Communications Network

Refer to Wiring Diagrams Cell 14 for schematic and connector information.

Special Tool(s)

 ST1137-A	73III Automotive Meter 105-R0057 or equivalent
 ST2332-A	Worldwide Diagnostic System (WDS) Vehicle Communication Module (VCM) with appropriate adapters, or equivalent diagnostic tool
 ST2574-A	Flex Probe Kit 105-R025B or equivalent

Principles of Operation

The vehicle has 3 module communication networks:

- high speed controller area network (CAN)
- medium speed CAN
- International Standards Organization (ISO) 9141 communications network

The diagnostic tool connects to the communication networks through the data link connector (DLC). The DLC allows a diagnostic tool access to diagnose and test the vehicle systems of any module on the communication networks.

All 3 communication networks are connected to the DLC. This makes diagnosis and testing of these systems easier by allowing 1 diagnostic tool to be able to diagnose and control any module on the 3 communication networks from 1 common connector. The DLC can be found under the instrument panel between the steering column and the driver door.

High Speed Controller Area Network (CAN)

The high speed CAN is an unshielded twisted pair cable, data plus circuit 1827 (WH/LG) and data minus circuit 1828 (PK/LG).

The high speed CAN is a high speed communication network used for the anti-lock brake system (ABS) module, the instrument cluster and the powertrain control module (PCM) communication. The ABS module, the PCM and the instrument cluster use the high speed CAN to communicate information back and forth such as engine RPM, vehicle speed and odometer. The modules on the high speed CAN are ignition switched. The high speed CAN is only on when the key is in the ON position.

The high speed CAN is not designed to operate under single point fault conditions. If either circuit is shorted to voltage or the high speed CAN data plus is shorted to ground, module-to-module and module-to-tester communication is not possible. If the high speed CAN data minus is shorted to ground or an open exists on either bus line, module-to-module and module-to-tester communication is marginal at best. The high speed CAN bus may remain operational when 1 of the 2 termination resistors are not present. If there are issues with the high speed CAN, there may be missing functionality and problems connecting with a diagnostic tool. On the CAN, there are 2 terminating modules which are composed of the PCM and the instrument cluster which are located at the far opposite ends of the CAN wiring.

Medium Speed Controller Area Network (CAN)

The medium speed CAN is an unshielded twisted pair cable, data plus circuit 1847 (WH/OG) and data minus circuit 1848 (PK/OG).

The medium speed CAN is a medium speed communication network used for the audio unit, the instrument cluster, and the smart junction box (SJB) communication. The SJB, the instrument cluster and the audio unit use the medium speed CAN to communicate information back and forth such as dimming, fuel level, turn signal indicator on the instrument cluster and vehicle compensated volume. The medium speed CAN can be awake when the key is in the OFF position to carry out functions such as delay accessory. In order to carry out diagnostics, it is necessary to have the key in the ON position.

The medium speed CAN is not designed to operate under single point fault conditions. If either circuit is shorted to voltage or the medium speed CAN data plus is shorted to ground, module-to-module and module-to-tester communication is not possible. If the medium speed CAN data minus is shorted to ground or an open exists on either bus line, module-to-module and module-to-tester communication is marginal at best. The medium speed CAN bus may remain operational when 1 of the 2 termination resistors are not present. If there are issues with the medium speed CAN, there may be missing functionality and problems connecting with a diagnostic tool. On the CAN, there are 2 terminating modules which are composed of the SJB and the instrument cluster which are located at the far opposite ends of the CAN wiring.

International Standards Organization (ISO) 9141 Communication Network

The ISO 9141 communication network is a single circuit communication network, circuit 70 (LB/WH). The ISO 9141 communication network does not permit intermodule communication. When the diagnostic tool communicates to modules on the ISO 9141 communication network, the diagnostic tool must ask for all information; the modules cannot initiate communication. The ISO 9141 communication network does not function if the circuit is shorted to ground, shorted to voltage or is open. Also, if one of the modules on the ISO 9141 communication network loses power or shorts internally, communication to that module fails. The ISO 9141 communication network is used to communicate with the restraint control module (RCM).

Inspection and Verification

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

Visual Inspection Chart

Electrical
• Smart junction box (SJB) fuse 8 (10A) • Wiring harness • Connections

3. If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step.
4. If the cause is not visually evident, connect the diagnostic tool to the data link connector (DLC) and select the vehicle to be tested from the diagnostic tool menu. If the diagnostic tool does not communicate with the vehicle:
   - check that the program card is correctly installed.
   - check the connections to the vehicle.
   - check the ignition switch position.
5. If the diagnostic tool still does not communicate with the vehicle, GO to Pinpoint Test J.
6. GO to Pinpoint Test PC.

Diagnostic Trouble Code (DTC) Chart

DTC	Description	Source	Action
U0073	CAN Bus Off-Transmit Error	ABS Module	GO to Pinpoint Test G.
U0073	Control Module Communication Bus Off	Audio Unit	GO to Pinpoint Test H.
U0073	Control Module Communication Bus Off	Instrument Cluster	GO to Pinpoint Test G.
U0073	Control Module Communication Bus Off	SJB	GO to Pinpoint Test H.
U1900	CAN Communication Bus Fault-Receive Error	ABS Module	GO to Pinpoint Test G.
U1900	CAN Communication Bus Fault-Receive Error	Audio Unit	GO to Pinpoint Test H.
U1900	CAN Communication Bus Fault-Receive Error	Instrument Cluster	GO to Pinpoint Test G.
U1900	CAN Communication Bus Fault-Receive Error	SJB	GO to Pinpoint Test H.

System Precheck

PINPOINT TEST PC : DATA LINK DIAGNOSTICS TEST

PC1 DATA LINK DIAGNOSTICS TEST	
• Ignition ON. • Enter the following diagnostic mode on the scan tool: Diagnostic Tool Data Link Test. **Is system passed obtained?**	
Yes	The test passed. RETURN to the Symptom Chart of the section for the module in question.
No	If CAN circuit faults; all electronic control units no response/not equipped, GO to Pinpoint Test G. If medium speed CAN circuit faults; all electronic control units no response/not equipped, GO to Pinpoint Test H. If ISO 9141 communications network circuit fault; all electronic control units no response/not equipped, GO to Pinpoint Test I.

If no response from the diagnostic tool, GO to Pinpoint Test J.
If the module in question is no response/not equipped, GO to Symptom Chart.

Symptom Chart

Symptom Chart

Condition	Possible Causes	Action
• The anti-lock brake system (ABS) module does not respond to the diagnostic tool	• Circuit or connection in the high speed controller area network (CAN) • ABS module	• FOLLOW the modules individual section diagnostics before proceeding. REFER to Section 206-09. If these diagnostics have already been completed, GO to Pinpoint Test A.
• The audio unit does not respond to the diagnostic tool	• Circuit or connection in the medium speed controller area network (CAN) • Audio unit	• FOLLOW the modules individual section diagnostics before proceeding. REFER to Section 415-00. If these diagnostics have already been completed, GO to Pinpoint Test B.
• The instrument cluster does not respond to the diagnostic tool — high speed controller area network (CAN)	• Circuit or connection in the high speed CAN • Instrument cluster	• FOLLOW the modules individual section diagnostics before proceeding. REFER to Section 413-01. If these diagnostics have already been completed, GO to Pinpoint Test C.
• The instrument cluster does not respond on the medium speed controller area network (CAN)	• Circuit or connection in the medium speed CAN • Instrument cluster	• FOLLOW the modules individual section diagnostics before proceeding. REFER to Section 413-01. If these diagnostics have already been completed, GO to Pinpoint Test D.
• The powertrain control module (PCM) does not respond to the diagnostic tool	• Circuit or connection in the high speed controller area network (CAN) • PCM	• REFER to the Powertrain Control/Emissions Diagnosis (PC/ED) manual, Section 5, pinpoint test QA before proceeding. If pinpoint test QA has been completed, GO to Pinpoint Test E.
• The restraint control module (RCM) does not respond to the diagnostic tool	• Circuit or connection in the International Standards Organization (ISO) 9141 communication network • RCM	• FOLLOW the modules individual section diagnostics before proceeding. REFER to Section 501-20B. If these diagnostics have already been completed, GO to Pinpoint Test I.
• The smart junction box (SJB) does not respond to the diagnostic tool	• Circuit or connection in the medium speed controller area network (CAN) • SJB	• FOLLOW the modules individual section diagnostics before proceeding. REFER to Section 419-10. If these diagnostics have already been completed, GO to Pinpoint Test F.
• No high speed controller area network (CAN) communication	• Circuit or connection in the high speed CAN • Anti-lock brake system (ABS) module • Instrument cluster • Powertrain control module (PCM)	• GO to Pinpoint Test G.
• No medium speed controller area network (CAN) communication	• Circuit or connection in the medium speed CAN • Audio unit • Instrument cluster • Smart junction box (SJB)	• GO to Pinpoint Test H.
• No International Standards Organization (ISO) 9141 communication network communication	• Circuit or connection in the ISO 9141 communication network circuit • Restraint control module (RCM)	• GO to Pinpoint Test I.
• No module/network communication — no power to the diagnostic tool	• Fuse • Data link connector (DLC) • Circuitry • Diagnostic tool	• GO to Pinpoint Test J.

Pinpoint Tests

Pinpoint Test A: The Anti-Lock Brake System (ABS) Module Does Not Respond To The Diagnostic Tool

Normal Operation

The ABS module communicates with the diagnostic tool through the high speed controller area network (CAN), circuits 1827 (WH/LG) and 1828 (PK/LG). Check circuits 1827 (WH/LG) and 1828 (PK/LG) between the ABS module C135 and the data link connector (DLC) C251. The total

resistance values must not be more than 5 ohms. If the resistance is more than 5 ohms there is an open in one of the high speed CAN circuits, damage to the DLC C251, damage to the ABS module C135, or damage to an in-line connector.

Possible Causes

- high speed CAN circuit 1827 (WH/LG) open
- high speed CAN circuit 1828 (PK/LG) open
- ABS module C135
- ABS module

PINPOINT TEST A : THE ANTI-LOCK BRAKE SYSTEM (ABS) MODULE DOES NOT RESPOND TO THE DIAGNOSTIC TOOL

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

A1 CHECK THE ABS MODULE C135 FOR DAMAGE

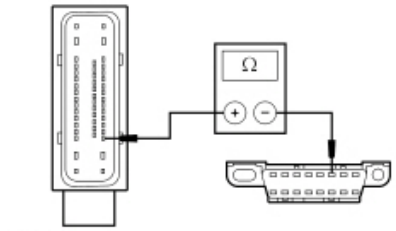
- Ignition OFF.
- Disconnect: ABS Module C135.
- Inspect the ABS module C135 for damage.

Is the ABS module C135 OK?

Yes	GO to A2.
No	REPAIR the ABS module C135 as necessary. CARRY OUT the diagnostic tool data link test.

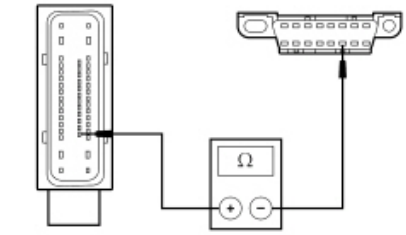
A2 CHECK THE HIGH SPEED CAN CIRCUITS BETWEEN THE DLC AND THE ABS MODULE FOR AN OPEN

- Measure the resistance between the ABS module C135 Pin 3, circuit 1827 (WH/LG), harness side and the DLC C251 Pin 6, circuit 1827 (WH/LG), harness side.



N0060136

- Measure the resistance between the ABS module C135 Pin 18, circuit 1828 (PK/LG), harness side and the DLC C251 Pin 14, circuit 1828 (PK/LG), harness side.



N0060137

Are the resistances less than 5 ohms?

Yes	GO to A3.
No	REPAIR the circuit. CARRY OUT the diagnostic tool data link test.

A3 CHECK FOR CORRECT ABS MODULE OPERATION

- Disconnect all the ABS module connectors.
- Check for:
  - corrosion
  - pushed-out pins
- Connect all the ABS 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 ABS module. REFER to Section 206-09. CLEAR the diagnostic trouble codes (DTCs). REPEAT the self-test. CARRY OUT the diagnostic tool data link 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. CARRY OUT the diagnostic tool data link test.

Pinpoint Test B: The Audio Unit Does Not Respond To The Diagnostic Tool

Normal Operation

The audio unit communicates with the diagnostic tool through the medium speed controller area network (CAN), circuits 1847 (WH/OG) and 1848 (PK/OG). Check circuits 1847 (WH/OG) and 1848 (PK/OG) between the audio unit C290a and the data link connector (DLC) C251. The total resistance values must not be more than 5 ohms. If the resistance is more than 5 ohms there is an open in one of the medium speed CAN circuits, damage to the DLC C251, damage to the audio unit connector, or damage to an in-line connector.

Possible Causes

- medium speed CAN circuit 1847 (WH/OG) open
- medium speed CAN circuit 1848 (PK/OG) open
- audio unit C290a
- audio unit

PINPOINT TEST B : THE AUDIO UNIT DOES NOT RESPOND TO THE DIAGNOSTIC TOOL

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

B1 CHECK THE AUDIO UNIT C290A FOR DAMAGE

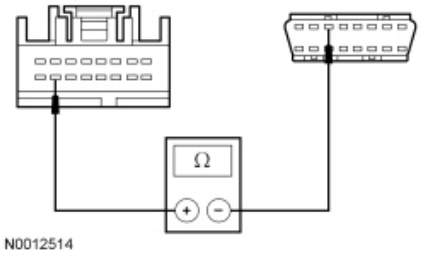
- Ignition OFF.
- Disconnect: Audio Unit C290a.
- Inspect the audio unit C290a for damage.

Is the audio unit C290a OK?

Yes	GO to B2.
No	REPAIR the audio unit C290a as necessary. CARRY OUT the diagnostic tool data link test.

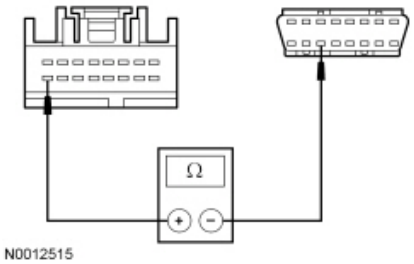
B2 CHECK THE MEDIUM SPEED CAN CIRCUITS BETWEEN THE DLC AND THE AUDIO UNIT FOR AN OPEN

- Measure the resistance between the audio unit C290A Pin 15, circuit 1847 (WH/OG), harness side and the DLC C251 Pin 3, circuit 1847 (WH/OG), harness side.



N0012514

- Measure the resistance between the audio unit C290A Pin 16, circuit 1848 (PK/OG), harness side and the DLC C251 Pin 11, circuit 1848 (PK/OG), harness side.



N0012515

Are the resistances less than 5 ohms?

Yes	GO to B3.
No	REPAIR the circuit. CARRY OUT the diagnostic tool data link test.

B3 CHECK FOR CORRECT AUDIO UNIT OPERATION

- Disconnect all the audio unit connectors.
- Check for:
  - corrosion
  - pushed-out pins
- Connect all the audio unit 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 audio unit. REFER to Section 415-00. CLEAR the diagnostic trouble codes (DTCs). REPEAT the self-test. CARRY OUT the diagnostic tool data link 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. CARRY OUT the diagnostic tool data link test.

Pinpoint Test C: The Instrument Cluster Does Not Respond To The Diagnostic Tool — High Speed Controller Area Network (CAN)

Normal Operation

The instrument cluster communicates with the diagnostic tool through the high speed CAN, circuits 1827 (WH/LG) and 1828 (PK/LG). Check circuits 1827 (WH/LG) and 1828 (PK/LG) between the instrument cluster C220 and the data link connector (DLC) C251. The total resistance values must not be more than 5 ohms. If the resistance is more than 5 ohms there is an open in one of the high speed CAN circuits, damage to the DLC C251, damage to the instrument cluster C220, or damage to an in-line connector.

Possible Causes

- high speed CAN circuit 1827 (WH/LG) open
- high speed CAN circuit 1828 (PK/LG) open
- instrument cluster C220
- instrument cluster

PINPOINT TEST C : THE INSTRUMENT CLUSTER DOES NOT RESPOND TO THE DIAGNOSTIC TOOL — HIGH SPEED CONTROLLER AREA NETWORK (CAN)

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

C1 CHECK THE INSTRUMENT CLUSTER C220 FOR DAMAGE

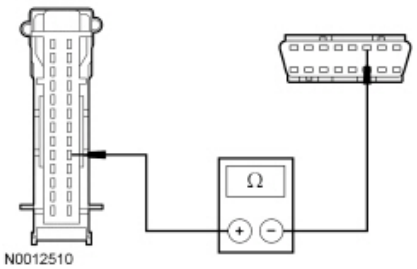
- Depower the supplemental restraint system (SRS). Refer to Section 501-20B.
- Disconnect: Instrument Cluster C220.
- Inspect the instrument cluster C220 for damage.

Is the instrument cluster C220 OK?

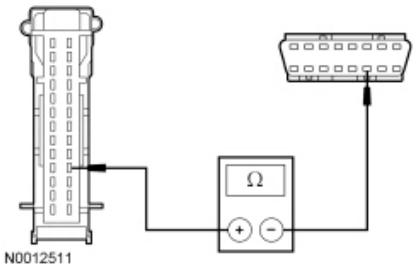
Yes	GO to C2.
No	REPAIR the instrument cluster C220 as necessary. CONNECT the instrument cluster C220. REPOWER the SRS. REFER to Section 501-20B. CLEAR the diagnostic trouble codes (DTCs). REPEAT the self-test. CARRY OUT the diagnostic tool data link test.

C2 CHECK HIGH SPEED CAN CIRCUITS BETWEEN THE DLC AND THE INSTRUMENT CLUSTER FOR AN OPEN

- Measure the resistance between the instrument cluster C220 Pin 18, circuit 1827 (WH/LG), harness side and the DLC C251 Pin 6, circuit 1827 (WH/LG), harness side.



- Measure the resistance between the instrument cluster C220 Pin 17, circuit 1828 (PK/LG), harness side and the DLC C251 Pin 14, circuit 1828 (PK/LG), harness side.



Are the resistances less than 5 ohms?

Yes	GO to C3.
No	REPAIR the circuit. CONNECT the instrument cluster C220. REPOWER the SRS. REFER to Section 501-20B. CARRY OUT the diagnostic tool data link test.

C3 CHECK FOR CORRECT INSTRUMENT CLUSTER OPERATION

- Disconnect all the instrument cluster connectors.
- Check for:
  - corrosion
  - pushed-out pins
- Connect all the instrument cluster 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 instrument cluster. REFER to Section 413-01. REPOWER the SRS. REFER to Section 501-20B. CARRY OUT the diagnostic tool data link test.
No	The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. REPOWER the SRS. REFER to Section 501-20B. CLEAR the DTCs. REPEAT the self-test. CARRY OUT the diagnostic tool data link test.

Pinpoint Test D: The Instrument Cluster Does Not Respond To The Diagnostic Tool — Medium Speed Controller Area Network (CAN)

Normal Operation

The instrument cluster communicates with the diagnostic tool through the medium speed CAN, circuits 1847 (WH/OG) and 1848 (PK/OG). Check circuits 1847 (WH/OG) and 1848 (PK/OG) between the instrument cluster C220 and the data link connector (DLC) C251. The total resistance values must not be more than 5 ohms. If the resistance is more than 5 ohms there is an open in one of the medium speed CAN circuits, damage to the DLC C251, damage to the instrument cluster connector, or damage to an in-line connector.

Possible Causes

- medium speed CAN circuit 1847 (WH/OG) open
- medium speed CAN circuit 1848 (PK/OG) open
- instrument cluster C220
- instrument cluster

PINPOINT TEST D : THE INSTRUMENT CLUSTER DOES NOT RESPOND TO THE DIAGNOSTIC TOOL — MEDIUM SPEED CONTROLLER AREA NETWORK (CAN)

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

D1 CHECK THE INSTRUMENT CLUSTER C220 FOR DAMAGE

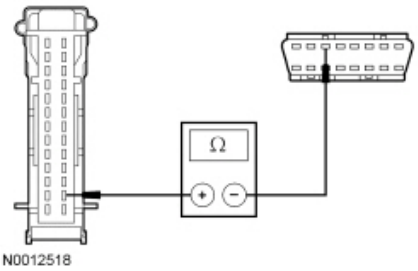
- Depower the supplemental restraint system (SRS). Refer to Section 501-20B.
- Disconnect: Instrument Cluster C220.
- Inspect the instrument cluster C220 for damage.

Is the instrument cluster C220 OK?

Yes	GO to D2.
No	REPAIR the instrument cluster C220 as necessary. CONNECT the instrument cluster C220. REPOWER the SRS. REFER to Section 501-20B. CLEAR the diagnostic trouble codes (DTCs). REPEAT the self-test. CARRY OUT the diagnostic tool data link test.

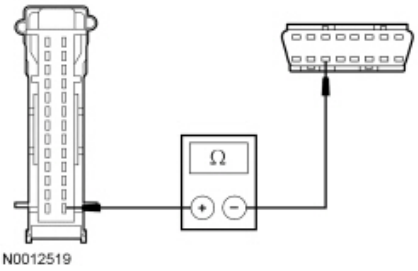
D2 CHECK THE MEDIUM SPEED CAN CIRCUITS BETWEEN THE DLC AND THE INSTRUMENT CLUSTER FOR AN OPEN

- Measure the resistance between the instrument cluster C220 Pin 15, circuit 1847 (WH/OG), harness side and the DLC C251 Pin 3, circuit 1847 (WH/OG), harness side.



N0012518

- Measure the resistance between the instrument cluster C220 Pin 14, circuit 1848 (PK/OG), harness side and the DLC C251 Pin 11, circuit 1848 (PK/OG), harness side.



N0012519

Are the resistances less than 5 ohms?

Yes	GO to D3.
No	REPAIR the circuit. CONNECT the instrument cluster C220. REPOWER the SRS. REFER to Section 501-20B. CLEAR the DTCs. REPEAT the self-test. CARRY OUT the diagnostic tool data link test.

D3 CHECK FOR CORRECT INSTRUMENT CLUSTER OPERATION

- Disconnect all the instrument cluster connectors.
- Check for:
  - corrosion
  - pushed-out pins
- Connect all the instrument cluster 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 instrument cluster. REFER to Section 413-01. REPOWER the SRS. REFER to Section 501-20B. CARRY OUT the diagnostic tool data link test.
No	The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. REPOWER the SRS. REFER to Section 501-20B. CLEAR the DTCs. REPEAT the self-test. CARRY OUT the diagnostic tool data link test.

Pinpoint Test E: The Powertrain Control Module (PCM) Does Not Respond To The Diagnostic Tool

Normal Operation

The PCM communicates with the diagnostic tool through the high speed controller area network (CAN), circuits 1827 (WH/LG) and 1828 (PK/LG). Check circuits 1827 (WH/LG) and 1828 (PK/LG) between the PCM C175b and the data link connector (DLC) C251. The total resistance values must not be more than 5 ohms. If the resistance is more than 5 ohms there is an open in one of the high speed CAN circuits, damage to the DLC C251, damage to the PCM C175b, or damage to an in-line connector.

Possible Causes

- high speed CAN circuit 1827 (WH/LG) open
- high speed CAN circuit 1828 (PK/LG) open
- PCM C175b
- PCM

PINPOINT TEST E : THE POWERTRAIN CONTROL MODULE (PCM) DOES NOT RESPOND TO THE DIAGNOSTIC TOOL

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

E1 CHECK THE PCM C175B FOR DAMAGE

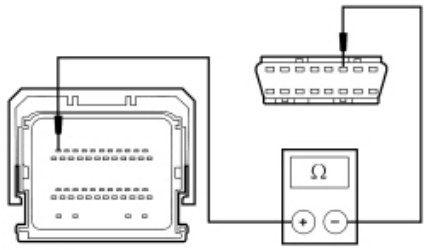
- Ignition OFF.
- Disconnect: PCM C175b.
- Inspect the PCM C175b for damage.

Is the PCM C175b OK?

Yes	GO to E2.
No	REPAIR the PCM C175b as necessary. CARRY OUT the diagnostic tool data link test.

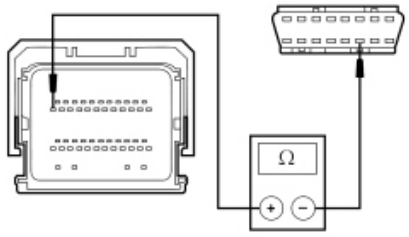
E2 CHECK THE HIGH SPEED CAN CIRCUITS BETWEEN THE DLC AND THE PCM FOR AN OPEN

- Measure the resistance between the PCM C175B Pin 11, circuit 1827 (WH/LG), harness side and the DLC C251 Pin 6, circuit 1827 (WH/LG), harness side.



N0012508

- Measure the resistance between the PCM C175B Pin 23, circuit 1828 (PK/LG), harness side and the DLC C251 Pin 14, circuit 1828 (PK/LG), harness side.



N0012509

Are the resistances less than 5 ohms?

Yes	GO to E3.
No	REPAIR the circuit. CARRY OUT the diagnostic tool data link test.

E3 CHECK FOR CORRECT PCM OPERATION

- Disconnect all the PCM connectors.
- Check for:
  - corrosion
  - pushed-out pins
- Connect all the PCM 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 PCM. REFER to Section 303-14. CARRY OUT the diagnostic tool data link 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. CARRY OUT the diagnostic tool data link test.

Pinpoint Test F: The Smart Junction Box (SJB) Does Not Respond To The Diagnostic Tool

Normal Operation

The SJB communicates with the diagnostic tool through the medium speed controller area network (CAN), circuits 1847 (WH/OG) and 1848 (PK/OG). Check circuits 1847 (WH/OG) and 1848 (PK/OG) between the SJB C2280b and the data link connector (DLC) C251. The total resistance values must not be more than 5 ohms. If the resistance is more than 5 ohms there is an open in one of the medium speed CAN circuits, damage to the DLC C251, damage to the SJB connector, or damage to an in-line connector.

Possible Causes

- medium speed CAN circuit 1847 (WH/OG) open
- medium speed CAN circuit 1848 (PK/OG) open
- SJB C2280b
- SJB

PINPOINT TEST F : THE SMART JUNCTION BOX (SJB) DOES NOT RESPOND TO THE DIAGNOSTIC TOOL

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

F1 CHECK THE SJB C2280B FOR DAMAGE

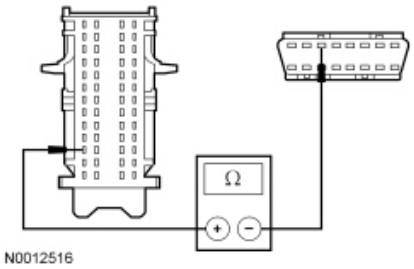
- Ignition OFF.
- Disconnect: SJB C2280b.
- Inspect the SJB C2280b for damage.

Is the SJB C2280b OK?

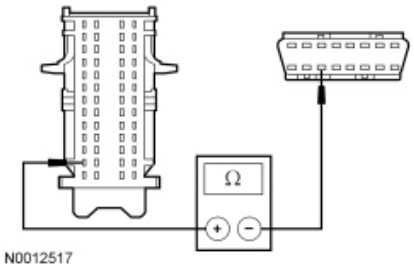
Yes	GO to F2.
No	REPAIR the SJB C2280b as necessary. CARRY OUT the diagnostic tool data link test.

F2 CHECK THE MEDIUM SPEED CAN CIRCUITS BETWEEN THE DLC AND THE SJB FOR AN OPEN

- Measure the resistance between the SJB C2280B Pin 50, circuit 1847 (WH/OG), harness side and the DLC C251 Pin 3, circuit 1847 (WH/OG), harness side.



- Measure the resistance between the SJB C2280B Pin 51, circuit 1848 (PK/OG), harness side and the DLC C251 Pin 11, circuit 1848 (PK/OG), harness side.



Are the resistances less than 5 ohms?

Yes	GO to F3.
No	REPAIR the circuit. CARRY OUT the diagnostic tool data link test.

F3 CHECK FOR CORRECT SJB OPERATION

- Disconnect all the SJB connectors.
- Check for:
  - corrosion
  - 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. CARRY OUT the diagnostic tool data link test.
No	The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. CLEAR the diagnostic trouble codes (DTCs). REPEAT the self-test. CARRY OUT the diagnostic tool data link test.

Pinpoint Test G: No High Speed Controller Area Network (CAN) Communication

Normal Operation

The high speed CAN has an unshielded twisted pair cable, circuits 1827 (WH/LG) and 1828 (PK/LG). The anti-lock brake system (ABS) module, the instrument cluster and the powertrain control module (PCM) are all on the high speed CAN. The total resistance values from the module to the data link connector (DLC) must not be more than 5 ohms. If the resistance is more than 5 ohms there is an open in one of the high speed CAN circuits, damage to the DLC C251, damage to one of the communications network module connectors, or damage to an in-line connector.

Possible Causes

- high speed CAN circuit 1827 (WH/LG) short to voltage, short to ground or open
- high speed CAN circuit 1828 (PK/LG) short to voltage, short to ground or open
- DLC C251
- ABS module C135
- instrument cluster C220
- PCM C175b
- ABS module
- instrument cluster
- PCM

PINPOINT TEST G : NO HIGH SPEED CONTROLLER AREA NETWORK (CAN) COMMUNICATION

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

G1 CHECK THE DLC C251 FOR DAMAGE

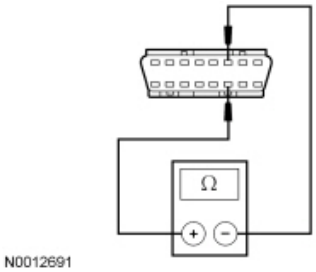
- Inspect the DLC C251 for damage.

Is the DLC C251 OK?

Yes	GO to G2.
No	REPAIR the DLC C251 as necessary. CARRY OUT the diagnostic tool data link test.

G2 CHECK THE HIGH SPEED CAN TERMINATION RESISTANCE

- Ignition OFF.
- Measure the resistance between the DLC C251 Pin 14, circuit 1828 (PK/LG), harness side and the DLC C251 Pin 6, circuit 1827 (WH/LG), harness side.

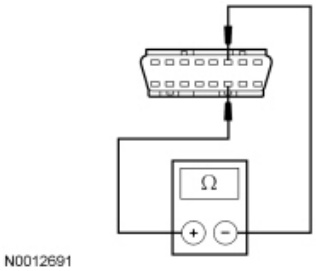


Is the resistance between 54 and 66 ohms?

Yes	GO to G5.
No	GO to G3.

G3 CHECK THE HIGH SPEED CAN RESISTANCE WITH THE PCM C175B DISCONNECTED

- Disconnect: PCM C175b.
- Measure the resistance between the DLC C251 Pin 14, circuit 1828 (PK/LG), harness side and the DLC C251 Pin 6, circuit 1827 (WH/LG), harness side.

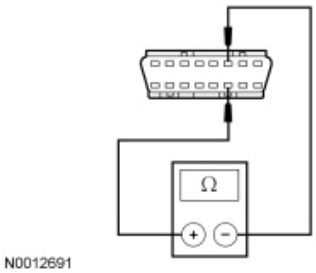


Is the resistance between 108 and 132 ohms?

Yes	GO to G4.
No	GO to G11.

G4 CHECK THE HIGH SPEED CAN RESISTANCE WITH THE INSTRUMENT CLUSTER C220 DISCONNECTED

- Connect: PCM C175b.
- Depower the supplemental restraint system (SRS). Refer to Section 501-20B.
- Disconnect: Instrument Cluster C220.
- Measure the resistance between the DLC C251 Pin 14, circuit 1828 (PK/LG), harness side and the DLC C251 Pin 6, circuit 1827 (WH/LG), harness side.



Is the resistance between 108 and 132 ohms?

Yes	CONNECT the instrument cluster C220. REPOWER the SRS. REFER to Section 501-20B. GO to G5 .
No	CONNECT the instrument cluster C220. REPOWER the SRS. REFER to Section 501-20B. GO to G9 .

G5 CHECK THE ABS MODULE C135 FOR DAMAGE

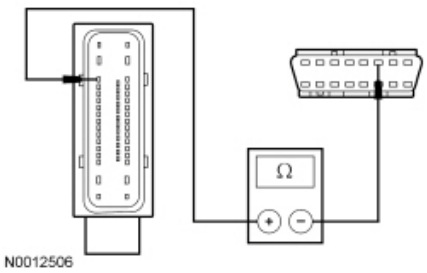
- Ignition OFF.
- Disconnect: ABS Module C135.
- Inspect the ABS module C135 for damage.

Is the ABS module C135 OK?

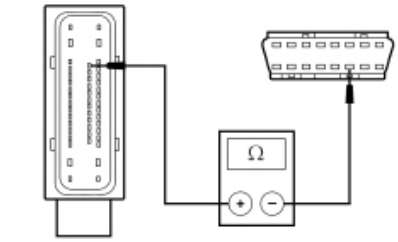
Yes	GO to G6.
No	REPAIR the ABS module C135 as necessary. CARRY OUT the diagnostic tool data link test.

G6 CHECK THE HIGH SPEED CAN CIRCUITS BETWEEN THE DLC AND THE ABS MODULE FOR AN OPEN

- Measure the resistance between the ABS module C135 Pin 3, circuit 1827 (WH/LG), harness side and the DLC C251 Pin 6, circuit 1827 (WH/LG), harness side.



- Measure the resistance between the ABS module C135 Pin 18, circuit 1828 (PK/LG), harness side and the DLC C251 Pin 14, circuit 1828 (PK/LG), harness side.



N0012507

Are the resistances less than 5 ohms?

Yes	GO to G7.
No	REPAIR the circuit. CARRY OUT the diagnostic tool data link test.

G7 CHECK THE COMMUNICATIONS NETWORK WITH THE ABS MODULE C135 DISCONNECTED

- Ignition ON.
- Enter the following diagnostic mode on the scan tool: Diagnostic Tool Data Link Test.

Is system passed obtained?

Yes	GO to G15.
No	CONNECT the ABS module C135. GO to G8 .

G8 CHECK THE PCM C175B FOR DAMAGE

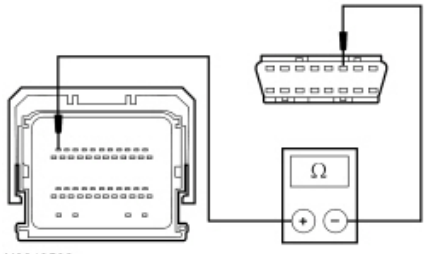
- Ignition OFF.
- Disconnect: PCM C175b.
- Inspect the PCM C175b for damage.

Is the PCM C175b OK?

Yes	GO to G9.
No	REPAIR the PCM C175b as necessary. CARRY OUT the diagnostic tool data link test.

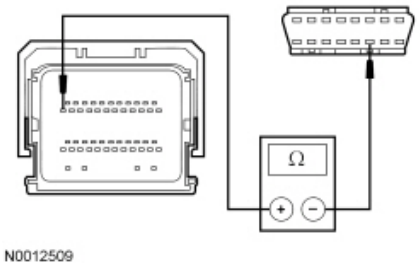
G9 CHECK THE HIGH SPEED CAN CIRCUITS BETWEEN THE DLC AND THE PCM FOR AN OPEN

- Measure the resistance between the PCM C175B Pin 11, circuit 1827 (WH/LG), harness side and the DLC C251 Pin 6, circuit 1827 (WH/LG), harness side.



N0012508

- Measure the resistance between the PCM C175B Pin 23, circuit 1828 (PK/LG), harness side and the DLC C251 Pin 14, circuit 1828 (PK/LG), harness side.



N0012509

Are the resistances less than 5 ohms?

Yes	If sent here from **G4**, GO to G17 . If sent here from **G8**, GO to G10 .
No	REPAIR the circuit. CARRY OUT the diagnostic tool data link test.

G10 CHECK THE INSTRUMENT CLUSTER C220 FOR DAMAGE

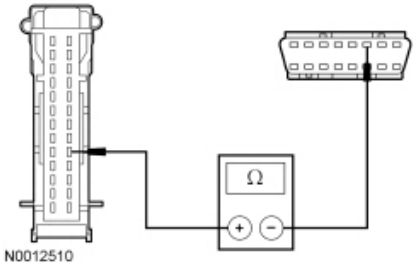
- Depower the SRS. Refer to Section 501-20B.
- Disconnect: Instrument Cluster C220.
- Inspect the instrument cluster C220 for damage.

Is the instrument cluster C220 OK?

Yes	GO to G11.
No	REPAIR the instrument cluster C220 as necessary. CONNECT the instrument cluster C220. REPOWER the SRS. REFER to Section 501-20B. CARRY OUT the diagnostic tool data link test.

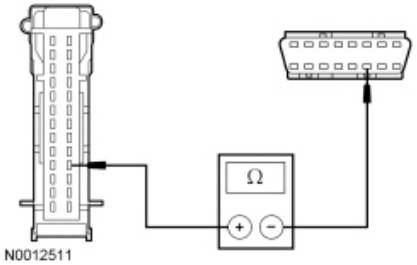
G11 CHECK THE HIGH SPEED CAN CIRCUITS BETWEEN THE DLC AND THE INSTRUMENT CLUSTER FOR AN OPEN

- Measure the resistance between the instrument cluster C220 Pin 18, circuit 1827 (WH/LG), harness side and the DLC C251 Pin 6, circuit 1827 (WH/LG), harness side.



N0012510

- Measure the resistance between the instrument cluster C220 Pin 17, circuit 1828 (PK/LG), harness side and the DLC C251 Pin 14, circuit 1828 (PK/LG), harness side.



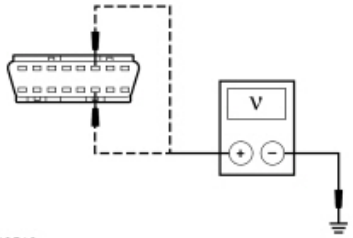
N0012511

Are the resistances less than 5 ohms?

Yes	If sent here from **G3**, GO to G16 . If sent here from **G10**, GO to G12 .
No	REPAIR the circuit. CONNECT the instrument cluster C220. REPOWER the SRS. REFER to Section 501-20B. CARRY OUT the diagnostic tool data link test.

G12 CHECK THE HIGH SPEED CAN CIRCUITS FOR A SHORT TO VOLTAGE

- Disconnect: ABS Module C135.
- Ignition ON.
- Measure the voltage between the DLC C251 Pin 6, circuit 1827 (WH/LG), harness side and ground; and between the DLC C251 Pin 14, circuit 1828 (PK/LG), harness side and ground.



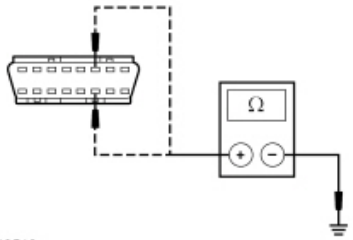
N0012512

Is any voltage present?

Yes	REPAIR the circuit. CONNECT the instrument cluster C220. REPOWER the SRS. REFER to Section 501-20B. CLEAR the diagnostic trouble codes (DTCs). CARRY OUT the diagnostic tool data link test.
No	GO to G13.

G13 CHECK THE HIGH SPEED CAN CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Measure the resistance between the DLC C251 Pin 6, circuit 1827 (WH/LG), harness side and ground; and between the DLC C251 Pin 14, circuit 1828 (PK/LG), harness side and ground.



N0012513

Are the resistances greater than 10,000 ohms?

Yes	GO to G14.
No	REPAIR the circuit. CONNECT the instrument cluster C220. REPOWER the SRS. REFER to Section 501-20B. CLEAR the DTCs. CARRY OUT the diagnostic tool data link test.

G14 CHECK THE HIGH SPEED CAN WITH A SUBSTITUTED PCM

- Connect: ABS Module C135.
- Connect: Instrument Cluster C220.
- Install a known good PCM. Refer to Section 303-14.
- Repower the SRS. Refer to Section 501-20B.
- Ignition ON.
- Enter the following diagnostic mode on the scan tool: Diagnostic Tool Data Link Test.

Is system passed obtained?

Yes	GO to G17.
No	GO to G16.

G15 CHECK FOR CORRECT ABS MODULE OPERATION

- Disconnect all the ABS module connectors.
- Check for:
  - corrosion
  - pushed-out pins
- Connect all the ABS 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 ABS module. REFER to Section 206-09. CARRY OUT the diagnostic tool data link 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.

G16 CHECK FOR CORRECT INSTRUMENT CLUSTER OPERATION

- Disconnect all the instrument cluster connectors.
- Check for:
  - corrosion
  - pushed-out pins
- Connect all the instrument cluster 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 instrument cluster. REFER to Section 413-01. REPOWER the SRS. REFER to Section 501-20B. CARRY OUT the diagnostic tool data link test.
No	The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. REPOWER the SRS. REFER to Section 501-20B. CLEAR the DTCs. REPEAT the self-test. CARRY OUT the diagnostic tool data link test.

G17 CHECK FOR CORRECT PCM OPERATION

- Disconnect all the PCM connectors.
- Check for:
  - corrosion
  - pushed-out pins
- Connect all the PCM 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 PCM. REFER to Section 303-14. CARRY OUT the diagnostic tool data link 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.

Pinpoint Test H: No Medium Speed Controller Area Network (CAN) Communication

Normal Operation

The medium speed CAN has an unshielded twisted pair cable, circuits 1847 (WH/OG) and 1848 (PK/OG). The audio unit, the instrument cluster, and the smart junction box (SJB) are all on the medium speed CAN. The total resistance values from the data link connector (DLC) C251 must not be more than 5 ohms. If the resistance is more than 5 ohms there is an open in one of the medium speed CAN circuits, damage to the DLC C251, damage to one of the communications network module connectors, or damage to an in-line connector.

Possible Causes

- medium speed CAN circuit 1847 (WH/OG) short to ground, short to voltage, or open
- medium speed CAN circuit 1848 (PK/OG) short to ground, short to voltage, or open
- DLC C251
- audio unit C290a
- instrument cluster C220
- SJB C2280b
- audio unit
- instrument cluster
- SJB

PINPOINT TEST H : NO MEDIUM SPEED CONTROLLER ARE NETWORK (CAN) COMMUNICATION

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

H1 CHECK THE DLC C251 FOR DAMAGE

- Inspect the DLC C251 for damage.

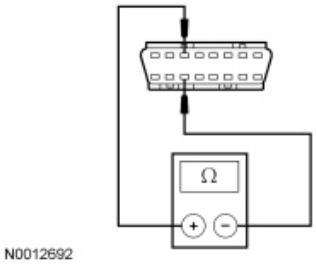
Is the DLC C251 OK?

Yes	GO to H2.

No	REPAIR the DLC C251 as necessary. CARRY OUT the diagnostic tool data link test.

H2 CHECK THE MEDIUM SPEED CAN TERMINATION RESISTANCE

- Ignition OFF.
- Disconnect the battery. Refer to Section 414-01.
- Measure the resistance between the DLC C251 Pin 3, circuit 1847 (WH/OG), harness side and the DLC C251 Pin 11, circuit 1848 (PK/OG), harness side.



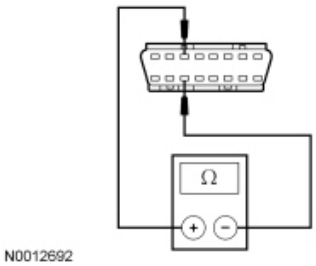
N0012692

Is the resistance between 54 and 66 ohms?

Yes	GO to H5.
No	GO to H3.

H3 CHECK THE MEDIUM SPEED CAN RESISTANCE WITH THE INSTRUMENT CLUSTER C220 DISCONNECTED

- Depower the supplemental restraint system (SRS). Refer to Section 501-20B.
- Disconnect: Instrument Cluster C220.
- Measure the resistance between the DLC C251 Pin 3, circuit 1847 (WH/OG), harness side and the DLC C251 Pin 11, circuit 1848 (PK/OG), harness side.



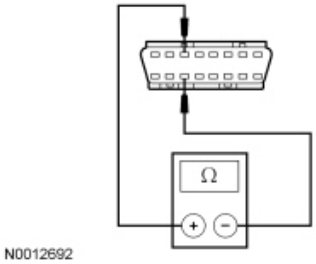
N0012692

Is the resistance between 108 and 132 ohms?

Yes	GO to H4.
No	CONNECT the instrument cluster C220. REPOWER the SRS. REFER to Section 501-20B. GO to H9 .

H4 CHECK THE MEDIUM SPEED CAN RESISTANCE WITH THE SJB C2280B DISCONNECTED

- Connect: Instrument Cluster C220.
- Disconnect: SJB C2280b.
- Measure the resistance between the DLC C251 Pin 3, circuit 1847 (WH/OG), harness side and the DLC C251 Pin 11, circuit 1848 (PK/OG), harness side.



N0012692

Is the resistance between 108 and 132 ohms?

Yes	CONNECT the instrument cluster C220. REPOWER the SRS. REFER to Section 501-20B. GO to H5 .
No	GO to H11.

H5 CHECK THE AUDIO UNIT C290A FOR DAMAGE

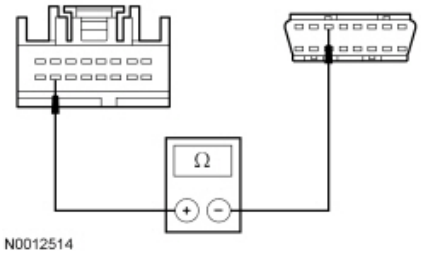
- Ignition OFF.
- Disconnect: Audio Unit C290a.
- Inspect the audio unit C290a for damage.

Is the audio unit C290a OK?

Yes	GO to H6.
No	REPAIR the audio unit C290a as necessary. CARRY OUT the diagnostic tool data link test.

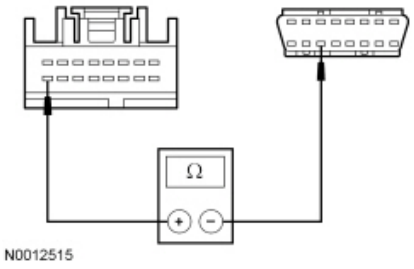
H6 CHECK THE MEDIUM SPEED CAN CIRCUITS BETWEEN THE DLC AND THE AUDIO UNIT FOR AN OPEN

- Measure the resistance between the audio unit C290A Pin 15, circuit 1847 (WH/OG), harness side and the DLC C251 Pin 3, circuit 1847 (WH/OG), harness side.



N0012514

- Measure the resistance between the audio unit C290A Pin 16, circuit 1848 (PK/OG), harness side and the DLC C251 Pin 11, circuit 1848 (PK/OG), harness side.



N0012515

Are the resistances less than 5 ohms?

Yes	GO to H7.
No	REPAIR the circuit. CARRY OUT the diagnostic tool data link test.

H7 CHECK THE COMMUNICATIONS NETWORK WITH THE AUDIO UNIT C290A DISCONNECTED

- Ignition ON.
- Enter the following diagnostic mode on the scan tool: Diagnostic Tool Data Link Test.

Is system passed obtained?

Yes	GO to H15.
No	CONNECT the audio unit C290a. GO to H8 .

H8 CHECK THE SJB C2280B FOR DAMAGE

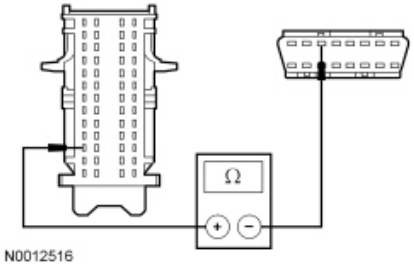
- Ignition OFF.
- Disconnect: SJB C2280b.
- Inspect the SJB C2280b for damage.

Is the SJB C2280b OK?

Yes	GO to H9.
No	REPAIR the SJB C2280b as necessary. CARRY OUT the diagnostic tool data link test.

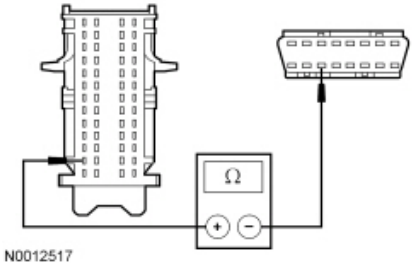
H9 CHECK MEDIUM SPEED CAN CIRCUITS BETWEEN THE DLC AND THE SJB FOR AN OPEN

- Measure the resistance between the SJB C2280B Pin 50, circuit 1847 (WH/OG), harness side and the DLC C251 Pin 3, circuit 1847 (WH/OG), harness side.



N0012516

- Measure the resistance between the SJB C2280B Pin 51, circuit 1848 (PK/OG), harness side and the DLC C251 Pin 11, circuit 1848 (PK/OG), harness side.



N0012517

Are the resistances less than 5 ohms?

Yes	If sent here from **H3**, GO to H17 . If sent here from **H8**, GO to H10 .
No	REPAIR the circuit. CARRY OUT the diagnostic tool data link test.

H10 CHECK THE INSTRUMENT CLUSTER C220 FOR DAMAGE

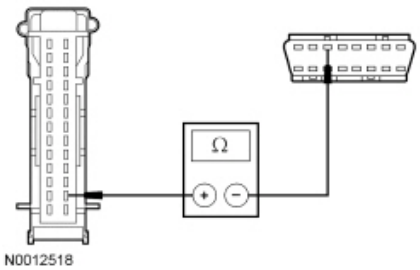
- Depower the SRS. Refer to Section 501-20B.
- Disconnect: Instrument Cluster C220.
- Inspect the instrument cluster C220 for damage.

Is the instrument cluster C220 OK?

Yes	GO to H11.
No	REPAIR the instrument cluster C220 as necessary. CONNECT the instrument cluster C220. REPOWER the SRS. REFER to Section 501-20B. CARRY OUT the diagnostic tool data link test.

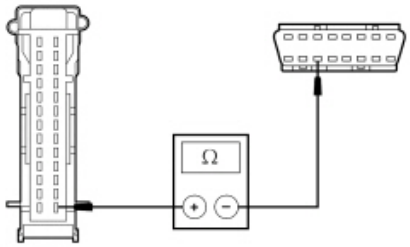
H11 CHECK THE MEDIUM SPEED CAN CIRCUITS BETWEEN THE DLC AND THE INSTRUMENT CLUSTER FOR AN OPEN

- Measure the resistance between the instrument cluster C220 Pin 15, circuit 1847 (WH/OG), harness side and the DLC C251 Pin 3, circuit 1847 (WH/OG), harness side.



N0012518

- Measure the resistance between the instrument cluster C220 Pin 14, circuit 1848 (PK/OG), harness side and the DLC C251 Pin 11, circuit 1848 (PK/OG), harness side.



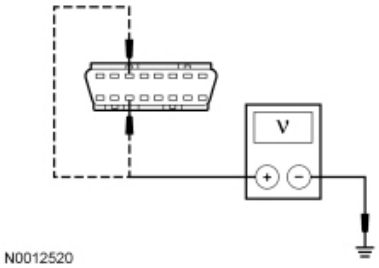
N0012519

Are the resistances less than 5 ohms?

Yes	If sent here from **H4**, GO to H16 . If sent here from **H10**, GO to H12 .
No	REPAIR the circuit. CONNECT the instrument cluster C220. REPOWER the SRS. REFER to Section 501-20B. CARRY OUT the diagnostic tool data link test.

H12 CHECK THE MEDIUM SPEED CAN CIRCUITS FOR A SHORT TO VOLTAGE

- Disconnect: Audio Unit C290a.
- Ignition ON.
- Measure the voltage between the DLC C251 Pin 3, circuit 1847 (WH/OG), harness side and ground; and between the DLC C251 Pin 11, circuit 1848 (PK/OG), harness side and ground.



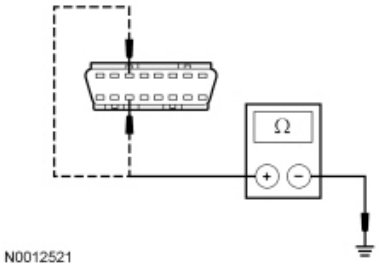
N0012520

Is any voltage present?

Yes	REPAIR the circuit. CONNECT the instrument cluster C220. REPOWER the SRS. REFER to Section 501-20B. CLEAR the diagnostic trouble codes (DTCs). CARRY OUT the diagnostic tool data link test.
No	GO to H13.

H13 CHECK THE MEDIUM SPEED CAN CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Measure the resistance between the DLC C251 Pin 3, circuit 1847 (WH/OG), harness side and ground; and between the DLC C251 Pin 11, circuit 1848 (PK/OG), harness side and ground.



N0012521

Are the resistances greater than 10,000 ohms?

Yes	GO to H14.
No	REPAIR the circuit in question. CONNECT the instrument cluster C220. REPOWER the SRS. REFER to Section 501-20B. CLEAR the DTCs. CARRY OUT the diagnostic tool data link test.

H14 CHECK THE MEDIUM SPEED CAN WITH A SUBSTITUTED SJB

- Connect: Audio Unit C290a.

- Connect: Instrument Cluster C220.
- Install a known good SJB. Refer to Section 419-10.
- Repower the SRS. Refer to Section 501-20B.
- Ignition ON.
- Enter the following diagnostic mode on the scan tool: Diagnostic Tool Data Link Test.

Is system passed obtained?

Yes	GO to H17.
No	GO to H16.

H15 CHECK FOR CORRECT AUDIO UNIT OPERATION

- Disconnect all the audio unit connectors.
- Check for:
  - corrosion
  - pushed-out pins
- Connect all the audio unit 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 audio unit. REFER to Section 415-00. CARRY OUT the diagnostic tool data link 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.

H16 CHECK FOR CORRECT INSTRUMENT CLUSTER OPERATION

- Disconnect all the instrument cluster connectors.
- Check for:
  - corrosion
  - pushed-out pins
- Connect all the instrument cluster 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 instrument cluster. REFER to Section 413-01. REPOWER the SRS. REFER to Section 501-20B. CARRY OUT the diagnostic tool data link test.
No	The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. REPOWER the SRS. REFER to Section 501-20B. CLEAR the DTCs. REPEAT the self-test. CARRY OUT the diagnostic tool data link test.

H17 CHECK FOR CORRECT SJB OPERATION

- Disconnect all the SJB connectors.
- Check for:
  - corrosion
  - 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. CARRY OUT the diagnostic tool data link 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.

Pinpoint Test I: No International Standards Organization (ISO) 9141 Communications Network Communication

Normal Operation

The restraint control module (RCM) communicates with the diagnostic tool through the ISO 9141 communications network, circuit 70 (LB/WH). Check circuit 70 (LB/WH) between the RCM C2041a and the data link connector (DLC) C251. The total resistance value must not be more than

5 ohms. If the resistance is more than 5 ohms there is an open in the ISO 9141 communications network circuit, damage to the DLC C251, damage to the RCM C2041a, or damage to an in-line connector.

Possible Causes

- ISO 9141 communications network circuit 70 (LB/WH) short to ground, short to voltage or open
- DLC C251
- RCM C2041a
- RCM

PINPOINT TEST I : NO INTERNATIONAL STANDARDS ORGANIZATION (ISO) 9141 COMMUNICATIONS NETWORK COMMUNICATION

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

I1 CHECK THE DLC C251 FOR DAMAGE

- Inspect the DLC C251 for damage.

Is the DLC C251 OK?

Yes	GO to I2.
No	REPAIR the DLC C251 as necessary. CARRY OUT the diagnostic tool data link test.

I2 CHECK THE RCM C2041A FOR DAMAGE

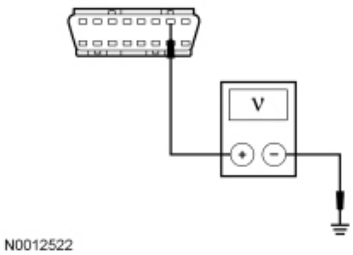
- Ignition OFF.
- Depower the supplemental restraint system (SRS). Refer to Section 501-20B.
- Disconnect: RCM C2041a.

Is the RCM C2041a OK?

Yes	GO to I3.
No	REPAIR the RCM C2041a as necessary. CONNECT the RCM C2041a. REPOWER the SRS. REFER to Section 501-20B. CARRY OUT the diagnostic tool data link test.

I3 CHECK THE ISO 9141 CIRCUIT FOR A SHORT TO VOLTAGE

- Ignition ON.
- Measure the voltage between the DLC C251 Pin 7, circuit 70 (LB/WH), harness side and ground.

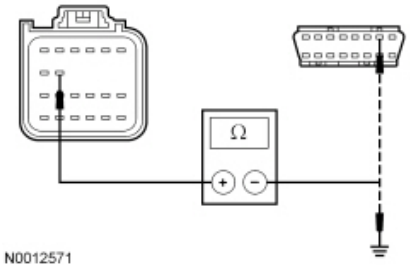


Is any voltage present?

Yes	GO to I4.
No	REPAIR the circuit. CONNECT the RCM C2041a. REPOWER the SRS. REFER to Section 501-20B. CLEAR the diagnostic trouble codes (DTCs). REPEAT the self-test. CARRY OUT the diagnostic tool data link test.

I4 CHECK THE ISO 9141 CIRCUIT BETWEEN THE DLC AND THE RCM FOR AN OPEN OR A SHORT TO GROUND

- Ignition OFF.
- Measure the resistance between the RCM C2041A Pin 11, circuit 70 (LB/WH), harness side and the DLC C251 Pin 7, circuit 70 (LB/WH), harness side; and between the RCM C2041A Pin 11, circuit 70 (LB/WH), harness side and ground.



Is the resistance less than 5 ohms between the RCM connector and the DLC, and greater than 10,000 ohms between the RCM connector and ground?

Yes	GO to I5.
No	REPAIR the circuit. CONNECT the RCM C2041a. REPOWER the SRS. REFER to Section 501-20B. CLEAR the DTCs. REPEAT the self-test. CARRY OUT the diagnostic tool data link test.

I5 CHECK FOR CORRECT RCM OPERATION

- Disconnect all the RCM connectors.
- Check for:
  - corrosion
  - pushed-out pins
- Connect all the RCM 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 RCM. REFER to Section 501-20B. CLEAR the DTCs. REPEAT the self-test. CARRY OUT the diagnostic tool data link test.
No	The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. REPOWER the SRS. REFER to Section 501-20B. CLEAR the DTCs. REPEAT the self-test. CARRY OUT the diagnostic tool data link test.

Pinpoint Test J: No Module/Network Communication — No Power To The Diagnostic Tool

Normal Operation

Under normal operation the diagnostic tool is connected to the data link connector (DLC) C251 to communicate with the high speed controller area network (CAN), medium speed CAN, and International Standards Organization (ISO) 9141 communication networks. If communication cannot be established, the diagnostic tool and the DLC C251 must be checked for damage. If the diagnostic tool and the DLC C251 are OK, circuits 570 (BK/WH), 1047 (LG/RD) and 1205 (BK) must be checked for an open condition.

Possible Causes

- fuse
- DLC C251
- diagnostic tool
- circuit 570 (BK/WH) open
- circuit 1047 (LG/RD) open
- circuit 1205 (BK) open

PINPOINT TEST J : NO MODULE/NETWORK COMMUNICATION — NO POWER TO THE DIAGNOSTIC TOOL

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

J1 CHECK THE DIAGNOSTIC TOOL CONNECTOR FOR DAMAGE

- Inspect the diagnostic tool connector pins for damage.

Are the pins OK?

Yes	GO to J2.
No	REPAIR the diagnostic tool connector as necessary. CARRY OUT the diagnostic tool data link test.

J2 CHECK THE DLC C251 FOR DAMAGE

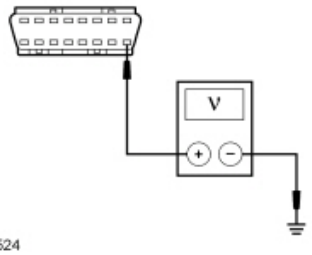
- Inspect the DLC C251 pins for damage.

Are the pins OK?

Yes	GO to J3.
No	REPAIR the DLC C251 as necessary. CARRY OUT the diagnostic tool data link test.

J3 CHECK CIRCUIT 1047 (LG/RD) FOR VOLTAGE

- Ignition ON.
- Measure the voltage between the DLC C251 Pin 16, circuit 1047 (LG/RD), harness side and ground.



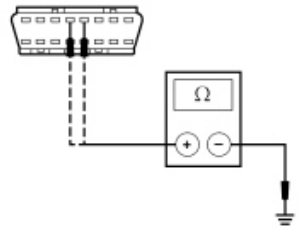
N0012524

Is the voltage greater than 10 volts?

Yes	GO to J4.
No	VERIFY the SJB fuse 8 (10A) is OK. If OK, REPAIR the circuit. CARRY OUT the diagnostic tool data link test.

J4 CHECK CIRCUITS 570 (BK/WH) AND 1205 (BK) FOR AN OPEN

- Measure the resistance between the DLC C251 Pin 4, circuit 1205 (BK), harness side and ground; and between the DLC C251 Pin 5, circuit 570 (BK/WH), harness side and ground.



N0012525

Are the resistances less than 5 ohms?

Yes	REPAIR the diagnostic tool. CARRY OUT the diagnostic tool data link test.
No	REPAIR the circuit. CARRY OUT the diagnostic tool data link test.