Instrument Cluster and Panel Illumination

Special Tool(s)

 ST1137-A	73III Automotive Meter 105-R0057 or equivalent
 ST2834-A	Vehicle Communication 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

NOTE: The Smart Junction Box (SJB) is also known as the Generic Electronic Module (GEM).

Dimmable Backlighting

When the parking lamps are on, the SJB provides a Pulse-Width Modulation (PWM) voltage to the dimmable instrument panel switches and components. The instrument panel dimmer switch allows the brightness level of the dimmable backlights and displays to be adjusted.

The SJB communicates with the Instrument Cluster (IC) and the Audio Control Module (ACM) through the Controller Area Network (CAN). The IC and ACM then increase or decrease the intensity of the backlighting according to the instrument panel dimmer switch position.

The dimmable components consist of the:

- IC
- ACM
- Instrument panel dimmer switch
- Message center switch
- Hazard flasher switch
- HVAC module
- Transmission Range (TR) indicator
- Convertible top switch (part of the overhead console) (if equipped)
- Steering wheel switch
- Headlamp switch

Non-Dimmable Backlighting

When the key is in the ACC or RUN positions, the SJB energizes the accessory delay relay, providing switched

voltage to the non-dimmable components and switches. The non-dimmable components consist of the:

- Window control switches
- Door lock control switches

Fault Management

The SJB defaults the dimmable backlighting to full intensity if the instrument panel dimmer switch or circuitry fails.

The IC and ACM default to full nighttime brightness if they receive a missing or invalid backlighting message from the SJB.

Inspection and Verification

1. Verify the customer concern.

2. Visually inspect for obvious signs of mechanical or electrical damage.

Visual Inspection Chart

Mechanical	Electrical
• Instrument panel dimmer switch	• Smart Junction Box (SJB) fuse 6 (5A) • Miniature bulb(s) • Wiring, terminals or connectors • Accessory delay relay • Instrument Cluster (IC) • Headlamp switch

3. If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step.

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

   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 power to 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 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 DTC Charts. For all other DTCs, refer to the

Diagnostic Trouble Code (DTC) Chart in Section 419-10 .

10. If no DTCs related to the concern are retrieved, GO to Symptom Chart .

DTC Charts

Smart Junction Box (SJB) DTC Chart

DTC	Description	Action
B1247	Panel Dim Switch Circuit Open	GO to Pinpoint Test B .
B2027	LED Backlighting Output Circuit Failure	For all hardwired illuminated components inoperative, GO to Pinpoint Test A . For all hardwired illuminated components always on, GO to Pinpoint Test C .
B2132	Dimmer Switch Circuit Short to Gnd	GO to Pinpoint Test B .
All other DTCs	—	REFER to the Diagnostic Trouble Code (DTC) Chart in Section 419-10 .

Symptom Chart

Symptom Chart

Condition	Possible Sources	Action
• No communication with the Smart Junction Box (SJB)	• Fuse(s) • Wiring, terminals or connectors • SJB	• REFER to Section 418-00 .
• The control illumination is inoperative — all hardwired illumination	• Wiring, terminals or connectors • SJB	• GO to Pinpoint Test A .
• The control illumination does not dim	• Wiring, terminals or connectors • Instrument panel dimmer switch • SJB	• GO to Pinpoint Test B .
• The control illumination is always on — all hardwired illumination	• Wiring, terminals or connectors • SJB	• GO to Pinpoint Test C .
• All network controlled illumination does not dim	• Medium Speed Controller Area Network (MS-CAN) • SJB	• CARRY OUT the network test. ▪ If the scan tool responds with no communication to any module on the MS-CAN , REFER to Section 418-00 . ▪ If the scan tool communicates with the modules on the MS-CAN , INSTALL a new SJB . REFER to Section 419-10 .

		TEST the system for normal operation.
• The Instrument Cluster (IC) illumination is inoperative	• IC	• INSTALL a new IC. REFER to Section 413-01. TEST the system for normal operation.
• The Audio Control Module (ACM) illumination is inoperative	• ACM	• REMOVE the ACM. REFER to Section 415-00. SEND it to an authorized repair facility. TEST the system for normal operation after the repair.
• The window control switch illumination is inoperative	• Window control switch	• CHECK the operation of the power windows. ▪ If the power windows operate correctly, INSTALL a new window control switch. REFER to Section 501-11. TEST the system for normal operation. ▪ If the power windows do not operate correctly, REFER to Section 501-11.
• One or more hardwired illumination source (s) is inoperative	• Wiring, terminals or connectors • Illuminated component • Clockspring • SJB	• GO to Pinpoint Test D.

Pinpoint Tests

Pinpoint Test A: The Control Illumination Is Inoperative — All Hardwired Illumination

Refer to Wiring Diagrams Cell 71, Cluster and Panel Illumination for schematic and connector information.

Normal Operation

When the headlamp switch is placed in the PARKING or HEADLAMP ON position, the Smart Junction Box (SJB) supplies either a Pulse-Width Modulation (PWM) signal or 12 volts to the various backlighting sources in the instrument panel, doors and console.

- DTC B2027 (LED Backlighting Output Circuit Failure) — is a continuous and on-demand DTC that sets when the SJB detects a short to ground on the dimmable backlighting circuits.

This pinpoint test is intended to diagnose the following:

- Wiring, terminals or connectors
- SJB

PINPOINT TEST A: THE CONTROL ILLUMINATION IS INOPERATIVE — ALL HARDWIRED ILLUMINATION

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

Test Step	Result / Action to Take

<table>
<tr><td>A1 CHECK FOR RECORDED SJB DTCs FROM THE ON-DEMAND SELF-TEST</td><td></td></tr>
<tr><td>• Use the recorded results from the SJB self-test.
• Is DTC B2027 recorded?</td><td>Yes
GO to A3 .

No
GO to A2 .</td></tr>
<tr><td>A2 CHECK THE INSTRUMENT PANEL DIMMER SWITCH</td><td></td></tr>
<tr><td>• Ignition ON.
• Enter the following diagnostic mode on the scan tool: SJB DataLogger.
• Monitor the SJB instrument panel dimmer switch PID (PANELINT) while rotating the instrument panel dimmer switch from the lowest setting to the highest setting.
• Does the PID indicate the switch is operating correctly?</td><td>Yes
INSTALL a new SJB . REFER to Section 419-10 . TEST the system for normal operation.

No
INSTALL a new instrument panel dimmer switch. CLEAR the DTCs. REPEAT the self-test.</td></tr>
<tr><td>A3 CHECK CIRCUITS 1403 (BK/WH), 19 (LB/RD), 293 (OG/RD), 203 (OG/LB), 2023 (YE/LB), 2029 (LB/WH), 2030 (YE/WH) AND 1425 (GY/WH) FOR A SHORT TO GROUND</td><td></td></tr>
<tr><td>• Ignition OFF.
• Disconnect: SJB C2280b.
• Disconnect: SJB C2280e.
• Disconnect: SJB C2280f.
• Connect a fused jumper wire between the SJB connector and battery positive as follows:

<table><tr><th>Suspect Illuminated Component Location</th><th>Connector-Pin</th><th>Circuit</th></tr><tr><td>Instrument panel dimmer switch</td><td>C2280b-8</td><td>1403 (BK/WH)</td></tr><tr><td>Transmission Range (TR) indicator/ambient lighting switch (if equipped)</td><td>C2280e-12</td><td>19 (LB/RD)</td></tr><tr><td>Convertible top switch (part of the overhead console) (if equipped)</td><td>C2280f-6</td><td>293 (OG/RD)</td></tr><tr><td>Speed control switch(es)</td><td>C2280b-10</td><td>203 (OG/LB)</td></tr><tr><td>Headlamp switch</td><td>C2280b-6</td><td>2023 (YE/LB)</td></tr><tr><td>Hazard flasher switch</td><td>C2280b-11</td><td>2029 (LB/WH)</td></tr><tr><td>Message center switch</td><td>C2280b-9</td><td>2030 (YE/WH)</td></tr><tr><td>Climate control assembly</td><td>C2280b-23</td><td>1425 (GY/WH)</td></tr></table>
• Did the jumper wire fail on any of the circuits?</td><td>Yes
REMOVE the jumper wire. REPAIR the circuit in question for a short to ground. CLEAR the DTCs. REPEAT the self-test.

No
REMOVE the jumper wire. INSTALL a new SJB . REFER to Section 419-10 . TEST the system for normal operation.</td></tr>
</table>

Pinpoint Test B: The Instrument Panel Illumination Does Not Dim

Refer to Wiring Diagrams Cell 71 , Cluster and Panel Illumination for schematic and connector information.

Normal Operation

With the parking lamps on, a voltage signal is supplied to the instrument panel dimmer switch through circuit

1036 (BN/WH) from the Smart Junction Box (SJB). The dimmer switch passes this voltage through a variable resistor and then returns the signal to the SJB on circuit 1035 (OG/RD). The SJB uses the return signal to determine the backlighting intensity desired by the operator. A Pulse-Width Modulation (PWM) signal is sent from the SJB to each of the dimmable backlights, maintaining the operator's desired level of lighting intensity.

The dimmable backlighting defaults to full intensity if the instrument panel dimmer switch or circuitry fails.

- DTC B1247 (Panel Dim Switch Circuit Open) — is a continuous and on-demand DTC that sets when the SJB detects a open circuit from the instrument panel dimmer switch circuitry.
- DTC B2132 (Dimmer Switch Circuit Short to Gnd) — is a continuous and on-demand DTC that sets when the SJB detects a short to ground on the instrument panel dimmer switch reference signal circuit.

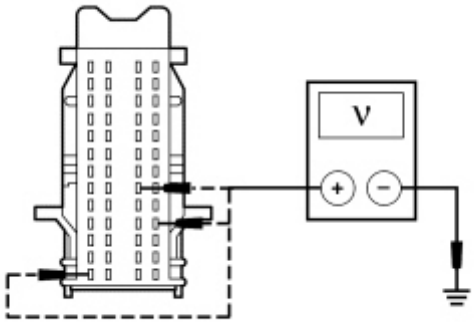
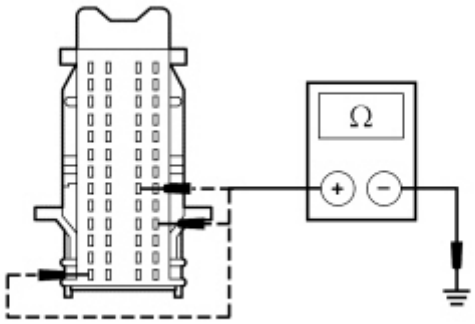
This pinpoint test is intended to diagnose the following:

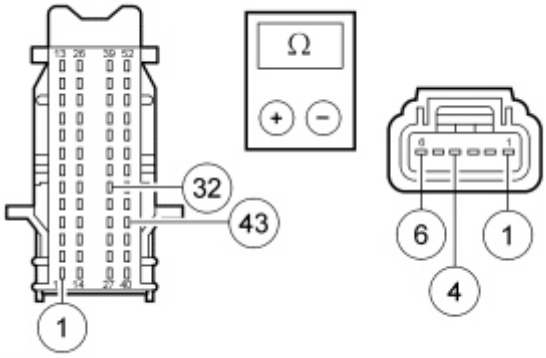
- Wiring, terminals or connectors
- Instrument panel dimmer switch
- SJB

PINPOINT TEST B: THE INSTRUMENT PANEL ILLUMINATION DOES NOT DIM

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

Test Step	Result / Action to Take
B1 MONITOR THE INSTRUMENT PANEL ILLUMINATION OPERATION	
• With the parking lamps on, rotate the dimmer switch from maximum brightness to minimum brightness. • Monitor all instrument panel illumination sources for correct operation. • **Do the Instrument Cluster (IC) and Audio Control Module (ACM) dim correctly?**	**Yes** GO to B2. **No** For the IC, INSTALL a new IC. REFER to Section 413-01. TEST the system for normal operation. For the ACM, REMOVE the Audio Control Module (ACM). REFER to Section 415-00. SEND it to an authorized repair facility. TEST the system for normal operation.
B2 CHECK THE SJB INSTRUMENT PANEL DIMMER SWITCH PIDs	
• Ignition ON. • Enter the following diagnostic mode on the scan tool: SJB DataLogger. • Turn the parking lamps on. • Monitor the SJB instrument panel dimmer switch PID (PANELINT) while rotating the instrument panel dimmer switch from the lowest setting to the highest setting. • **Do the SJB instrument panel dimmer switch PIDs agree with the instrument panel dimmer switch position?**	**Yes** GO to B7. **No** GO to B3.
B3 CHECK THE INSTRUMENT PANEL DIMMER SWITCH OPERATION	
• Disconnect: Instrument Panel Dimmer Switch C2298. • Carry out the instrument panel dimmer switch component test. Refer to Wiring Diagrams Cell 149 for component testing. • **Does the instrument panel dimmer switch pass the component test?**	**Yes** GO to B4. **No** INSTALL a new instrument panel dimmer switch. REFER to Headlamp Switch in Section 417-01. CLEAR the DTCs. REPEAT the self-test.

B4 CHECK CIRCUITS 1035 (OG/RD), 1036 (BN/WH) AND 1405 (LB/BK) FOR A SHORT TO VOLTAGE	
• Ignition OFF. • Disconnect: SJB C2280b. • Measure the voltage between the SJB, harness side and ground as follows: **Connector-Pin** / **Circuit** C2280b-43 / 1035 (OG/RD) C2280b-32 / 1036 (BN/WH) C2280b-1 / 1405 (LB/BK)  N0085731 • **Is any voltage indicated?**	**Yes** REPAIR the circuit in question. TEST the system for normal operation. **No** GO to B5.
B5 CHECK CIRCUITS 1035 (OG/RD), 1036 (BN/WH) AND 1405 (LB/BK) FOR A SHORT TO GROUND	
• Measure the resistance between the SJB, harness side and ground as follows: **Connector-Pin** / **Circuit** C2280b-43 / 1035 (OG/RD) C2280b-32 / 1036 (BN/WH) C2280b-1 / 1405 (LB/BK)  N0085732 • **Are the resistances greater than 10,000 ohms?**	**Yes** GO to B6. **No** REPAIR the circuit in question. TEST the system for normal operation.
B6 CHECK CIRCUITS 1035 (OG/RD), 1036 (BN/WH) AND 1405 (LB/BK) FOR AN OPEN	
• Disconnect: Illumination Dimmer Switch C2298.	**Yes**

• Measure the resistance between the SJB, harness side and the instrument panel dimmer switch, harness side as follows: **SJB Connector-Pin** / **Instrument Panel Dimmer Switch Connector-Pin** / **Circuit** C2280b-43 / C2298-6 / 1035 (OG/RD) C2280b-32 / C2298-1 / 1036 (BN/WH) C2280b-1 / C2298-4 / 1405 (LB/BK)  N0085733 • **Are the resistances less than 5 ohms?**	GO to B7. **No** REPAIR the circuit in question. TEST the system for normal operation.

B7 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 C: The Control Illumination Is Always On — All Hardwired Illumination

Refer to Wiring Diagrams Cell 71, Cluster and Panel Illumination for schematic and connector information.

Normal Operation

When the headlamp switch is placed in the PARKING or HEADLAMP ON position, the Smart Junction Box (SJB) supplies either a Pulse-Width Modulation (PWM) signal or 12 volts to the various backlighting sources in the instrument panel, doors and console.

- DTC B2027 (LED Backlighting Output Circuit Failure) — is a continuous and on-demand DTC that sets when the SJB detects a short to voltage on the LED backlighting circuits.

This pinpoint test is intended to diagnose the following:

- Wiring, terminals or connectors

- SJB

PINPOINT TEST C: THE CONTROL ILLUMINATION IS ALWAYS ON — ALL HARDWIRED ILLUMINATION

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

Test Step	Result / Action to Take
C1 CHECK FOR RECORDED SJB DTCs FROM THE ON-DEMAND SELF-TEST	
• Use the recorded results from the SJB self-test. • **Is DTC B2027 recorded?**	**Yes** GO to C2. **No** GO to C3.
C2 CHECK CIRCUITS 1403 (BK/WH), 19 (LB/RD), 293 (OG/RD), 203 (OG/LB), 2023 (YE/LB), 2030 (YE/WH) AND 1425 (GY/WH) FOR A SHORT TO VOLTAGE	
• Ignition OFF. • Disconnect: SJB C2280b. • Disconnect: SJB C2280e. • Disconnect: SJB C2280f. • Ignition ON. • **Do the dimmable backlighted components continue to illuminate?**	**Yes** REPAIR the circuit in question. CLEAR the DTCs. REPEAT the self-test. **No** GO to C3.
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. CLEAR the DTCs. REPEAT the self-test.

Pinpoint Test D: One Or More Hardwired Illumination Source(s) Is Inoperative

Refer to Wiring Diagrams Cell 71, Cluster and Panel Illumination for schematic and connector information.

Normal Operation — Dimmable Backlighting

With the parking lamps on, a voltage signal is supplied to the instrument panel dimmer switch through circuit 1036 (BN/WH) from the Smart Junction Box (SJB). The dimmer switch passes this voltage through a variable resistor and then returns the signal to the SJB on circuit 1035 (OG/RD). The SJB uses the return signal to determine the backlighting intensity desired by the operator. A Pulse-Width Modulation (PWM) signal is sent from the SJB to each of the dimmable backlights maintaining the operator's desired level of lighting intensity.

Non-Dimmable Backlighting

When the ignition switch is placed in the ACC or ON position, a voltage signal is supplied to the SJB. The SJB activates the accessory delay relay, supplying voltage to the non-dimmable backlights.

This pinpoint test is intended to diagnose the following:

- Wiring, terminals or connectors

- Illuminated component
- Clockspring
- SJB

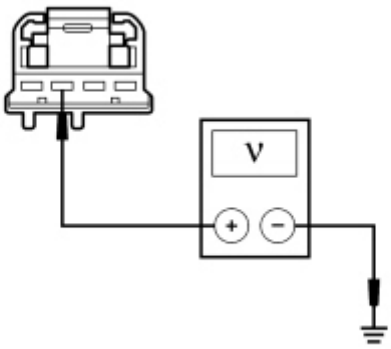
PINPOINT TEST D: ONE OR MORE HARDWIRED ILLUMINATION SOURCE(S) IS INOPERATIVE

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

NOTE: Failure to disconnect the battery when instructed will result in false resistance readings. Refer to Section 414-01 .

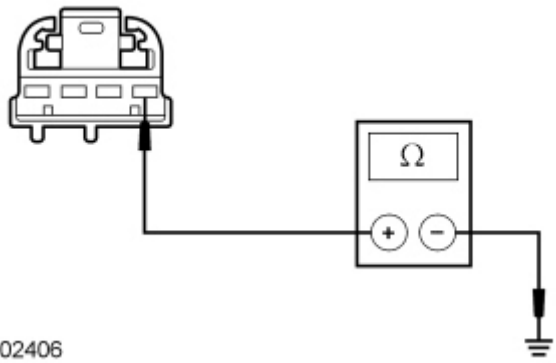
<table>
<tr><th>Test Step</th><th>Result / Action to Take</th></tr>
<tr><td>D1 CHECK THE INSTRUMENT PANEL ILLUMINATION OPERATION
• Ignition ON.
• Place the headlamp switch in the PARKLAMP position.
• Rotate the dimmer switch to the maximum brightness position.
• Monitor all instrument panel illumination sources for correct operation.
• Are all the instrument panel illumination sources inoperative?</td><td>Yes
GO to Pinpoint Test A .

No
For a non-dimmable, illumination source GO to D2 .

For all others, GO to D4 .</td></tr>
<tr><td>D2 CHECK THE DOOR LOCK CONTROL SWITCH CIRCUIT FOR VOLTAGE
• Disconnect: Suspect Door Lock Control Switch.
• Ignition ON.
• Measure the voltage between the suspect door lock control switch, harness side and ground as follows:
<table><tr><th>Door Lock Control Switch</th><th>Connector-Pin</th><th>Circuit</th></tr><tr><td>Driver</td><td>C505-3</td><td>985 (RD/LB)</td></tr><tr><td>Passenger</td><td>C605-3</td><td>984 (YE/LB)</td></tr></table> 
N0085734
• Is the voltage greater than 10 volts?</td><td>Yes
GO to D3 .

No
REPAIR the circuit in question for an open. TEST the system for normal operation.</td></tr>
<tr><td>D3 CHECK THE DOOR LOCK CONTROL SWITCH LAMP GROUND CIRCUIT 1205 (BK) FOR AN OPEN
• Ignition OFF.
• Disconnect: Negative Battery Cable.
• Measure the resistance between the suspect door lock control switch, harness side and ground as follows:</td><td>Yes
INSTALL a new door lock control switch. REFER to Section 501-</td></tr>
</table>

Suspect Door Lock Control Switch	Connector-Pin	Circuit
Driver	C505-1	1205 (BK)
Passenger	C605-1	1205 (BK)



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- **Is the resistance less than 5 ohms?**

14 . TEST the system for normal operation.

No
REPAIR the circuit in question. TEST the system for normal operation.

D4 CHECK THE INOPERABLE ILLUMINATED COMPONENT CIRCUIT FOR VOLTAGE

- Disconnect: Suspect Illuminated Component.
- Ignition ON.
- **NOTE:** If the headlamp switch is the inoperative source, unplug the headlamp switch to measure the illumination circuit voltage. Unplugging the connector causes the SJB to turn the exterior lights on by default for 10 minutes, so it is unnecessary to turn on the headlamp switch.
- Turn the parking lamps on and rotate the instrument panel dimmer switch to the full intensity position.
- Measure the voltage between the suspect illuminated component and ground as follows:

Suspect Illuminated Component Location	Connector-Pin	Circuit
Ambient lighting switch (if equipped)	C3348-3	VLN04 (VT/GY)
Transmission Range (TR) indicator	C307-4	19 (LB/RD)
Speed control switch	C2274-3	203 (OG/LB)
Convertible top switch (if equipped)	C9013-8	293 (OG/RD)
Instrument panel dimmer switch	C2298-3	1403 (BK/WH)
Climate control assembly	C294a-2	1425 (GY/WH)
Headlamp switch	C205-2	2023 (YE/LB)
Hazard flasher switch	C2039-6	2029 (LB/WH)
Message center switch	C253-1	2030 (YE/WH)

- **Is the voltage greater than 10 volts?**

Yes
GO to D6 .

No
GO to D5 .

D5 CHECK THE ILLUMINATED COMPONENT VOLTAGE CIRCUIT FOR AN OPEN

- Ignition OFF.
- Connect: Suspect Illuminated Component.
- Disconnect: SJB C2280b.
- Disconnect: SJB C2280e.
- Disconnect: SJB C2280f.

Yes
GO to D8 .

No
REPAIR the circuit in

- Connect a fused jumper wire between the SJB connector and battery positive as follows:

Suspect Illuminated Component Location	SJB Connector-Pin	Circuit
Instrument panel dimmer switch	C2280b-8	1403 (BK/WH)
Transmission Range (TR) indicator/ambient lighting switch (if equipped)	C2280e-12	19 (LB/RD)
Convertible top switch (part of the overhead console) (if equipped)	C2280f-6	293 (OG/RD)
Speed control switch(es)	C2280b-10	203 (OG/LB)
Headlamp switch	C2280b-6	2023 (YE/LB)
Message center switch	C2280b-9	2030 (YE/WH)
Hazard flasher switch	C2280b-11	2029 (LB/WH)
Climate control assembly	C2280b-23	1425 (GY/WH)

- **Does the suspect component illuminate?**

question for an open. TEST the system for normal operation.

D6 CHECK GROUND CIRCUIT TO THE ILLUMINATED COMPONENT FOR AN OPEN

- Turn the headlamp switch off.
- Ignition OFF.
- Disconnect: Negative Battery Cable.
- Disconnect: Suspect Illuminated Component.
- Measure the resistance between the inoperative illuminated component, harness side and ground as follows:

Suspect Illuminated Component Location	Connector-Pin	Circuit
Ambient lighting switch (if equipped)	C3348-4	GD908 (BK)
Transmission Range (TR) indicator	C307-1	1205 (BK)
Speed control switch	C2274-6	1205 (BK)
Convertible top switch (if equipped)	C9013-3	1205 (BK)
Climate control assembly	C294a-1	1205 (BK)
Headlamp switch	C205-1	1205 (BK)
Hazard flasher switch	C2039-1	1205 (BK)
Message center switch	C253-4	1205 (BK)

- **Is the resistance less than 5 ohms?**

Yes
For the speed control switch, GO to D7.

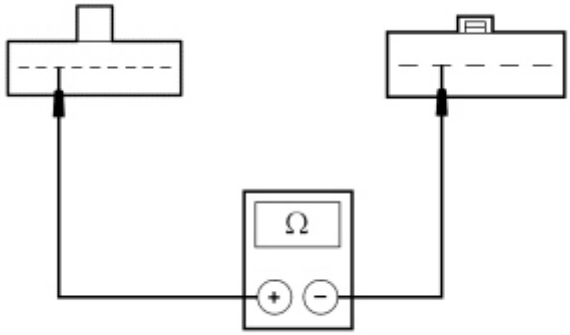
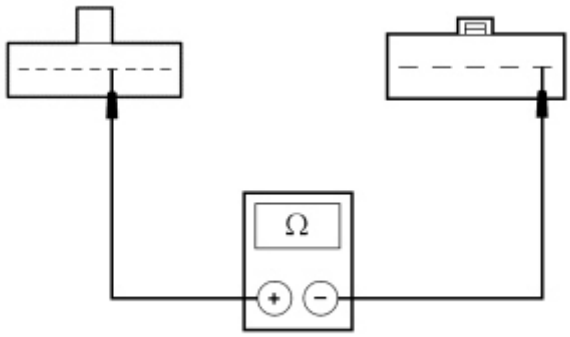
For all others, INSTALL a new illuminated component in question. TEST the system for normal operation.

No
REPAIR the circuit in question. TEST the system for normal operation.

D7 CHECK THE CLOCKSPRING FOR AN OPEN

- Remove the driver air bag module. Refer to Section 501-20B.
- Disconnect: Steering Wheel Control Harness.
- Measure the resistance between the clockspring C2274 pin 3, component side, and the top of the clockspring pin 1, component side.

Yes
INSTALL a new speed control switch. REFER to Section 310-03. INSTALL the driver air bag module. REFER to Section 501-20B. TEST the system for normal

 N0072737 • Measure the resistance between the clockspring C2274 pin 6, component side and the top of the clockspring pin 4, component side.  N0072738 • **Are the resistances less than 5 ohms?**	operation. **No** INSTALL a new clockspring. REFER to Section 501-20B . INSTALL the driver air bag module. REFER to Section 501-20B . TEST the system for normal operation.
D8 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. REPEAT the self-test.