




Interior Lighting

Special Tool(s)

 ST1137-A	73III Automotive Meter 105-R0057 or equivalent
 ST2834-A	Vehicle Communications Module (VCM) and Integrated Diagnostic System (IDS) software with appropriate hardware, or equivalent scan tool
 ST2574-A	Flex Probe Kit 105-R025C or equivalent

Principles of Operation

When the smart junction box (SJB) detects a request for lighting, it turns on the interior lamps by supplying power and ground to the lamps. The request for lighting can be an open door signal from a door ajar switch, an interior lighting on command from the instrument panel dimmer switch or an unlock command from a remote keyless entry (RKE) transmitter.

The door ajar switches are hard-wired directly to the SJB. The 2 door ajar switches are normally closed when the doors are closed. The luggage compartment lid ajar switch is normally closed when the luggage compartment lid is closed. All door ajar switches receive voltage from the SJB and each has its own ground circuit.

The instrument panel dimmer switch receives a voltage signal from the SJB. The instrument panel dimmer switch provides variable resistance for backlighting the instrument cluster and a toggle on/off function for the courtesy lamps.

The RKE receiver is contained inside the SJB. When the SJB receives an unlock request from a RKE transmitter, it unlocks the doors and turns on the courtesy lamps.

Inspection and Verification

1. Verify the customer concern.
2. Visually inspect the following for obvious signs of electrical damage.

Visual Inspection Chart

Electrical

- Fuse
- Circuitry
- Loose or corroded connections

Electrical

- Lamp(s)
- Dimmer switch
- Door ajar switches
- Smart junction box (SJB)

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. **NOTE:** *Make sure to use the latest scan tool release software.*

If the cause is not visually evident, connect the scan tool to the data link connector (DLC).

5. **NOTE:** *The vehicle communication module (VCM) LED prove-out confirms power and ground from the DLC are provided to the VCM.*

If the scan tool does not communicate with the VCM:

- Check the VCM connection to the vehicle.
- Check the scan tool connection to the VCM.
- Refer to [Section 418-00](#), No Power To The Scan Tool, to diagnose no communication with the scan tool.

6. If the scan tool does not communicate with the vehicle:

- Verify the ignition key is in the ON position.
- Verify the scan tool operation with a known good vehicle.
- Refer to [Section 418-00](#) to diagnose no response from the powertrain control module (PCM).

7. Carry out the network test.

- If the scan tool responds with no communication with the SJB, refer to [Section 418-00](#).
- If the network test passes, retrieve and record the continuous memory DTCs.

8. Clear the continuous DTCs and carry out the self-test diagnostics for the SJB.

9. If the DTCs retrieved are related to the concern, go to the Smart Junction Box (SJB) Diagnostic Trouble Code (DTC) Index. For all other DTCs, refer to [Section 419-10](#).

10. If no DTCs related to the concern are retrieved, GO to [Symptom Chart](#).

Smart Junction Box (SJB) Diagnostic Trouble Code (DTC) Index

DTC	Description	Action
B1084	Trunk Lamp Circuit Failure	If the luggage compartment lamp is inoperative, GO to Pinpoint Test F . If the luggage compartment lamp is always on, GO to Pinpoint Test G .
B1319	Driver's Door Ajar Circuit Failure	GO to Pinpoint Test D .
B1327	Passenger's Door Ajar Circuit Failure	GO to Pinpoint Test D .
B2021	Dome Lamp Output Return Circuit Failure	GO to Pinpoint Test A .
B2550	Lamp Dome Output Circuit Short to Ground	GO to Pinpoint Test A .

DTC	Description	Action
B2554	Lamp Dome Output Circuit Failure	If the interior lamps are inoperative, GO to Pinpoint Test A If the interior lamps are always on, GO to Pinpoint Test D.

Symptom Chart

Symptom Chart

Condition	Possible Causes	Action
• No communication with the smart junction box (SJB)	<ul style="list-style-type: none"> • Circuitry • SJB 	• REFER to Section 418-00.
• The courtesy lamps are inoperative	<ul style="list-style-type: none"> • Fuse • Circuitry • Interior lamp • SJB 	• GO to Pinpoint Test A.
• The courtesy lamps do not turn on with one door open	<ul style="list-style-type: none"> • Circuitry • Door ajar switch • SJB 	• GO to Pinpoint Test B.
• The courtesy lamps are inoperative — using the dimmer switch	<ul style="list-style-type: none"> • Circuitry • Dimmer switch • SJB 	• GO to Pinpoint Test C.
• The courtesy lamps stay on continuously	<ul style="list-style-type: none"> • Circuitry • Door ajar switch • Dimmer switch • SJB 	• GO to Pinpoint Test D.
• The demand lamps are inoperative	<ul style="list-style-type: none"> • Circuitry • Interior lamp 	• GO to Pinpoint Test E.
• The luggage compartment lamp is inoperative	<ul style="list-style-type: none"> • Circuitry • Luggage compartment lamp • Luggage compartment lid ajar switch • SJB 	• GO to Pinpoint Test F.
• The luggage compartment lamp stays on continuously	<ul style="list-style-type: none"> • Circuitry • Luggage compartment lid ajar switch • SJB 	• GO to Pinpoint Test G.
• The illuminated entry is inoperative when using the remote keyless entry (RKE) transmitter	<ul style="list-style-type: none"> • RKE system • SJB 	• GO to Pinpoint Test H.

Pinpoint Tests

Pinpoint Test A: The Courtesy Lamps Are Inoperative

Refer to Wiring Diagrams Cell [89](#) , Interior Lamps for schematic and connector information.

Normal Operation

Power is supplied to the smart junction box (SJB) through the bussed electrical center (BEC) fuse 67 (30A) to the SJB. When a door is opened, the ajar switch opens, signaling the SJB. The SJB monitors the ajar circuits, and based on the ajar status, the SJB will supply voltage to the courtesy lamps on circuit 53 (BK/LB). Ground for the courtesy lamps is supplied by the SJB through circuit 54 (LG/YE).

DTC B2021 — sets when the SJB detects a short to voltage on the dome lamp return circuit.

DTC B2550 — sets when the SJB detects a short to ground on the dome lamp output supply circuit.

DTC B2554 — sets when the SJB detects an open on the dome lamp supply or return circuits.

Possible Causes

- Fuse
- Circuit 53 (BK/LB) open or short to ground
- Circuit 54 (LG/YE) open or short to voltage
- Interior lamp
- SJB

PINPOINT TEST A : THE COURTESY LAMPS ARE INOPERATIVE

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

A1 CHECK THE SJB DTCS

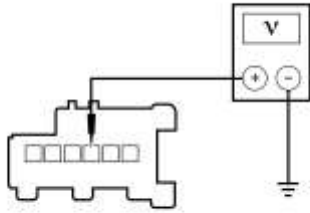
- Ignition ON.
- Check the SJB for DTCs.

Is DTC B2021 or B2554 present?

Yes	For DTC B2021, GO to A2 . For DTC B2550, GO to A3 . For DTC B2554, GO to A5 .
No	GO to A4 .

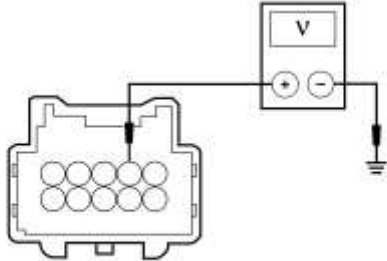
A2 CHECK CIRCUIT 54 (LG/YE) FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect: Overhead Console [C930](#) .
- Disconnect: Overhead Console (With Convertible Top) [C9013](#) .
- Disconnect: SJB [C2280F](#) .
- Ignition ON.
- For vehicles without a convertible top, measure the voltage between the overhead console [C930](#) Pin 4, circuit 54 (LG/YE), harness side and ground.



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- For vehicles with a convertible top, measure the voltage between the overhead console [C9013](#) Pin 4, circuit 54 (LG/YE), harness side and ground.



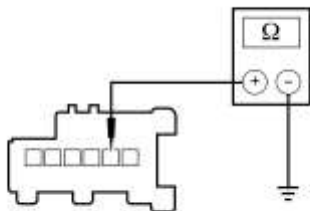
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Is any voltage present?

Yes	REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.
No	GO to A9 .

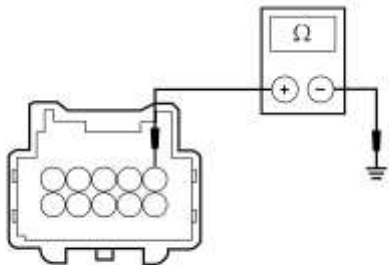
A3 CHECK CIRCUIT 53 (BK/LB) FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect: Overhead Console [C930](#) .
- Disconnect: Overhead Console (With Convertible Top) [C9013](#) .
- Disconnect: SJB [C2280F](#) .
- For vehicles without a convertible top, measure the resistance between the overhead console [C930](#) Pin 5, circuit 53 (BK/LB), harness side and ground.



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- For vehicles with a convertible top, measure the resistance between the overhead console [C9013](#) Pin 5, circuit 53 (BK/LB), harness side and ground.



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Is the resistance greater than 10,000 ohms?

Yes	GO to A9 .
No	REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.

A4 CHECK THE SJB DOOR AJAR AND THE DIMMER SWITCH PIDS

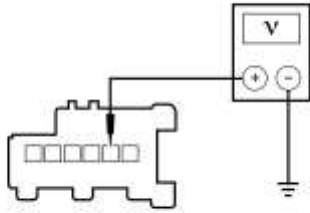
- Enter the following diagnostic mode on the scan tool: SJB Door Ajar and the Dimmer Switch PIDs.
- Open all the doors and operate the dimmer switch.

Do the SJB door ajar and dimmer switch PIDs correspond?

Yes	GO to A9 .
No	For door ajar, GO to Pinpoint Test B . For dimmer switch, GO to Pinpoint Test C .

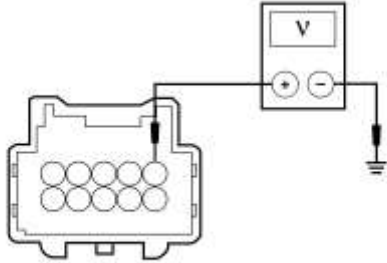
A5 CHECK CIRCUIT 53 (BK/LB) FOR VOLTAGE

- Ignition OFF.
- Disconnect: Overhead Console [C930](#) .
- Disconnect: Overhead Console (With Convertible Top) [C9013](#) .
- Ignition ON.
- For vehicles without a convertible top, measure the voltage between the overhead console [C930](#) Pin 5, circuit 53 (BK/LB), harness side and ground.



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- For vehicles with a convertible top, measure the voltage between the overhead console [C9013](#) Pin 5, circuit 53 (BK/LB), harness side and ground.



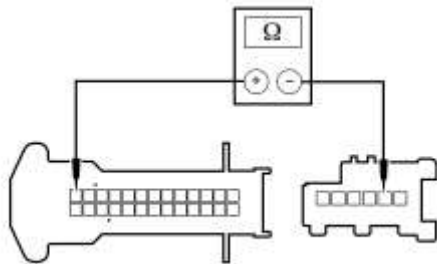
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Is the voltage greater than 10 volts?

Yes	GO to A7 .
No	GO to A6 .

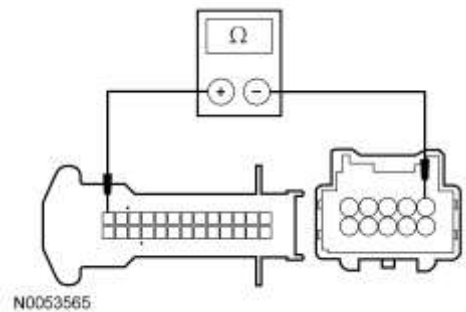
A6 CHECK CIRCUIT 53 (BK/LB) FOR AN OPEN

- Ignition OFF.
- Disconnect: SJB [C2280F](#) .
- For vehicles without a convertible top, measure the resistance between the overhead console [C930](#) Pin 5, circuit 53 (BK/LB), harness side and the SJB [C2280F](#) Pin 26, circuit 53 (BK/LB), harness side.



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- For vehicles with a convertible top, measure the resistance between the overhead console [C9013](#) Pin 5, circuit 53 (BK/LB), harness side and the SJB [C2280F](#) Pin 26, circuit 53 (BK/LB), harness side.

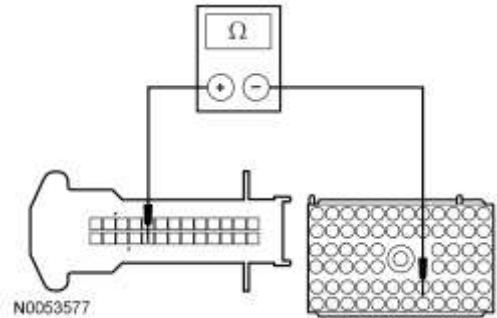


Is the resistance less than 5 ohms?

Yes	VERIFY the BEC fuse 67 (30A) is OK. If OK, GO to A9 .
No	REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.

A7 CHECK CIRCUIT 1052 (TN/BK) FOR AN OPEN

- Ignition OFF.
- Disconnect: SJB [C2280H](#) .
- Disconnect: BEC [C1035A](#) .
- Measure the resistance between the SJB [C2280H](#) Pin 32, circuit 1052 (TN/BK), harness side and the BEC [C1035A](#) Pin A5, circuit 1052 (TN/BK), harness side.

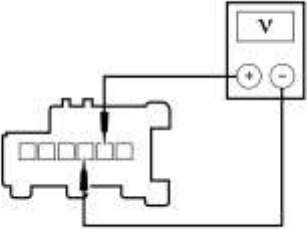


Is the resistance less than 5 ohms?

Yes	VERIFY the BEC fuse 67 (30A) is OK. If OK, GO to A8 .
No	REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.

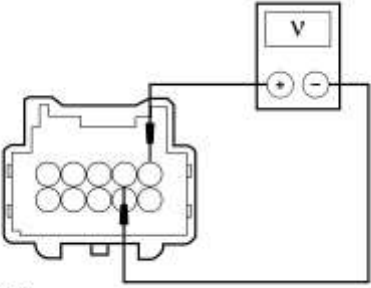
A8 CHECK THE GROUND CIRCUIT TO THE OVERHEAD CONSOLE

- For vehicles without a convertible top, measure the voltage between the overhead console [C930](#) Pin 5, circuit 53 (BK/LB), harness side and the overhead console [C930](#) Pin 4, circuit 54 (LG/YE), harness side.



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- For vehicles with a convertible top, measure the voltage between the overhead console [C9013](#) Pin 5, circuit 53 (BK/LB), harness side and the overhead console [C930](#) Pin 4, circuit 54 (LG/YE), harness side.



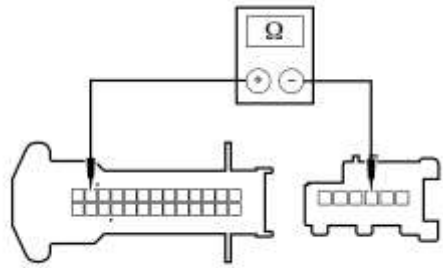
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Is the voltage greater than 10 volts?

Yes	INSTALL a new interior lamp. CLEAR the DTCs. REPEAT the self-test.
No	GO to A9 .

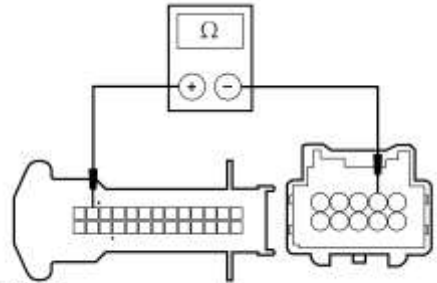
A9 CHECK CIRCUIT 54 (LG/YE) FOR AN OPEN

- Ignition OFF.
- Disconnect: SJB [C2280F](#) .
- For vehicles without a convertible top, measure the resistance between the overhead console [C930](#) Pin 4, circuit 54 (LG/YE), harness side and the SJB [C2280F](#) Pin 25, circuit 54 (LG/YE), harness side.



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- For vehicles with a convertible top, measure the resistance between the overhead console [C9013](#) Pin 4, circuit 54 (LG/YE), harness side and the SJB [C2280F](#) Pin 25, circuit 54 (LG/YE), harness side.



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Is the resistance less than 5 ohms?

Yes	GO to A10 .
No	REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.

A10 CHECK FOR CORRECT SJB OPERATION

- Disconnect all the SJB connectors.
- Check for:
 - corrosion
 - damaged pins
 - pushed-out pins
- Connect all the SJB 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 SJB. REFER to Section 419-10 . 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. REPEAT the self-test.

Pinpoint Test B: The Courtesy Lamps Do Not Turn On With One Door Open

Refer to Wiring Diagrams Cell [89](#) , Interior Lamps for schematic and connector information.

Normal Operation

When a door is open, the ajar switch opens the circuit to the smart junction box (SJB). The SJB monitors the ajar circuits, and based on the ajar status, the SJB will supply voltage to the courtesy lamps on circuit 53 (BK/LB).

Possible Causes

- Circuit 1312 (LG/BK) short to ground
- Circuit 1314 (YE/LG) short to ground
- Door ajar switch
- SJB

PINPOINT TEST B : THE COURTESY LAMPS DO NOT TURN ON WITH ONE DOOR OPEN

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

B1 CHECK THE SJB DOOR AJAR PIDS

- Ignition ON.
- Enter the following diagnostic mode on the scan tool: SJB Door Ajar PIDs.
- Check the SJB door ajar PIDs while opening and closing all the doors.

Do all the door ajar PID values agree with the door positions?

Yes	GO to B4 .
No	GO to B2 .

B2 CHECK THE DOOR AJAR SWITCH OPERATION

- Disconnect: Suspect Door Ajar Switch .
- Measure the resistance between the suspect door ajar switch pins, component side, while toggling the switch open and closed as follows:

Location	Connector	Pins
LH door	C526	1 and 2
RH door	C602	1 and 2

Is the resistance less than 5 ohms when the door ajar switch is closed, and greater than 10,000 ohms when the door ajar switch is open?

Yes	GO to B3 .
No	INSTALL a new door ajar switch for the switch in question. REFER to Section 501-14 . TEST the system for normal operation.

B3 CHECK THE DOOR AJAR SWITCH SIGNAL CIRCUIT FOR A SHORT TO GROUND

- Disconnect: SJB [C2280E](#) .
- Measure the resistance between the suspect door ajar switch, harness side and ground as follows:

Location	Connector-Pin	Circuit
LH door	C526 Pin 2	1312 (LG/BK)
RH door	C602 Pin 2	1314 (YE/LG)

Is the resistance greater than 10,000 ohms?

Yes	GO to B4 .
No	REPAIR the circuit in question. TEST the system for normal operation.

B4 CHECK FOR CORRECT SJB OPERATION

- Disconnect all the SJB connectors.
- Check for:
 - corrosion
 - damaged pins
 - pushed-out pins
- Connect all the SJB 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 SJB. REFER to Section 419-10 . 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. TEST the system for normal operation.

Pinpoint Test C: The Courtesy Lamps Are Inoperative — Using The Dimmer Switch

Refer to Wiring Diagrams Cell [89](#) , Interior Lamps for schematic and connector information.

Normal Operation

The smart junction box (SJB) monitors the dimmer switch status on circuit 2085 (VT/YE) to determine if the courtesy lamps are requested. Based on the dimmer switch status, the SJB supplies voltage to the courtesy lamps through circuit 53 (BK/LB).

Possible Causes

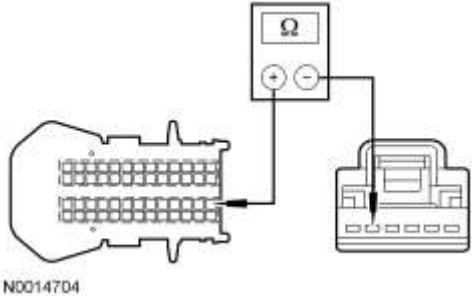
- Circuit 2085 (VT/YE) open
- Dimmer switch
- SJB

PINPOINT TEST C : THE COURTESY LAMPS ARE INOPERATIVE — USING THE DIMMER SWITCH

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

C1 CHECK CIRCUIT 2085 (VT/YE) FOR AN OPEN

- Ignition OFF.
- Disconnect: Dimmer Switch [C2298](#) .
- Disconnect: SJB [C2280B](#) .
- Measure the resistance between the SJB [C2280B](#) Pin 14, circuit 2085 (VT/YE), harness side and the dimmer switch [C2298](#) Pin 5, circuit 2085 (VT/YE), harness side.



Is the resistance less than 5 ohms?

Yes	GO to C2 .
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No	REPAIR the circuit. TEST the system for normal operation.
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C2 CHECK THE DIMMER SWITCH

- Carry out the dimmer switch component test.
Refer to Wiring Diagrams Cell [149](#) for component testing.

Is the dimmer switch OK?

Yes	GO to C3 .
No	INSTALL a new dimmer switch. TEST the system for normal operation.

C3 CHECK FOR CORRECT SJB OPERATION

- Disconnect all the SJB connectors.
- Check for:
 - corrosion
 - damaged pins
 - pushed-out pins
- Connect all the SJB 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 SJB. REFER to Section 419-10 . 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.

Pinpoint Test D: The Courtesy Lamps Stay On Continuously

Refer to Wiring Diagrams Cell [89](#) , Interior Lamps for schematic and connector information.

Normal Operation

When a door is opened, the door ajar input from circuit 1312 (LG/BK) or circuit 1314 (YE/GN) to the smart junction box (SJB) open. When the SJB identifies that the circuit is open, the SJB provides voltage to the courtesy lamps through circuit 53 (BK/LB). The door ajar switches are grounded through circuit 1205 (BK). When the dimmer switch is rotated to the interior lamps ON position, the SJB receives a signal through circuit 2085 (VT/YE), requesting the courtesy lamps.

DTC B1319 — sets when the SJB detects an open on the driver door ajar switch circuit.

DTC B1327 — sets when the SJB detects an open on the passenger door ajar switch circuit.

DTC B2554 — sets when the SJB detects a short to voltage on the dome lamp output supply circuit.

Possible Causes

- Circuit 53 (BK/LB) short to voltage
- Circuit 54 (LG/YE) short to ground
- Circuit 1205 (BK) open
- Circuit 1312 (LG/BK) open
- Circuit 1314 (YE/LG) open
- Circuit 2085 (VT/YE) short to ground
- Door ajar switch
- Dimmer switch
- SJB

PINPOINT TEST D : THE COURTESY LAMPS STAY ON CONTINUOUSLY

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

D1 CHECK THE SJB DTCS

- Ignition ON.
- Check the SJB for DTCs.

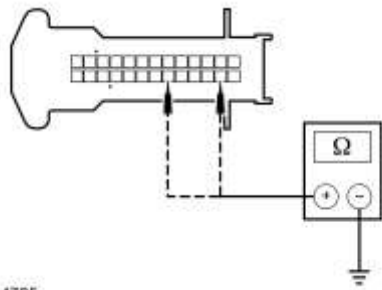
Is DTC B1319, B1327 or B2554 present?

Yes	For DTC B1319 or B1327, GO to D2 . For DTC B2554, GO to D6 .
No	GO to D7 .

D2 CHECK THE AJAR SIGNAL CIRCUIT FOR GROUND

- Ignition OFF.
- Disconnect: SJB [C2280E](#) .
- Measure the resistance between the SJB, harness side and ground as follows:

DTC	Location	Connector-Pin/ Circuit
B1319	LH door	C2280E Pin 2 1312 (LG/BK)
B1327	RH door	C2280E Pin 6 1314 (YE/LG)



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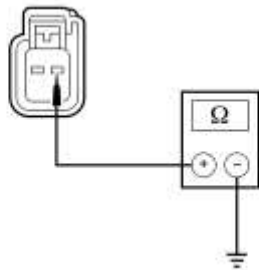
Is the resistance less than 5 ohms?

Yes	GO to D11 .
No	GO to D3 .

D3 CHECK CIRCUIT 1205 (BK) FOR AN OPEN

- Ignition OFF.
- Disconnect: Suspect Door Ajar Switch.
- Measure the resistance between the suspect door ajar switch, harness side and ground as follows:

DTC	Location	Connector-Pin/ Circuit
B1319	LH door	C526 Pin 1 1205 (BK)
B1327	RH door	C602 Pin 1 1205 (BK)



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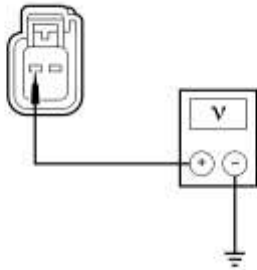
Is the resistance less than 5 ohms?

Yes	GO to D4 .
No	REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.

D4 CHECK THE DOOR AJAR SIGNAL CIRCUIT FOR A SHORT TO VOLTAGE

- Ignition ON.
- Measure the voltage between the suspect door ajar switch, harness side and ground as follows:

DTC	Location	Connector-Pin/ Circuit
B1319	LH door	C526 Pin 2 1312 (LG/BK)
B1327	RH door	C602 Pin 2 1314 (YE/LG)



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Is any voltage present?

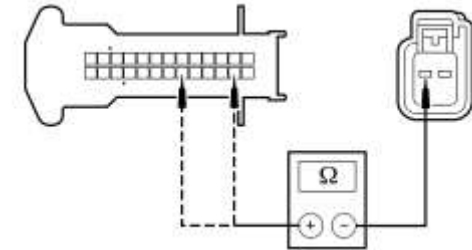
Yes	REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.
No	GO to D5 .

D5 CHECK THE DOOR AJAR SIGNAL CIRCUIT FOR AN OPEN

- Ignition OFF.
- Measure the resistance between the suspect door ajar switch, harness side and the SJB, harness side as follows:

DTC	Location	SJB Connector- Pin/Circuit	Ajar Switch Connector- Pin/Circuit
B1319	LH door	C2280E Pin 2 1312 (LG/BK)	C526 Pin 2 1312 (LG/BK)

DTC	Location	SJB Connector- Pin/Circuit	Ajar Switch Connector- Pin/Circuit
B1327	RH door	C2280E Pin 6 1314 (YE/LG)	C602 Pin 2 1314 (YE/LG)



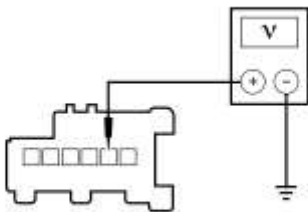
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Is the resistance less than 5 ohms?

Yes	INSTALL a new door ajar switch. REFER to Section 501-14 . CLEAR the DTCs. REPEAT the self-test.
No	REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.

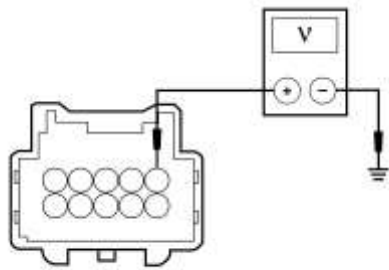
D6 CHECK CIRCUIT 53 (BK/LB) FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect: SJB [C2280F](#) .
- Disconnect: Overhead Console [C930](#) .
- Disconnect: Overhead Console (With Convertible Top) [C9013](#) .
- Ignition ON.
- For vehicles without a convertible top, measure the voltage between the overhead console [C930](#) Pin 5, circuit 53 (BK/LB), harness side and ground.



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- For vehicles with a convertible top, measure the voltage between the overhead console [C9013](#) Pin 5, circuit 53 (BK/LB), harness side and ground.



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Is any voltage present?

Yes	REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.
No	GO to D11 .

D7 CHECK THE SJB DOME LAMP SWITCH PID

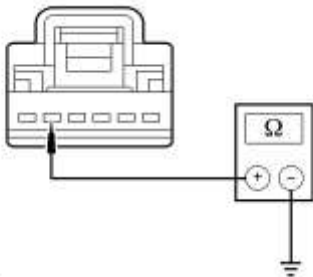
- Ignition ON.
- Enter the following diagnostic mode on the scan tool: SJB Dome Lamp Switch PID.
- Close all doors and rotate the dimmer switch to the dome lamp OFF position.

Does the dome lamp switch PID read active?

Yes	GO to D8 .
No	GO to D10 .

D8 CHECK CIRCUIT 2085 (VT/YE) FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect: Dimmer Switch [C2298](#) .
- Disconnect: SJB [C2280B](#) .
- Measure the resistance between the dimmer switch [C2298](#) Pin 5, circuit 2085 (VT/YE), harness side and ground.



N0014709

Is the resistance greater than 10,000 ohms?

Yes	GO to D9 .
No	REPAIR the circuit. TEST the system for normal operation.

D9 CHECK THE DIMMER SWITCH

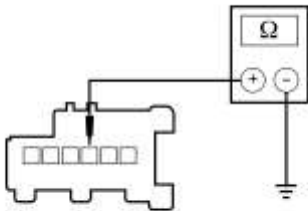
- Carry out the dimmer switch component test.
Refer to Wiring Diagrams Cell [149](#) for component testing.

Is the dimmer switch OK?

Yes	GO to D11 .
No	INSTALL a new dimmer switch. TEST the system for normal operation.

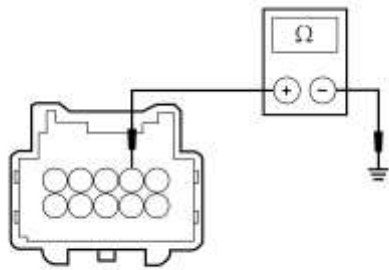
D10 CHECK CIRCUIT 54 (LG/YE) FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect: Overhead Console [C930](#) .
- Disconnect: Overhead Console (With Convertible Top) [C9013](#) .
- Disconnect: SJB [C2280F](#) .
- For vehicles without a convertible top, measure the resistance between the overhead console [C930](#) Pin 4, circuit 54 (LG/YE), harness side and ground.



N0014710

- For vehicles with a convertible top, measure the resistance between the overhead console [C9013](#) Pin 4, circuit 54 (LG/YE), harness side and ground.



N0053569

Is the resistance greater than 10,000 ohms?

Yes	GO to D11 .
No	REPAIR the circuit. TEST the system for normal operation.

D11 CHECK FOR CORRECT SJB OPERATION

- Disconnect all the SJB connectors.
- Check for:
 - corrosion
 - damaged pins
 - pushed-out pins
- Connect all the SJB 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 SJB. REFER to Section 419-10 . 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. TEST the system for normal operation.

Pinpoint Test E: The Demand Lamps Are Inoperative

Refer to Wiring Diagrams Cell [89](#) , Interior Lamps for schematic and connector information.

Normal Operation

The smart junction box (SJB) provides voltage to the demand lamps through circuit 53 (BK/LB). Ground for the demand lamps is provided through circuit 1205 (BK).

Possible Causes

- Circuit 1205 (BK) open

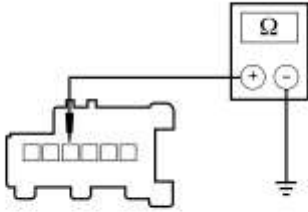
- Interior lamp

PINPOINT TEST E : THE DEMAND LAMPS ARE INOPERATIVE

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

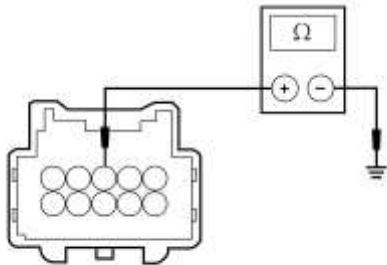
E1 CHECK CIRCUIT 1205 (BK) FOR AN OPEN

- Ignition OFF.
- Disconnect: Overhead Console [C930](#) .
- Disconnect: Overhead Console (With Convertible Top) [C9013](#) .
- For vehicles without a convertible top, measure the resistance between the overhead console [C930](#) Pin 3, circuit 1205 (BK), harness side and ground.



N0014703

- For vehicles with a convertible top, measure the resistance between the overhead console [C9013](#) Pin 3, circuit 1205 (BK), harness side and ground.



N0053570

Is the resistance less than 5 ohms?

Yes	If the courtesy lamps are inoperative, GO to Pinpoint Test A. If the courtesy lamps operate correctly, INSTALL a new lamp. TEST the system for normal operation.
No	REPAIR the circuit. TEST the system for normal operation.

Pinpoint Test F: The Luggage Compartment Lamp Is Inoperative

Refer to Wiring Diagrams Cell [89](#) , Interior Lamps for schematic and connector information.

Normal Operation

When the luggage compartment lid is open, circuit 1351 (TN) to the smart junction box (SJB) opens. When the SJB identifies that the circuit is open, the SJB provides voltage to the luggage compartment lamp through circuit 707 (WH/YE). The luggage compartment lid ajar switch and the luggage compartment lamp are grounded through circuit 1205 (BK).

DTC B1084 — sets when the SJB detects an open or short to ground on the luggage compartment lamp supply circuit.

Possible Causes

- Circuit 707 (WH/YE) open or short to ground
- Circuit 1205 (BK) open
- Circuit 1351 (TN) short to ground
- Luggage compartment lamp
- Luggage compartment lid ajar switch
- SJB

PINPOINT TEST F : THE LUGGAGE COMPARTMENT LAMP IS INOPERATIVE

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

F1 CHECK THE SJB DTCS

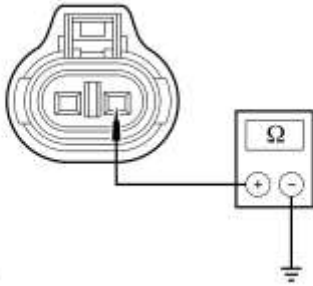
- Ignition ON.
- Check the SJB for DTCs.

Is DTC B1084 present?

Yes	GO to F2 .
No	GO to F6 .

F2 CHECK CIRCUIT 1205 (BK) FOR AN OPEN

- Ignition OFF.
- Disconnect: Luggage Compartment Lamp [C428](#) .
- Measure the resistance between the luggage compartment lamp [C428](#) Pin 2, circuit 1205 (BK), harness side and ground.



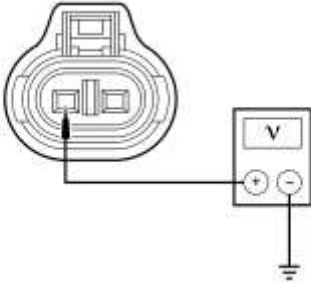
N0014711

Is the resistance less than 5 ohms?

Yes	GO to F3 .
No	REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.

F3 CHECK CIRCUIT 707 (WH/YE) FOR VOLTAGE

- Ignition ON.
- Measure the voltage between the luggage compartment lamp [C428](#) Pin 1, circuit 707 (WH/YE), harness side and ground.



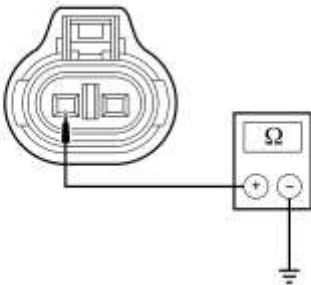
N0014712

Is the voltage greater than 10 volts?

Yes	INSTALL a new lamp. CLEAR the DTCs. REPEAT the self-test.
No	GO to F4 .

F4 CHECK CIRCUIT 707 (WH/YE) FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect: SJB [C2280E](#) .
- Measure the resistance between the luggage compartment lamp [C428](#) Pin 1, circuit 707 (WH/YE), harness side and ground.



N0014713

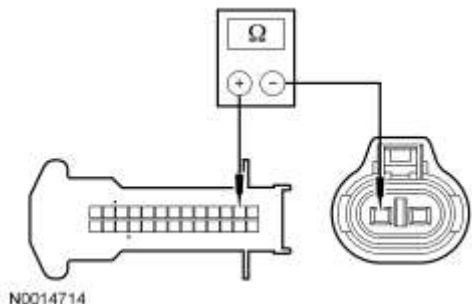
Is the resistance greater than 10,000 ohms?

Yes	GO to F5 .
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No	REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.
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F5 CHECK CIRCUIT 707 (WH/YE) FOR AN OPEN

- Measure the resistance between the luggage compartment lamp [C428](#) Pin 1, circuit 707 (WH/YE), harness side and the SJB [C2280E](#) Pin 15, circuit 707 (WH/YE), harness side.



Is the resistance less than 5 ohms?

Yes	GO to F9 .
No	REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.

F6 CHECK THE SJB LUGGAGE COMPARTMENT LID AJAR PID

- Enter the following diagnostic mode on the scan tool: SJB Luggage Compartment Lid Ajar PID.
- Open the luggage compartment lid.

Does the luggage compartment lid ajar PID read open?

Yes	GO to F9 .
No	GO to F7 .

F7 CHECK THE SJB LUGGAGE COMPARTMENT LID AJAR SWITCH PID

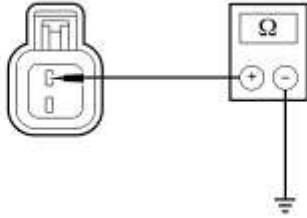
- Ignition OFF.
- Disconnect: Luggage Compartment Lid Ajar Switch [C429](#) .
- Ignition ON.
- Enter the following diagnostic mode on the scan tool: SJB Luggage Compartment Lid Ajar PID.
- Monitor the luggage compartment lid ajar PID.

Does the luggage compartment lid ajar PID read open?

Yes	INSTALL a new luggage compartment lid ajar switch. REFER to Section 501-14 . TEST the system for normal operation.
No	GO to F8 .

F8 CHECK CIRCUIT 1351 (TN) FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect: SJB [C2280C](#) .
- Measure the resistance between the luggage compartment lid ajar switch [C429](#) Pin 1, circuit 1351 (TN), harness side and ground.



N0014715

Is the resistance greater than 10,000 ohms?

Yes	GO to F9 .
No	REPAIR the circuit. TEST the system for normal operation.

F9 CHECK FOR CORRECT SJB OPERATION

- Disconnect all the SJB connectors.
- Check for:
 - corrosion
 - damaged pins
 - pushed-out pins
- Connect all the SJB 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 SJB. REFER to Section 419-10 . 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. REPEAT the self-test.

Pinpoint Test G: The Luggage Compartment Lamp Stays On Continuously

Refer to Wiring Diagrams Cell [89](#) , Interior Lamps for schematic and connector information.

Normal Operation

When the luggage compartment lid is open, circuit 1351 (TN) to the smart junction box (SJB) opens. When the SJB identifies that the circuit is open, the SJB provides voltage to the luggage compartment lamp through circuit 707 (WH/YE). The luggage compartment lid ajar switch is grounded through circuit 1205 (BK).

DTC B1084 — sets when the SJB detects a short to voltage on the luggage compartment lamp supply circuit.

Possible Causes

- Circuit 707 (WH/YE) short to voltage
- Circuit 1205 (BK) open
- Circuit 1351 (TN) open
- Luggage compartment lid ajar switch
- SJB

PINPOINT TEST G : THE LUGGAGE COMPARTMENT LAMP STAYS ON CONTINUOUSLY

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

G1 CHECK THE SJB DTCS

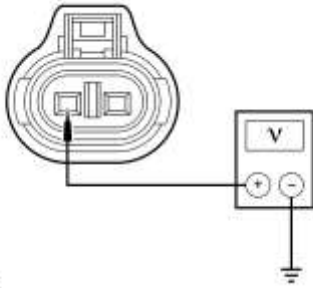
- Ignition ON.
- Check the SJB for DTCs.

Is DTC B1084 present?

Yes	GO to G2 .
No	GO to G3 .

G2 CHECK CIRCUIT 707 (WH/YE) FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect: SJB [C2280E](#) .
- Disconnect: Luggage Compartment Lamp [C428](#) .
- Ignition ON.
- Measure the voltage between the luggage compartment lamp [C428](#) Pin 1, circuit 707 (WH/YE), harness side and ground.



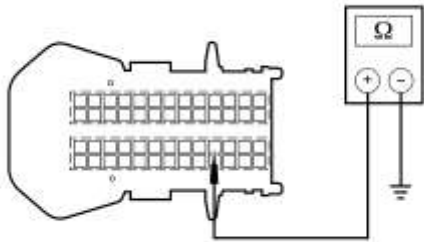
N0014712

Is any voltage present?

Yes	REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.
No	GO to G7 .

G3 CHECK THE AJAR SIGNAL CIRCUIT FOR GROUND

- Ignition OFF.
 - Disconnect: SJB [C2280C](#) .
 - **NOTE:** *The luggage compartment lid must be closed.*
- Measure the resistance between the SJB [C2280C](#) Pin 17, circuit 1351 (TN), harness side and ground.



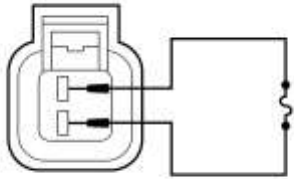
N0014716

Is the resistance less than 5 ohms?

Yes	GO to G7 .
No	GO to G4 .

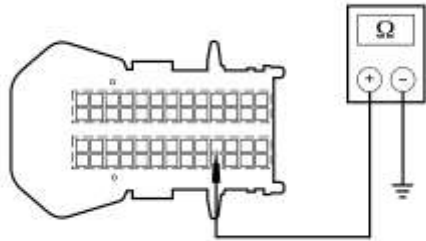
G4 CHECK THE LUGGAGE COMPARTMENT LID AJAR SWITCH

- Disconnect: Luggage Compartment Lid Ajar Switch [C429](#) .
- Place a fused (10A) jumper between the luggage compartment lid ajar switch [C429](#) Pin 2, circuit 1205 (BK), harness side and the luggage compartment lid ajar switch [C429](#) Pin 1, circuit 1351 (TN), harness side.



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- Measure the resistance between the SJB [C2280C](#) Pin 17, circuit 1351 (TN), harness side and ground.



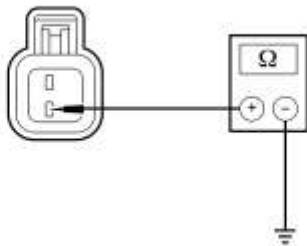
N0014716

Is the resistance less than 5 ohms?

Yes	INSTALL a new ajar switch. REFER to Section 501-14 . TEST the system for normal operation.
No	REMOVE the jumper wire. GO to G5 .

G5 CHECK CIRCUIT 1205 (BK) FOR AN OPEN

- Measure the resistance between the luggage compartment lid ajar switch [C429](#) Pin 2, circuit 1205 (BK), harness side and ground.



N0014717

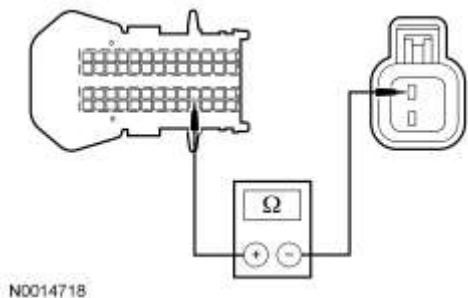
Is the resistance less than 5 ohms?

Yes	GO to G6 .
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No	REPAIR the circuit. TEST the system for normal operation.
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G6 CHECK CIRCUIT 1351 (TN) FOR AN OPEN

- Measure the resistance between the SJB [C2280C](#) Pin 17, circuit 1351 (TN), harness side and the luggage compartment lid ajar switch [C429](#) Pin 1, circuit 1351 (TN), harness side.



Is the resistance less than 5 ohms?

Yes	GO to G7 .
No	REPAIR the circuit. TEST the system for normal operation.

G7 CHECK FOR CORRECT SJB OPERATION

- Disconnect all the SJB connectors.
- Check for:
 - corrosion
 - damaged pins
 - pushed-out pins
- Connect all the SJB 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 SJB. REFER to Section 419-10 . 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. REPEAT the self-test.

Pinpoint Test H: The Illuminated Entry is Inoperative When Using The Remote Keyless Entry (RKE) Transmitter

Normal Operation

The illuminated entry provides courtesy lighting whenever the smart junction box (SJB) receives a doors unlock request from the RKE transmitter. The SJB provides voltage on circuit 53 (BK/LB) for the courtesy lamps.

Possible Causes

- RKE system
- SJB

PINPOINT TEST H : THE ILLUMINATED ENTRY IS INOPERATIVE WHEN USING THE REMOTE KEYLESS ENTRY (RKE) TRANSMITTER

H1 CHECK THE VEHICLE EQUIPMENT

- Check to see if the vehicle is equipped with RKE.

Is the vehicle equipped with RKE?

Yes	GO to H2 .
No	INSTALL a new SJB. REFER to Section 419-10 . TEST the system for normal operation.

H2 CHECK THE RKE TRANSMITTER

- Using the RKE transmitter, lock and unlock the doors.

Do the doors lock and unlock?

Yes	INSTALL a new SJB. REFER to Section 419-10 . TEST the system for normal operation.
No	REFER to Section 501-14 to continue diagnosis of the RKE system.

