

PINPOINT TEST P: THE FUEL FILLER DOOR IS INOPERATIVE (Continued)

Test Step		Result / Action to Take
P4	**CHECK CIRCUIT 482 (WH/PK) FOR A SHORT TO GROUND (Continued)**	
	• Measure the resistance between the fuel filler door release switch C512-1, circuit 482 (WH/PK), harness side and ground.  AN1207-A • **Is the resistance greater than 10,000 ohms?**	**Yes** GO to **P5**. **No** REPAIR the circuit. TEST the system for normal operation.
P5	**CHECK THE SWITCH VOLTAGE SUPPLY**	
	• Measure the voltage between the fuel filler door release switch C512-2, circuit 84 (VT/YE), harness side and ground.  AN1204-A • **Is the voltage greater than 10 volts?**	**Yes** GO to **P6**. **No** VERIFY the BJB fuse 15 (15A) is OK. If OK, REPAIR the circuit. TEST the system for normal operation.
P6	**CHECK THE SWITCH OPERATION**	
	• Measure the resistance between the fuel filler door release switch connector terminals.  AN1206-A • Press the fuel filler door switch. • **Is the resistance less than 5 ohms with the switch pressed, and greater than 10,000 ohms with the switch released?**	**Yes** GO to **P7**. **No** INSTALL a new fuel filler door release switch. TEST the system for normal operation.

(Continued)

PINPOINT TEST P: THE FUEL FILLER DOOR IS INOPERATIVE (Continued)

Test Step		Result / Action to Take
P7	CHECK THE SOLENOID GROUND	
	• Measure the resistance between the fuel filler interlock catch C409-1, circuit 482 (WH/PK), harness side and ground.  AN1207-A • **Is the resistance less than 5 ohms?**	**Yes** INSTALL a fuel filler interlock catch. TEST the system for normal operation. **No** REPAIR the circuit. TEST the system for normal operation.

P7

Normal Operation

The fuel filler door release switch receives voltage from the battery junction box (BJB) on circuit 84 (DG). When the fuel filler door release switch is pressed the switch closes and voltage is supplied to the fuel filler interlock catch on circuit 482 (WH/PK). The fuel filler interlock catch is grounded on circuit 57 (BK).

Possible Causes

- fuse
- circuit 84 (VT/YE) open or short to ground
- circuit 482 (WH/PK) open, short to ground or short to voltage
- fuel filler door release switch
- fuel filler interlock catch

Test Q: The Memory Seat Does Not Operate Correctly Using The Remote Keyless Entry (RKE) Transmitter

PINPOINT TEST Q: THE MEMORY SEAT DOES NOT OPERATE CORRECTLY USING THE REMOTE KEYLESS ENTRY (RKE) TRANSMITTER

PINPOINT TEST Q: THE MEMORY SEAT DOES NOT OPERATE CORRECTLY USING THE REMOTE KEYLESS ENTRY (RKE) TRANSMITTER

Test Step		Result / Action to Take
Q1	CHECK FOR DIAGNOSTIC TROUBLE CODES (DTCs) RECORDED FROM THE DDM SELF-TEST	
	• Check the recorded results from the DDM self-test. • **Are any DTCs recorded?**	**Yes** REFER to the Driver Door Module (DDM) Diagnostic Trouble Code (DTC) Index. **No** GO to **Q2**.
Q2	PROGRAM THE REMOTE TRANSMITTER TO MEMORY SETTING 1	
	• Program the remote transmitter in question to memory setting 1. Refer to Remote Memory Activation. • Move the driver memory seat memory mirrors, and memory pedals to different settings and press the unlock button on the remote transmitter. • **Do the driver memory seat, memory mirrors, and memory pedals return to preset memory position 1?**	**Yes** The system is OK. TEST the system for normal operation. **No** GO to **Q3**.

(Continued)

Q1-Q2

PINPOINT TEST Q: THE MEMORY SEAT DOES NOT OPERATE CORRECTLY USING THE REMOTE KEYLESS ENTRY (RKE) TRANSMITTER (Continued)

Test Step		Result / Action to Take
Q3	CHECK MEMORY POSITION 1 FROM THE MEMORY SET SWITCH	
	• Press memory button 1 on the memory set switch. • **Do the driver memory seat and memory mirrors return to preset memory position 1?**	**Yes** GO to **Q4**. **No** REFER to Seats to continue diagnosis of the memory seats.
Q4	CHECK FOR CORRECT DDM OPERATION	

	• Disconnect all the DDM connectors.
	• Check for:
	  • corrosion
	  • pushed-out pins
	• Connect all the DDM connectors and make sure they seat correctly.
	• Operate the system and verify the concern is still present.
	• **Is the concern still present?**
		Yes
		INSTALL a new DDM. PROGRAM the RKE transmitters. TEST the system for normal operation.
		No
		The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. CLEAR the DTCs. TEST the system for normal operation.

Q3-Q4

Normal Operation

The driver door module (DDM) is programmed to recognize each programmed RKE transmitter by its unique transmitter identification code (TIC) and associate the TIC with a programmed memory configuration of the seats, mirrors and adjustable pedals. The DDM receives a command from the RKE transmitter. The driver seat module (DSM) positions the seat and adjustable pedals to the preset positions based on the TIC that is received.

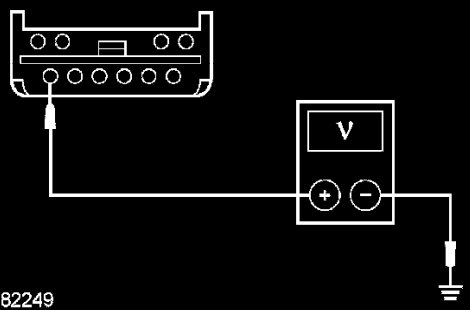
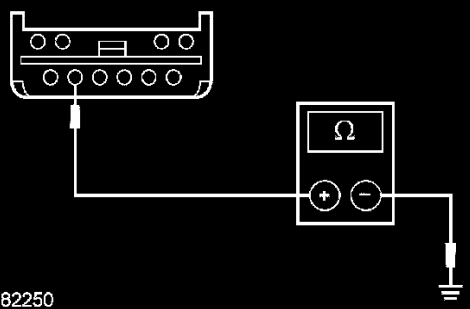
Possible Causes

- RKE transmitter
- DDM
- DSM

Test R: The Luggage Compartment Lid Is Inoperative - Luggage Compartment Lid Closing Motor

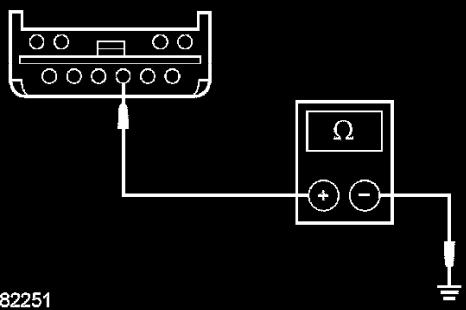
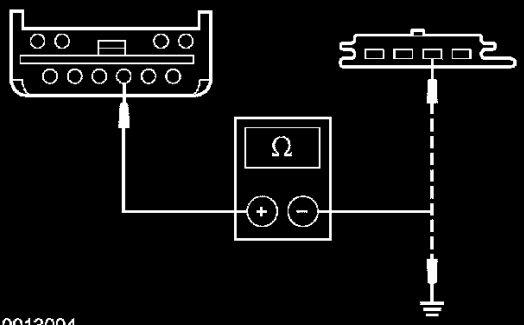
PINPOINT TEST R: THE LUGGAGE COMPARTMENT LID IS INOPERATIVE - LUGGAGE COMPARTMENT LID CLOSING MOTOR

PINPOINT TEST R: THE LUGGAGE COMPARTMENT LID IS INOPERATIVE — LUGGAGE COMPARTMENT LID CLOSING MOTOR

Test Step		Result / Action to Take
R1	CHECK CIRCUIT 1190 (YE/BK) FOR VOLTAGE	
	• Key in OFF position. • Disconnect: Luggage Compartment Lid Module C4197. • Measure the voltage between the luggage compartment lid module C4197-6, circuit 1190 (YE/BK), harness side and ground.  A0082249 • **Is the voltage greater than 10 volts?**	**Yes** GO to **R2**. **No** VERIFY the BJB fuse 116 (20A) is OK. If OK, REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.
R2	CHECK CIRCUIT 57 (BK) FOR AN OPEN	
	• Measure the resistance between the luggage compartment lid module C4197-5, circuit 57 (BK), harness side and ground.  A0082250 • **Is the resistance less than 5 ohms?**	**Yes** GO to **R3**. **No** REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.

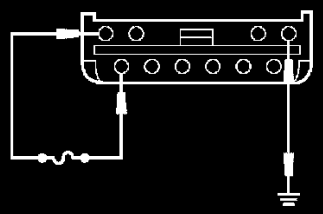
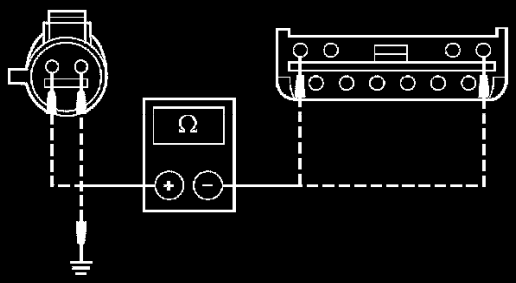
(Continued)

PINPOINT TEST R: THE LUGGAGE COMPARTMENT LID IS INOPERATIVE — LUGGAGE COMPARTMENT LID CLOSING MOTOR (Continued)

Test Step		Result / Action to Take
R3	CHECK THE LUGGAGE COMPARTMENT LID LATCH OPERATION	
	• Measure the resistance between the luggage compartment lid module C4197-3, circuit 486 (BN/WH), harness side and ground while manually opening and closing the luggage compartment lid latch.  A0082251 • **Does the resistance switch from less than 5 ohms to greater than 10,000 ohms?**	**Yes** GO to **R5**. **No** GO to **R4**.
R4	CHECK CIRCUIT 486 (BN/WH) FOR AN OPEN OR A SHORT TO GROUND	
	• Disconnect: Luggage Compartment Lid Latch C430. • Measure the resistance between the luggage compartment lid module C4197-3, circuit 486 (BN/WH), harness side and the luggage compartment lid latch C430-C, circuit 486 (BN/WH), harness side; and between the luggage compartment lid module C4197-3, circuit 486 (BN/WH), harness side and ground.  N0013004 • **Is resistance less than 5 ohms between the luggage compartment lid module and the luggage compartment lid latch, and greater than 10,000 ohms between luggage compartment lid module and ground?**	**Yes** INSTALL a new luggage compartment lid latch. CLEAR the DTCs. REPEAT the self-test. **No** REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.
R5	CHECK THE LUGGAGE COMPARTMENT LID CLOSING MOTOR FOR CORRECT OPERATION	
	• Key in OFF position.	

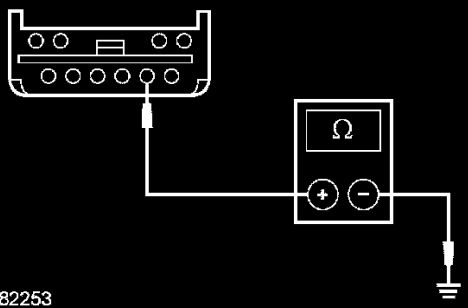
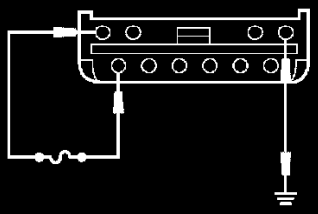
(Continued)

PINPOINT TEST R: THE LUGGAGE COMPARTMENT LID IS INOPERATIVE — LUGGAGE COMPARTMENT LID CLOSING MOTOR (Continued)

Test Step		Result / Action to Take
R5	**CHECK THE LUGGAGE COMPARTMENT LID CLOSING MOTOR FOR CORRECT OPERATION (Continued)**	
	• Connect a fused (5A) jumper wire between the luggage compartment lid module C4197-6, circuit 1190 (YE/BK), harness side and the luggage compartment lid module C4197-10, circuit 1601 (WH/PK), harness side; and between the luggage compartment lid module C4197-7, circuit 1603 (RD/LG), harness side and ground. Switch voltage and ground between pin 10 and pin 7 to verify the luggage compartment lid closing motor operates in both directions, ending in the full up position.  A0045327 • **Does the luggage compartment lid closing motor operate in both directions?**	**Yes** GO to **R7**. **No** GO to **R6**.
R6	**CHECK CIRCUITS 1601 (WH/PK) AND 1603 (RD/LG) FOR AN OPEN OR SHORT TO GROUND**	
	• Disconnect: Luggage Compartment Lid Closing Motor C4080. • Measure the resistance between the luggage compartment lid module C4197-10, circuit 1601 (WH/PK), harness side and the luggage compartment lid closing motor C4080-2, circuit 1601 (WH/PK), harness side; and between the luggage compartment lid module C4080-7, circuit 1603 (RD/LG), harness side and the luggage compartment lid closing motor C4080-1, circuit 1603 (RD/LG), harness side. Then measure the resistance between the luggage compartment lid module C4197-10, circuit 1601 (WH/PK), harness side and ground and between the luggage compartment lid module C4197-7, circuit 1603 (RD/LG), harness side and ground.  A0045328 • **Is the resistance less than 5 ohms between the luggage compartment lid module and the luggage compartment lid closing motor, and greater than 10,000 ohms between the luggage compartment lid module and ground?**	**Yes** INSTALL a new luggage compartment lid closing motor. CLEAR the DTCs. REPEAT the self-test. **No** REPAIR circuit 1601 (WH/PK) or 1603 (RD/LG) as necessary. CLEAR the DTCs. REPEAT the self-test.

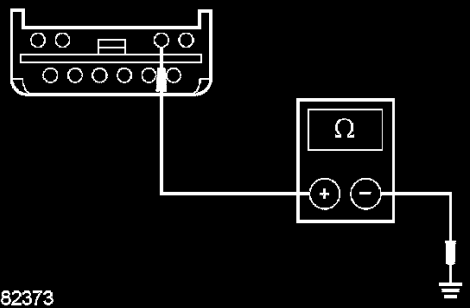
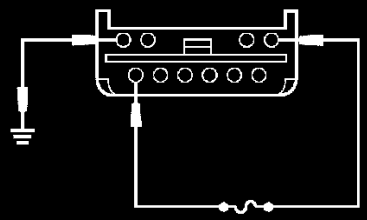
(Continued)

PINPOINT TEST R: THE LUGGAGE COMPARTMENT LID IS INOPERATIVE — LUGGAGE COMPARTMENT LID CLOSING MOTOR (Continued)

Test Step		Result / Action to Take
R7	CHECK THE LUGGAGE COMPARTMENT LID SWITCH-STRIKER UP	
	• Measure the resistance between the luggage compartment lid module C4197-2, circuit 1605 (VT/WH), harness side and ground.  A0082253 • Connect a fused (5A) jumper wire between the luggage compartment lid module C4197-6, circuit 1190 (YE/BK), harness side and the luggage compartment lid module C4197-10, circuit 1601 (WH/PK), harness side; and between the luggage compartment lid module C4197-7, circuit 1603 (RD/LG), harness side and ground. Switch voltage and ground between pin 10 and pin 7 to operate the luggage compartment lid closing motor to the full down position.  A0045327 • **Is the resistance less than 5 ohms while the luggage compartment lid closing motor is in the full up position, and greater than 10,000 ohms in the full down position?**	**Yes** GO to **R8**. **No** GO to **R9**.

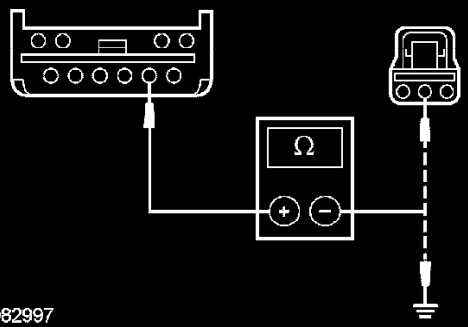
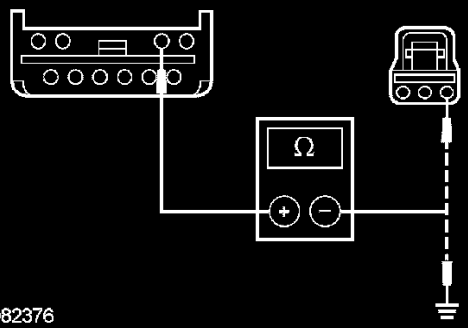
(Continued)

PINPOINT TEST R: THE LUGGAGE COMPARTMENT LID IS INOPERATIVE — LUGGAGE COMPARTMENT LID CLOSING MOTOR (Continued)

Test Step		Result / Action to Take
R8	**CHECK THE LUGGAGE COMPARTMENT LID SWITCH-STRIKER DOWN**	
	• Measure the resistance between the luggage compartment lid module C4197-8, circuit 1604 (VT/OG), harness side and ground.  A0082373 • Connect a fused (5A) jumper wire between the luggage compartment lid module C4197-6, circuit 1190 (YE/BK), harness side and the luggage compartment lid module C4197-7, circuit 1603 (RD/LG), harness side; and between the luggage compartment lid module C4197-10, circuit 1601 (WH/PK) harness side and ground. Switch voltage and ground between pin 10 and pin 7 to operate the luggage compartment lid closing motor to the full up position.  A0082374 • **Is the resistance less than 5 ohms while the luggage compartment lid closing motor is in the full down position, and greater than 10,000 ohms in the full up position?**	**Yes** GO to **R12**. **No** GO to **R10**.
R9	**CHECK CIRCUIT 1605 (VT/WH) FOR AN OPEN OR A SHORT TO GROUND**	
	• Disconnect: Luggage Compartment Lid Switch C4079.	

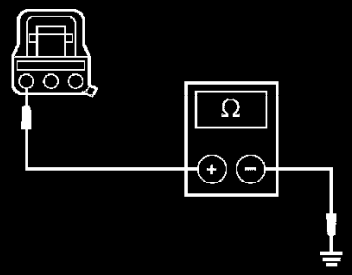
(Continued)

PINPOINT TEST R: THE LUGGAGE COMPARTMENT LID IS INOPERATIVE — LUGGAGE COMPARTMENT LID CLOSING MOTOR (Continued)

Test Step		Result / Action to Take
R9	**CHECK CIRCUIT 1605 (VT/WH) FOR AN OPEN OR A SHORT TO GROUND (Continued)**	
	• Measure the resistance between the luggage compartment lid module C4197-2, circuit 1605 (VT/WH), harness side and the luggage compartment lid switch C4079-2, circuit 1605 (VT/WH), harness side; and between the luggage compartment lid module C4197-2, circuit 1605 (VT/WH), harness side and ground.  A0082997 • **Is the resistance less than 5 ohms between the luggage compartment lid module and luggage compartment lid switch, and greater than 10,000 ohms between the luggage compartment lid module and ground?**	**Yes** GO to **R11**. **No** REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.
R10	**CHECK CIRCUIT 1604 (VT/OG) FOR AN OPEN OR A SHORT TO GROUND**	
	• Disconnect: Luggage Compartment Lid Switch C4079. • Measure the resistance between the luggage compartment lid module C4197-8, circuit 1604 (VT/OG), harness side and the luggage compartment lid switch C4079-1, circuit 1604 (VT/OG), harness side; and between the luggage compartment lid module C4197-8, circuit 1604 (VT/OG), harness side and ground.  A0082376 • **Is the resistance less than 5 ohms between the luggage compartment lid module and the luggage compartment lid switch, and greater than 10,000 ohms between the luggage compartment lid module and ground?**	**Yes** GO to **R11**. **No** REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.

(Continued)

PINPOINT TEST R: THE LUGGAGE COMPARTMENT LID IS INOPERATIVE — LUGGAGE COMPARTMENT LID CLOSING MOTOR (Continued)

Test Step		Result / Action to Take
R11	CHECK THE LUGGAGE COMPARTMENT LID SWITCH CIRCUIT 57 (BK) FOR AN OPEN	
	• Measure the resistance between the luggage compartment lid switch C4079-3, circuit 57 (BK), harness side and ground.  A0045331 • **Is the resistance less than 5 ohms?**	**Yes** INSTALL a new luggage compartment lid switch. CLEAR the DTCs. REPEAT the self-test. **No** REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.
R12	CHECK FOR CORRECT LUGGAGE COMPARTMENT LID MODULE OPERATION	

	• Disconnect all the luggage compartment lid module connectors.
	• Check for:
	  • corrosion
	  • pushed-out pins
	• Connect all the luggage compartment lid module connectors and make sure they seat correctly.
	• Operate the system and verify the concern is still present.
	• **Is the concern still present?**
		Yes
		INSTALL a new luggage compartment lid module. CLEAR the DTCs. REPEAT the self-test.
		No
		The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. CLEAR the DTCs. REPEAT the self-test.

R11-R12

Normal Operation

The luggage compartment lid module receives voltage from the battery junction box (BJB) on circuit 1190 (YE/BK). The luggage compartment lid module receives a ground signal from the luggage compartment lid release solenoid through circuits 486 (BN/WH) and 57 (BK) when the luggage compartment is opened. The luggage compartment lid supplies voltage to the luggage compartment lid closing motor through circuit 1601 (WH/PK) and grounds the motor through circuit 1603 (RD/LG) to raise the striker with the closing motor.

The luggage compartment lid module stops the voltage to the closing motor when the striker up switch indicates that the striker is fully up with a ground signal on circuit 1605 (VT/WH). The luggage compartment lid module receives a ground signal from the striker up switch through circuit 1605 (VT/WH) when the luggage compartment is closed. The luggage compartment lid module supplies voltage to circuit 1603 (RD/LG) and grounds through circuit 1601 (WH/PK) to lower the striker with the closing motor. The luggage compartment lid module stops the voltage to the closing motor when the striker down switch indicates that the striker is fully down by providing a ground signal on circuit 1604 (VT/OG).

The luggage compartment lid module is grounded on circuit 57 (BK).

Possible Causes

- fuse
- circuit 57 (BK) open
- circuit 486 (BN/WH) open or short to ground
- circuit 1190 (YE/BK) open
- circuit 1601 (WH/PK) open, short to voltage, or short to ground
- circuit 1603 (RD/LG) open, short to voltage, or short to ground
- circuit 1604 (VT/OG) open or short to ground
- circuit 1605 (VT/WH) open or short to ground
- luggage compartment lid closing motor
- luggage compartment lid module
- luggage compartment lid motor
- luggage compartment lid latch