




## Smart Junction Box (SJB)

### Special Tool(s)

 ST1137-A	73III Automotive Meter 105-R0057
 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) .

The SJB is a combination of a multifunction electronic module and an interior fuse panel. The SJB functions control multiple vehicle functions which include:

- Battery saver
- Convertible top (if equipped)
- Convertible top drop window function (if equipped)
- Exterior lighting
- Heated rear window (if equipped)
- Interior lighting
- Perimeter anti-theft (if equipped)
- Power locks
- Remote Keyless Entry (RKE)
- Tire Pressure Monitoring System (TPMS)
- Interface between the Instrument Cluster (IC) TPMS warning lamp and other warning chimes

The SJB is connected to the Medium Speed Controller Area Network (MS-CAN) . The SJB controls both interior and exterior lighting, body functions, active anti-theft functions (perimeter alarm), RKE functions, and the TPMS . The SJB receives wireless signals from both the RKE transmitters and the TPMS sensors via a TPMS /RKE antenna that is fixed to the exterior of the SJB plastic casing.

The SJB has programmable parameters that can be programmed using the scan tool. Refer to [Section 418-01](#) for programmable parameters in the SJB .

### Inspection and Verification

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

## Visual Inspection Chart

### Electrical

- Bussed Electrical Center (BEC) fuse(s):
  - 59 (30A)
  - 63 (30A)
  - 67 (30A)
  - 68 (20A)
- Wiring, terminals or connectors
- 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 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 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 PCM.

7. Carry out the network test.

- If the scan tool responds with no communication for one or more modules, 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. **NOTE:** *In order to correctly run the self-test, the convertible top (if equipped) must be in the full-down position and the doors must be closed. If these conditions are not met, DTCs B1141, B1142, B1319 and/or B1327 may be set. In this case, they would be product characteristic and diagnostics should not be followed for these DTCs at this time.*

Clear the DTCs. Repeat the self-test with the convertible top (if equipped) in the full-down position and both doors closed. If the DTCs retrieved are related to the concern, refer to [Diagnostic Trouble Code \(DTC\) Chart](#) in this section.

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

## Symptom Chart

### Symptom Chart

Condition	Possible Causes	Action
<ul style="list-style-type: none"><li>No communication with the Smart Junction Box (SJB)</li></ul>	<ul style="list-style-type: none"><li>Fuse(s)</li><li>Wiring, terminals or connectors</li><li><u>SJB</u></li></ul>	<ul style="list-style-type: none"><li>REFER to <a href="#">Section 418-00</a>.</li></ul>

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