Information and Entertainment System

Refer to Wiring Diagrams Cell 130 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

Inspection and Verification

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

Visual Inspection Chart

Mechanical	Electrical
• Audio unit • Antenna or antenna cable(s) • Speakers, mounting/speaker cones • Radio ignition interference capacitors, radio frequency interference suppression bond, and radio receiver hood bonding strap • Subwoofers, speakers/mounting	• Smart junction box (SJB) fuse(s): ▪ 6 (5A) (audio unit) ▪ 20 (10A) (audio unit) • Bussed electrical center (BEC) fuse(s): ▪ 6 (30A) (luggage compartment amplifiers) ▪ 9 (30A) (luggage compartment amplifiers) ▪ 16 (30A) (door amplifiers) ▪ 56 (20A) (audio unit) • Circuitry

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, refer to the diagnostic tool operating manual.

6. Carry out the diagnostic tool data link test. If the diagnostic tool responds with:
   - CAN circuit fault; all electronic control units no response/not equipped, refer to Section 418-00.
   - No response/not equipped for the audio unit, GO to Pinpoint Test A.

   - **NOTE:** *Do not press any buttons on the audio unit while the audio unit is carrying out the self-test.*

     System passed, retrieve and record the continuous diagnostic trouble codes (DTCs), erase the continuous DTCs, and carry out self-test diagnostics for the audio unit.

7. If the DTCs retrieved are related to the concern, go to Audio Control Module Diagnostic Trouble Code (DTC) Index.

8. If no DTCs related to the concern are retrieved, and the concern is not visually evident, proceed to the Speaker Walk-Around Test and the Audio Unit Self-Diagnostic Mode.

Speaker Walk-Around Test

NOTE: *To enter the speaker walk-around test or audio unit self-diagnostic mode, the audio unit must be turned on and in radio tuner mode (AM/FM).*

1. To enter the speaker walk-around test, simultaneously press and hold the audio unit preset buttons 3 and 6.

2. The speaker walk-around test applies sound to each speaker for about 1 to 2 seconds. Each speaker is tested and displayed on the audio unit in the following sequence: RF, LF, LR, RR, and SUBWOOFER.

3. To exit the speaker walk-around test, turn the ignition switch off, turn the audio unit off, or press preset button 1 for DIA.

Audio Unit Self-Diagnostic Mode

NOTE: *To enter the speaker walk-around test or the audio unit self-diagnostic mode, the audio unit must be turned on and in radio tuner mode (AM/FM).*

1. To enter the following tests, press the desired preset button while in the speaker walk-around test or while in the audio unit self-diagnostic mode.

2. To exit the audio unit self-diagnostic mode, turn the ignition switch or the audio unit off.

3. If the concern remains and the fault is not detected, GO to Symptom Chart.

4. The self-diagnostic mode has 6 manual tests available:
   - Preset button 1 = ENTER DIAGNOSTICS. This test enters the audio self-test from the speaker walk-around test. Press the tune > button after the audio self-test to display the diagnostic trouble codes.
   - Preset button 2 = View continuous DTCs. Press the tune > button to scroll through the DTCs.
   - Preset button 3 = SIGNAL STRENGTH.
   - Preset button 4 = Software configuration level. This test queries each radio system controller for its software configuration level. Press the tune > button to scroll through the software levels.
   - Preset button 5 = DISPLAY TEST. This test lights all the display segments for 5 seconds and then turns all segments off.
   - Preset button 6 = MODULE CONFIGURATION. Press the tune > button to scroll through the configuration list.

5. To exit the self-diagnostic mode, turn the ignition switch off or the audio unit off.

6. If the concern remains and the fault is not detected, GO to Symptom Chart.

Audio Unit Diagnostic Trouble Code (DTC) Index

DTC	Description	Source	Action
B1317	Battery Voltage High	Audio Unit	DOCUMENT and CLEAR the DTCs. REPEAT the audio unit self-test. If DTC B1317 is retrieved again, REFER to Section 414-00 to continue diagnosis of the charging system. CLEAR the DTCs. REPEAT the self-test.
B1318	Battery Voltage Low	Audio Unit	DOCUMENT and CLEAR the DTCs. REPEAT the audio unit self-test. If DTC B1318 is retrieved again, REFER to Section 414-00 to continue diagnosis of the charging system. CLEAR the DTCs. REPEAT the self-test.
B1342	ECU is Faulted	Audio Unit	DOCUMENT and CLEAR the DTCs. REPEAT the audio unit self-test. If DTC B1342 is retrieved again, REMOVE the audio unit. REFER to Audio Unit in this section. SEND it to an authorized repair facility. REPEAT the self-test after the repair.
B2405	Audio Disc CD Player Thermal Shutdown Fault	Audio Unit	Allow the unit to cool. Disregard.
B2406	Audio Disc CD Player Internal Fault	Audio Unit	DOCUMENT and CLEAR the DTCs. REPEAT the audio unit self-test. If DTC B2406 is retrieved again, REMOVE the audio unit. REFER to Audio Unit in this section. SEND it to an authorized repair facility. REPEAT the self-test after the repair.
B2477	Module Configuration Failure	Audio Unit	REFER to Section 418-01.
B2924	Audio Button Stuck	Audio Unit	DOCUMENT and CLEAR the DTCs. REPEAT the audio unit self-test. If DTC B2924 is retrieved again, REMOVE the audio unit. REFER to Audio Unit in this section. SEND it to an authorized repair facility. REPEAT the self-test after the repair.
B2965	Audio System Speaker Circuit Fault	Audio Unit	GO to Pinpoint Test D.
U0073	Control Module Communication BUS Off	Audio Unit	REFER to Section 418-00.
U1900	CAN Communication BUS Fault - Receiver Error	Audio Unit	REFER to Section 418-00.

Symptom Chart

Symptom Chart

Condition	Possible Sources	Action
• No communication with the audio unit	• Fuse • Circuitry • Audio unit	• GO to Pinpoint Test A.
• The audio unit is inoperative/does not operate correctly	• Fuse • Circuitry • Audio unit	• GO to Pinpoint Test B.
• Poor reception	• Antenna • Antenna connections	• GO to Pinpoint Test C.

	• Audio unit	
• Continuous SEEK/SCAN in AM/FM	• Antenna • Antenna connections • Audio unit	• GO to Pinpoint Test C.
• Poor quality/distorted sound from one or more speakers (not all speakers)	• Circuitry • Speaker(s) • Audio unit	• GO to Pinpoint Test D.
• Poor quality/distorted sound from all speakers	• Antenna • Antenna cable(s) • Radio frequency interference suppression equipment • Audio unit	• GO to Pinpoint Test E.
• No sound from one or more of the speakers (not all speakers)	• Circuitry • Speaker(s) • Audio unit	• GO to Pinpoint Test D.
• No sound from all speakers	• Circuitry • Audio unit	• REMOVE the audio unit. REFER to Audio Unit in this section. SEND it to an authorized repair facility. TEST the system for normal operation after the repair.
• The subwoofer is inoperative	• Fuse • Circuitry • Subwoofer amplifier • Subwoofer • Audio unit	• GO to Pinpoint Test F.
• Loud popping sound when cycling the ignition switch	• Fuse • Circuitry • Subwoofer amplifier • Audio unit	• GO to Pinpoint Test G.
• Audio unit illumination is inoperative.	• Circuitry • Audio unit	• REFER to Section 413-00 for diagnosis of the instrument cluster and panel illumination.
• The vehicle speed sensitive volume feature does not operate correctly.	• Audio unit • Medium speed — controller area network (CAN) communication network	• REFER to Section 418-00 for diagnosis of the CAN communication network. If the CAN passes the diagnosis, REMOVE the audio unit. REFER to Audio Unit in this section. SEND the audio unit to an authorized repair facility. TEST the system for normal operation after the repair.

Pinpoint Tests

Pinpoint Test A: No Communication With The Audio Unit

Normal Operation

Voltage is supplied to the audio unit on circuits 797 (LG/VT) and 687 (GY/YE). The audio unit is grounded through circuit 1204 (BK/OG).

Possible Causes

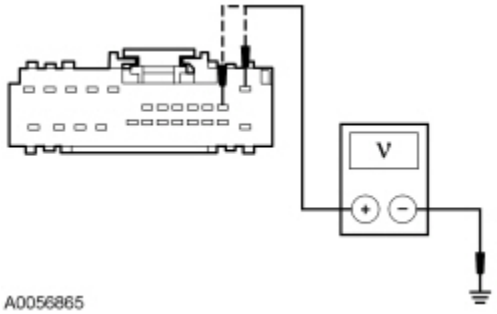
- Fuse
- Circuit 797 (LG/VT) open

- Circuit 687 (GY/YE) open
- Circuit 1204 (BK/OG) open
- Audio unit

PINPOINT TEST A : NO COMMUNICATION WITH THE AUDIO UNIT

A1 CHECK CIRCUITS 797 (LG/VT) AND 687 (GY/YE) FOR VOLTAGE

- Disconnect: Audio Unit C290D .
- Ignition ON.
- Measure the voltage between the audio unit C290D Pin 1, circuit 797 (LG/VT), harness side and ground; and between the audio unit C290D Pin 2, circuit 687 (GY/YE), harness side and ground.

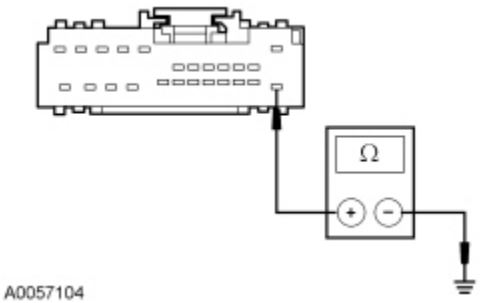


Are the voltages greater than 10 volts?

Yes	GO to A2.
No	VERIFY the bussed electrical center (BEC) fuse 56 (20A) or the smart junction box (SJB) fuse 6 (5A) is OK. If OK, REPAIR the circuit in question. TEST the system for normal operation.

A2 CHECK CIRCUIT 1204 (BK/OG) FOR AN OPEN

- Ignition OFF.
- Measure the resistance between the audio unit C290D Pin 13, circuit 1204 (BK/OG), harness side and ground.



Is the resistance less than 5 ohms?

Yes	REFER to Section 418-00 to continue diagnosis of the network communication.

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

Pinpoint Test B: The Audio Unit is Inoperative/Does Not Operate Correctly

Normal Operation

Voltage is supplied to the audio unit when the ignition switch is in the ON or ACC position. The audio unit provides audio signals to the speakers, thus producing sound.

Possible Causes

- Fuse
- Circuit 797 (LG/VT) open
- Circuit 687 (GY/YE) open
- Circuit 1000 (RD/BK) short to voltage
- Circuit 1204 (BK/OG) open
- Audio unit

PINPOINT TEST B : THE AUDIO UNIT IS INOPERATIVE/DOES NOT OPERATE CORRECTLY

B1 CHECK OPERATION OF THE AUDIO UNIT

- Ignition ON.
- Turn the audio unit on.

Is the audio unit display illuminated?

Yes	GO to B2.
No	GO to B4.

B2 CHECK FOR SOUND COMING FROM THE SPEAKERS

- Carry out the Speaker Walk-Around Test.

Is sound coming from the all speakers?

Yes	GO to B3.
No	GO to Symptom Chart for correct diagnosis.

B3 CARRY OUT THE CONTROLS AND FEATURES TEST

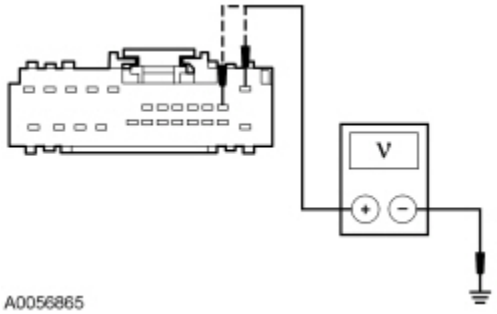
- Verify that all the audio system controls and features operate correctly. Refer to the Owner's Literature.

Do all the controls and features operate correctly?

Yes	INFORM the customer how to correctly operate the audio system controls and features.
No	REMOVE the audio unit. REFER to Audio Unit in this section. SEND it to an authorized repair facility. TEST the system for normal operation after the repair.

B4 CHECK CIRCUITS 797 (LG/VT) AND 687 (GY/YE) FOR VOLTAGE

- Ignition OFF.
- Disconnect: Audio Unit C290D .
- Ignition ON.
- Measure the voltage between the audio unit C290D Pin 1, circuit 797 (LG/VT), harness side and ground; and between the audio unit C290D Pin 2, circuit 687 (GY/YE), harness side and ground.

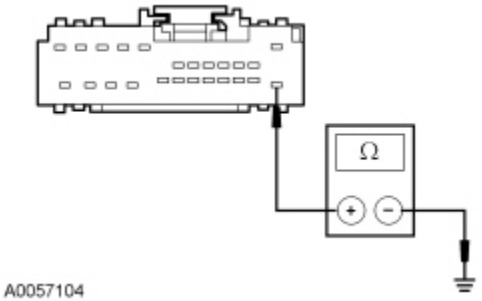


Are the voltages greater than 10 volts?

Yes	GO to B5.
No	VERIFY the bussed electrical center (BEC) fuse 56 (20A) or the smart junction box (SJB) fuse 6 (5A) is OK. If OK, REPAIR the circuit in question. TEST the system for normal operation.

B5 CHECK CIRCUIT 1204 (BK/OG) FOR AN OPEN

- Ignition OFF.
- Measure the resistance between the audio unit C290D Pin 13, circuit 1204 (BK/OG), harness side and ground.

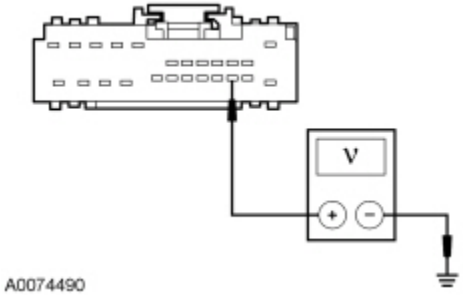


Is the resistance less than 5 ohms?

Yes	GO to B6.
No	REPAIR the circuit. TEST the system for normal operation.

B6 CHECK CIRCUIT 1000 (RD/BK) FOR A SHORT TO VOLTAGE

- While cycling the ignition switch from OFF, through ACC, to ON, measure the voltage between the audio unit C290D Pin 15, circuit 1000 (RD/BK), harness side and ground.



Is any voltage present?

Yes	REPAIR the circuit. TEST the system for normal operation.
No	GO to B7.

B7 CHECK FOR CORRECT AUDIO UNIT OPERATION

- Disconnect the audio unit connectors.
- Check for:
  - corrosion
  - pushed-out pins
- Connect the audio unit connectors and make sure they seat correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	REMOVE the audio unit. REFER to Audio Unit in this section. SEND it to an authorized repair facility. TEST the system for normal operation after the repair.
No	The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.

Pinpoint Test C: Poor Reception or Continuous Seek/Scan in AM/FM

Normal Operation

The radio antenna receives AM and FM radio signals. The radio signals are sent to the audio unit through the radio antenna lead-in cable.

Possible Causes

- Antenna
- Antenna connections
- Audio unit

PINPOINT TEST C : POOR RECEPTION OR CONTINUOUS SEEK/SCAN IN AM/FM

C1 CHECK THE OPERATION OF THE SEEK/SCAN FUNCTIONS

- Ignition ON.
- Operate the SEEK/SCAN functions with the audio unit in both AM and FM tuner modes.

Do the SEEK/SCAN functions search continuously?

Yes	GO to C2.
No	The system is OK.

C2 CHECK THE ANTENNA FOR DAMAGE

- Ignition OFF.
- Disconnect: Antenna Lead Terminal.
- Measure the resistance between the antenna cable lead terminal and the end of the antenna.

Is the resistance less than 8 ohms?

Yes	GO to C3.
No	INSTALL a new antenna. REFER to Antenna Base in this section.

C3 SUBSTITUTE THE ANTENNA EXTENSION CABLE

- Substitute a known good antenna cable between the audio unit and the antenna.
- Ignition ON.
- Check the operation of the audio unit.

Has reception improved or SEEK/SCAN locate a station?

Yes	INSTALL a new antenna extension cable. REFER to Antenna Lead-In Cable in this section. TEST the system for normal operation.
No	INSTALL the original cable. REMOVE the audio unit. REFER to Audio Unit in this section. SEND it to an authorized repair facility. TEST the system for normal operation.

Pinpoint Test D: DTC B2965 — Audio System Speaker Circuit Fault, Poor Quality/Distorted Sound or No Sound from One or More Speakers (Not All Speakers)

Normal Operation

The audio unit directs the audio signals to the speakers through separate positive and negative circuits for each of the 4 audio channels: LH front, RH front, LH rear, and RH rear. The audio unit provides internal circuit protection for shorts to ground, shorts to voltage or shorts between any output circuits.

Possible Causes

- Trim panel
- Circuit 1722 (LB/WH) open or short to ground
- Circuit 1723 (OG/LG) open or short to ground
- Circuit 1725 (TN/YE) open or short to ground
- Circuit 1726 (GY/LB) open or short to ground
- Circuit 1777 (DG/OG) open or short to ground
- Circuit 1778 (WH/LG) open or short to ground
- Circuit 1780 (BN/PK) open or short to ground
- Circuit 1781 (OG/RD) open or short to ground
- Speaker(s)
- Audio unit

PINPOINT TEST D : DTC B2965 — AUDIO SYSTEM SPEAKER CIRCUIT FAULT, POOR QUALITY/DISTORTED SOUND OR NO SOUND FROM ONE OR MORE SPEAKERS (NOT ALL SPEAKERS)

D1 CHECK FOR SOUND

- Ignition ON.
- Turn the audio unit ON.
- Adjust the speaker controls front to rear, and left to right.

Do all speakers have poor quality/distorted sound or no sound?

Yes	GO to Pinpoint Test E for correct diagnosis.
No	GO to D2.

D2 CHECK FOR SUBWOOFER OPERATION

- Turn the audio unit ON.

Do the subwoofers have poor quality/distorted sound or no sound?

Yes	GO to Pinpoint Test F for correct diagnosis.
No	GO to D3.

D3 CHECK THE TRIM PANEL

- Ignition OFF.
- Remove the door trim panel for the suspect speaker. Refer to Section 501-05.
- Remove the speaker and check for:
  - connector integrity.
  - debris in the speaker cone.
- Install the speaker.
- Ignition ON.
- Turn the audio unit ON.
- Observe the operation of the suspect speaker.

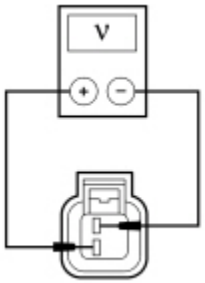
Is the speaker sound OK?

Yes	INSPECT the trim panel and REPAIR as necessary. TEST the system for normal operation.
No	GO to D4.

D4 CHECK FOR AN AUDIO SIGNAL OUTPUT TO THE SPEAKER WITH POOR QUALITY/DISTORTED SOUND OR NO SOUND

- Ignition OFF.
- Disconnect: Suspect Speaker.
- Ignition ON.
- Turn the audio unit ON.
- Measure the voltage between pin 1 and pin 2 of the suspect speaker as follows:

Suspect Speaker	Connector-Pin	Circuit
LH front	C523 Pin 1 C523 Pin 2	1723 (OG/LG) 1722 (LB/WH)
RH front	C612 Pin 1 C612 Pin 2	1778 (WH/LG) 1777 (DG/OG)
LH rear	C484 Pin 1 C484 Pin 2	1726 (GY/LB) 1725 (TN/YE)
RH rear	C485 Pin 1 C485 Pin 2	1781 (OG/RD) 1780 (BN/PK)



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Is there a fluctuating AC voltage?

Yes	GO to D5.
No	GO to D6.

D5 CHECK FOR CORRECT SPEAKER OPERATION

- Replace the suspect speaker with a known good speaker.

Does the speaker operate correctly?

Yes	INSTALL a new speaker. REFER to Door Speaker, Parcel Shelf Speaker, or Quarter Panel Speaker in this section. CLEAR the DTCs. REPEAT the self-test.
No	GO to D7.

D6 CHECK CIRCUITS 1722 (LB/WH), 1723 (OG/LG), 1725 (TN/YE), 1726 (GY/LB), 1777 (DG/OG), 1778 (WH/LG), 1780 (BN/PK), AND 1781 (OG/RD) FOR AN OPEN AND A SHORT TO GROUND

- Ignition OFF.
- Disconnect: Audio Unit C290D .
- Measure the resistance between the suspect speaker, harness side and the audio unit, harness side; and between the suspect speaker, harness side and ground as follows:

Suspect Speaker	Speaker Connector-Pin	Audio Unit Connector-Pin	Circuit
LH front	C523 Pin 1	C290D Pin 8	1723 (OG/LG)
LH front	C523 Pin 2	C290D Pin 21	1722 (LB/WH)
RH front	C612 Pin 1	C290D Pin 11	1778 (WH/LG)
RH front	C612 Pin 2	C290D Pin 12	1777 (DG/OG)
LH rear	C484 Pin 1	C290D Pin 9	1726 (GY/LB)
LH rear	C484 Pin 2	C290D Pin 22	1725 (TN/YE)

Suspect Speaker	Speaker Connector-Pin	Audio Unit Connector-Pin	Circuit
RH rear	C485 Pin 1	C290D Pin 10	1781 (OG/RD)
RH rear	C485 Pin 2	C290D Pin 23	1780 (BN/PK)

Are the resistances less than 5 ohms between the suspect speaker and the audio unit, and greater than 10,000 ohms between the suspect speaker and ground?

Yes	GO to D7.
No	REPAIR the circuit in question. CLEAR the DTCs. REPEAT the self-test.

D7 CHECK FOR CORRECT AUDIO UNIT OPERATION

- Disconnect the audio unit connectors.
- Check for:
  - corrosion
  - pushed-out pins
- Connect the audio unit connectors and make sure they seat correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	REMOVE the audio unit. REFER to Audio Unit in this section. SEND it to an authorized repair facility. TEST the system for normal operation after the repair.
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 E: Poor Quality/Distorted Sound From All Speakers

Normal Operation

The radio antenna receives AM and FM radio signals. The radio signals are sent to the audio unit through the radio antenna lead-in cable.

The radio suppression equipment reduces interference transmitted through the speakers by the engine ignition and electrical systems. When installing any new radio suppression equipment components, make sure that a good contact is made at all connections. Remove any paint or dirt from between a component and its ground. Tighten all connectors and screws securely according to torque specifications.

Possible Causes

- Antenna
- Antenna cable(s)
- Radio frequency interference suppression equipment

- Audio unit

PINPOINT TEST E : POOR QUALITY/DISTORTED SOUND FROM ALL SPEAKERS

E1 CHECK THE ANTENNA GROUND

- Measure the resistance between the antenna base and the battery ground cable.

Is the resistance less than 5 ohms?

Yes	GO to E3.
No	GO to E2.

E2 CHECK THE ANTENNA CABLE CONNECTIONS

- Ignition OFF. Check the antenna connections, including the extension cable.
- Check to make sure the antenna is securely mounted to the vehicle body at ground points.

Are the connections clean, secure, and in metal-to-metal contact?

Yes	GO to E3.
No	CLEAN and SECURE the antenna connections as needed. TEST the system for normal operation.

E3 CHECK THE SUPPRESSION EQUIPMENT/MOUNTING AND CONNECTING CIRCUITS

- Check all necessary suppression equipment and the radio frequency interference suppression bond.
- Check the radio receiver bonding strap for integrity, cleanliness and metal-to-metal contact.
- **NOTE:** *The capacitor mounting points are used to complete the electrical circuit and must be mounted securely to clean surfaces.*

  Check the mounting and connecting circuits of the radio ignition interference capacitor for integrity, cleanliness, and metal-to-metal contact.

Are the connections clean, secure, and in metal-to-metal contact?

Yes	GO to E4.
No	CLEAN, SECURE or INSTALL new suppression equipment as necessary. TEST the system for normal operation.

E4 CHECK THE RADIO IGNITION INTERFERENCE CAPACITOR

- Ignition OFF.
- Check the operation of the radio ignition interference capacitor by installing a known good component.
- Start the engine.
- Turn the audio unit on and check the radio reception.

Is the noise eliminated?

Yes	INSTALL a new radio ignition interference capacitor. TEST the system for normal operation.
No	GO to E5.

E5 CHECK THE GENERATOR

- Ignition OFF.
- Check the generator by disconnecting the voltage regulator.
- Start the engine.
- Turn the audio unit on and check the radio reception.

Is the noise eliminated?

Yes	INSTALL a new generator. REFER to Section 414-02. TEST the system for normal operation.
No	GO to E6.

E6 CHECK THE IGNITION CIRCUITS

- Ignition OFF.
- Check the ignition circuits for correct routing, grounding and integrity of connections.
- Check the spark plugs and the spark plug wires.

Are the ignition components OK?

Yes	GO to E7.
No	REPAIR the ignition system as necessary. TEST the system for normal operation.

E7 SUBSTITUTE THE ANTENNA

- Substitute a known good antenna. Ground the antenna base to an unpainted metal surface on the vehicle.
- Start the engine.
- Verify the operation of the audio unit.

Is the noise eliminated?

Yes	INSTALL a new antenna. REFER to Antenna Base in this section. TEST the system for normal operation.
No	INSTALL the original antenna. GO to E8 .

E8 SUBSTITUTE THE ANTENNA EXTENSION CABLE

- Ignition OFF.
- Substitute a known good antenna extension cable.

- Start the engine.
- Verify the operation of the audio unit.

Is the noise eliminated?

Yes	INSTALL a new antenna extension cable. REFER to Antenna Lead-In Cable in this section. TEST the system for normal operation.
No	INSTALL the original antenna extension cable. GO to E9 .

E9 SUBSTITUTE THE AUDIO UNIT

- Ignition OFF.
- Substitute a known good audio unit.
- Start the engine.
- Verify the operation of the audio unit.

Is the noise eliminated?

Yes	SEND the original audio unit to an authorized repair facility. TEST the system for normal operation after the repair.
No	INSTALL the original audio unit. GO to E10 .

E10 REPOSITION THE COMPONENTS

- Ignition OFF.
- Determine if the noise can be eliminated by repositioning the antenna extension cable, speaker circuits or audio unit power feed circuits away from other circuits and brackets.
- Start the engine.
- Verify the operation of the audio unit.

Is the noise eliminated?

Yes	Permanently REPOSITION the components as needed. TEST the system for normal operation.
No	GROUND various parts of the vehicle to the frame using a jumper cable (for example: engine, fenders, quarter panels, stone deflectors, body sheet metal). When the noise is eliminated, PROVIDE a permanent ground where necessary. TEST the system for normal operation.

Pinpoint Test F: The Subwoofer is Inoperative

Normal Operation

The subwoofers are powered from a separate subwoofer amplifier for each subwoofer speaker. The enable/clip circuit 173 (DG/VT) for the 2 front subwoofer amplifiers, and circuit 174 (GY/BK) for the 4 rear subwoofer amplifiers, carries out 2 functions: to turn on the subwoofer amplifiers, and to indicate to the audio unit when the subwoofer output distortion signal reaches a damaging level. The audio unit then reduces the audio output signal to the subwoofer amplifiers. The 2 front subwoofer amplifiers receive voltage on circuit 829 (WH/VT). The 2 LH rear subwoofer amplifiers receive voltage on circuit 828 (VT/LB) and the 2 RH rear subwoofer amplifiers receive voltage on circuit 830 (PK/YE).

The 2 front subwoofer amplifiers share a common ground through circuit 1204 (BK/OG). The 4 rear subwoofer amplifiers also share a common ground through circuit 1204 (BK/OG).

Possible Causes

- Fuse
- Circuit 167 (BN/OG) open or short to ground
- Circuit 168 (RD/BK) open or short to ground
- Circuit 173 (DG/VT) open or short to ground
- Circuit 174 (GY/BK) open or short to ground
- Circuit 176 (PK/LG) open or short to ground
- Circuit 179 (OR/RD) open or short to ground
- Circuit 800 (GY/LB) open or short to ground
- Circuit 801 (TN/YE) open or short to ground
- Circuit 802 (OR/RD) open or short to ground
- Circuit 803 (BN/PK) open or short to ground
- Circuit 804 (OG/LG) open or short to ground
- Circuit 805 (WH/LG) open or short to ground
- Circuit 806 (PK/LB) open or short to ground
- Circuit 807 (PK/LG) open or short to ground
- Circuit 811 (DG/OG) open or short to ground
- Circuit 813 (LB/WH) open or short to ground
- Circuit 815 (LG/OG) open or short to ground
- Circuit 816 (LG/VT) open or short to ground
- Circuit 819 (LG/WH) open or short to ground
- Circuit 820 (DB/YE) open or short to ground
- Circuit 825 (TN/LG) open or short to ground
- Circuit 827 (TN/WH) open or short to ground
- Circuit 828 (VT/LB) open
- Circuit 829 (WH/VT) open
- Circuit 830 (PK/YE) open
- Circuit 1204 (BK/OG) open
- Subwoofer amplifier
- Subwoofer
- Audio unit

PINPOINT TEST F : THE SUBWOOFER IS INOPERATIVE

F1 CHECK FOR FRONT AND REAR SPEAKER OPERATION

- Ignition ON.
- Turn the audio unit ON.

Is concern with just the subwoofer speakers?

Yes	GO to F2.
No	GO to Pinpoint Test D for correct diagnosis.

F2 CHECK FOR FRONT SUBWOOFER CONCERN

- Observe the front and rear subwoofers.

Does the concern involve just the front subwoofer(s)?

Yes	GO to F3.
No	GO to F10.

F3 CHECK FOR AC VOLTAGE AT THE FRONT SUBWOOFER SPEAKERS

- Ignition OFF.
- Disconnect: Suspect Subwoofer Speaker.
- Ignition ON.
- Turn the audio unit on.
- Measure the AC voltage between the suspect front subwoofer speaker audio output circuit, harness side and the suspect front subwoofer speaker audio return circuit, harness side as follows:

Subwoofer Speaker	Connector-Pin	Circuit
LH front door subwoofer speaker	C536 Pin 1 C536 Pin 2 C536 Pin 3 C536 Pin 4	+ 804 (OG/LG) - 813 (LB/WH) + 820 (DB/YE) - 819 (LG/WH)
RH front door subwoofer speaker	C628 Pin 1 C628 Pin 2 C628 Pin 3 C628 Pin 4	+ 805 (WH/LG) - 811 (DG/OG) + 816 (LG/VT) - 815 (LG/OG)

Is there fluctuating AC voltage?

Yes	INSTALL a new front subwoofer speaker in question. TEST the system for normal operation.
No	GO to F4.

F4 CHECK CIRCUITS 804 (OG/LG), 805 (WH/LG), 811 (DG/OG), 813 (LB/WH), 815 (LG/OG), 816 (LG/VT), 819 (LG/WH) AND 820 (DB/YE) FOR AN OPEN AND A SHORT TO GROUND

- Ignition OFF.
- Disconnect: Subwoofer Amplifier C2993B or C2994B .
- Measure the resistance between the suspect front subwoofer speaker, harness side and the subwoofer amplifier, harness side; and between the suspect front subwoofer speaker, harness side and ground as follows:

Suspect Front Subwoofer Speaker	Subwoofer Speaker Connector-Pin	Subwoofer Amplifier Connector-Pin	Circuit
LH front door subwoofer speaker	C536 Pin 1	C2993B Pin 1	804 (OG/LG)
LH front door subwoofer speaker	C536 Pin 2	C2993B Pin 2	813 (LB/WH)
LH front door subwoofer speaker	C536 Pin 3	C2993B Pin 3	820 (DB/YE)
LH front door subwoofer speaker	C536 Pin 4	C2993B Pin 4	819 (LG/WH)
RH front door subwoofer speaker	C628 Pin 1	C2994B Pin 1	805 (WH/LG)
RH front door subwoofer speaker	C628 Pin 2	C2994B Pin 2	811 (DG/OG)
RH front door subwoofer speaker	C628 Pin 3	C2994B Pin 3	816 (LG/VT)
RH front door subwoofer speaker	C628 Pin 4	C2994B Pin 4	815 (LG/OG)

Is the resistance less than 5 ohms between the suspect speaker and the amplifier, and greater than 10,000 ohms between the suspect speaker and ground?

Yes	GO to F5.
No	REPAIR the circuit in question. TEST the system for normal operation.

F5 CHECK CIRCUIT 829 (WH/VT) FOR VOLTAGE

- Measure the voltage between the suspect front subwoofer amplifier, harness side and ground as follows:

Suspect Subwoofer Amplifier	Subwoofer Amplifier Connector-Pin	Circuit
LH front door	C2993A Pin 5	829 (WH/VT)
RH front door	C2994A Pin 5	829 (WH/VT)

Is the voltage greater than 10 volts?

Yes	GO to F6.
No	VERIFY the bussed electrical center (BEC) fuse 14 (30A) is OK. If OK, REPAIR the circuit. TEST the system for normal operation.

F6 CHECK CIRCUIT 1204 (BK/OG) FOR AN OPEN

- Measure the resistance between the suspect subwoofer amplifier, harness side and ground as follows:

Suspect Subwoofer Amplifier	Subwoofer Amplifier Connector-Pin	Circuit
LH front door	C2993A Pin 2	1204 (BK/OG)
RH front door	C2994A Pin 2	1204 (BK/OG)

Is the resistance less than 5 ohms?

Yes	GO to F7.
No	REPAIR the circuit. TEST the system for normal operation.

F7 CHECK CIRCUITS 167 (BN/OG) AND 168 (RD/BK) FOR AC VOLTAGE

- Ignition ON.
- Turn the audio unit on.
- Measure the AC voltage between the suspect subwoofer amplifier audio signal input circuit, harness side and the suspect subwoofer amplifier audio signal return circuit, harness side as follows:

Suspect Subwoofer Amplifier	Subwoofer Amplifier Connector-Pin	Circuit
LH front door	C2993A Pin 7 C2993A Pin 8	167 (BN/OG) 168 (RD/BK)
RH front door	C2994A Pin 7 C2994A Pin 8	167 (BN/OG) 168 (RD/BK)

Is there a fluctuating AC voltage?

Yes	GO to F8.
No	GO to F9.

F8 CHECK CIRCUIT 173 (DG/VT) FOR AN OPEN AND A SHORT TO GROUND

- Ignition OFF.
- Disconnect: Audio Unit C290B .
- Measure the resistance between the suspect subwoofer amplifier, harness side and the audio unit, harness side; and between the suspect subwoofer amplifier, harness side and ground as follows:

Suspect Subwoofer Amplifier	Subwoofer Amplifier Connector-Pin	Audio Unit Connector-Pin	Circuit
LH front door	C2993A Pin 1	C290B Pin 4	173 (DG/VT)
RH front door	C2994A Pin 1	C290B Pin 4	173 (DG/VT)

Is the resistance less than 5 ohms between the subwoofer amplifier and the audio unit, and greater than 10,000 ohms between the subwoofer amplifier and ground?

Yes	REMOVE the subwoofer amplifier in question. REFER to Subwoofer Amplifier — Door in this section. SEND it to an authorized repair facility. TEST the system for normal operation after the repair.
No	REPAIR the circuit. TEST the system for normal operation.

F9 CHECK CIRCUITS 167 (BN/OG) AND 168 (RD/BK) FOR AN OPEN AND A SHORT TO GROUND

- Ignition OFF.
- Disconnect: Audio Unit C290B .
- Measure the resistance between the suspect subwoofer amplifier, harness side and the audio unit, harness side; and between the suspect subwoofer amplifier, harness side and ground as follows:

Suspect Subwoofer Amplifier	Subwoofer Amplifier Connector-Pin	Audio Unit Connector-Pin	Circuit
LH front door	C2993A Pin 7	C290B Pin 1	167 (BN/OG)
LH front door	C2993A Pin 8	C290B Pin 2	168 (RD/BK)
RH front door	C2994A Pin 7	C290B Pin 1	167 (BN/OG)
RH front door	C2994A Pin 8	C290B Pin 2	168 (RD/BK)

Are the resistances less than 5 ohms between the subwoofer amplifier and the audio unit, and greater than 10,000 ohms between the subwoofer amplifier and ground?

Yes	GO to F22.
No	REPAIR the circuit in question. TEST the system for normal operation.

F10 CHECK FOR LUGGAGE COMPARTMENT SUBWOOFER CONCERN

- Observe both luggage compartment subwoofer speakers.

Does the concern involve just the luggage compartment subwoofer(s)?

Yes	If the concern is with both luggage compartment subwoofer speakers, GO to F11 . Otherwise, GO to F14 .
No	GO to F22.

F11 CHECK CIRCUITS 176 (PK/LG) AND 179 (OG/RD) FOR AC VOLTAGE AT ANY LUGGAGE COMPARTMENT SUBWOOFER AMPLIFIER

- Disconnect: Luggage Compartment Subwoofer Amplifier C4157A, C4158A, C4159 or C4160A .
- Ignition ON.
- Turn the audio unit on.
- Measure the AC voltage between the luggage compartment subwoofer amplifier audio input circuit, harness side, and the luggage compartment subwoofer audio return circuit, harness side as follows:

Luggage Compartment Subwoofer Amplifier Connector-Pin	Circuit
C4157A Pin 7 C4157A Pin 8	179 (OG/RD) 176 (PK/LG)
C4158A Pin 7 C4158A Pin 8	179 (OG/RD) 176 (PK/LG)
C4160A Pin 7 C4160A Pin 8	179 (OG/RD) 176 (PK/LG)
C4159A Pin 7 C4159A Pin 8	179 (OG/RD) 176 (PK/LG)

Is there a fluctuating AC voltage?

Yes	GO to F12.
No	GO to F13.

F12 CHECK CIRCUIT 174 (GY/BK) FOR AN OPEN AND A SHORT TO GROUND

- Ignition OFF.
- Disconnect: Audio Unit C290B .
- Measure the resistance between the subwoofer amplifier, harness side and the audio unit, harness side; and between the subwoofer amplifier, harness side and ground as follows:

Luggage Compartment Subwoofer Amplifier Connector-Pin	Audio Unit Connector-Pin	Circuit
C4157A Pin 1	C290B Pin 8	174 (GY/BK)

Luggage Compartment Subwoofer Amplifier Connector-Pin	Audio Unit Connector-Pin	Circuit
C4158A Pin 1	C290B Pin 8	174 (GY/BK)
C4160A Pin 1	C290B Pin 8	174 (GY/BK)
C4159A Pin 1	C290B Pin 8	174 (GY/BK)

Are the resistances less than 5 ohms between the subwoofer amplifier and the audio unit, and greater than 10,000 ohms between the subwoofer amplifier and ground?

Yes	GO to F22.
No	REPAIR the circuit. TEST the system for normal operation.

F13 CHECK CIRCUITS 176 (PK/LG) AND 179 (OG/RD) FOR AN OPEN AND A SHORT TO GROUND

- Ignition OFF.
- Disconnect: Audio Unit C290B .
- Measure the resistance between the subwoofer amplifier, harness side and the audio unit, harness side; and between the subwoofer amplifier, harness side and ground as follows:

Luggage Compartment Subwoofer Amplifier Connector-Pin	Audio Unit Connector-Pin	Circuit
C4157A Pin 8	C290B Pin 5	176 (PK/LG)
C4157A Pin 7	C290B Pin 6	179 (OG/RD)
C4158A Pin 8	C290B Pin 5	176 (PK/LG)
C4158A Pin 7	C290B Pin 6	179 (OG/RD)
C4160A Pin 8	C290B Pin 5	176 (PK/LG)
C4160A Pin 7	C290B Pin 6	179 (OG/RD)
C4159A Pin 8	C290B Pin 5	176 (PK/LG)
C4159A Pin 7	C290B Pin 6	179 (OG/RD)

Are the resistances less than 5 ohms between the subwoofer amplifier and the audio unit, and greater than 10,000 ohms between the subwoofer amplifier and ground?

Yes	GO to F22.
No	REPAIR the circuit in question. TEST the system for normal operation.

F14 CHECK THE LUGGAGE COMPARTMENT SUBWOOFER SPEAKER CIRCUITS FOR AC VOLTAGE

- Ignition OFF.
- Disconnect: Suspect Subwoofer Speaker.
- Ignition ON.
- Turn the audio unit on.
- Measure the AC voltage between the suspect subwoofer speaker audio output circuit, harness side and the suspect subwoofer speaker audio return circuit, harness side as follows:

Luggage Compartment Subwoofer Speaker Connector-Pin	Circuit
C4161 Pin 1 C4161 Pin 2	800 (GY/LB) 801 (TN/YE)
C4161 Pin 3 C4161 Pin 4	806 (PK/LB) 807 (PK/LG)
C4162 Pin 1 C4162 Pin 2	802 (OG/RD) 803 (BN/PK)
C4162 Pin 3 C4162 Pin 4	825 (TN/LG) 827 (TN/WH)

Is there a fluctuating AC voltage?

Yes	INSTALL a new speaker enclosure. REFER to Speaker Enclosure in this section. TEST the system for normal operation.
No	GO to F15.

F15 CHECK CIRCUITS 800 (GY/LB), 801 (TN/YE), 802 (OG/RD), 803 (BN/PK), 806 (PK/LB), 807 (PK/LG), 825 (TN/LG), AND 827 (TN/WH) FOR AN OPEN AND A SHORT TO GROUND

- Ignition OFF.
- Disconnect: Suspect Subwoofer Amplifier.
- Measure the resistance between the suspect subwoofer speaker, harness side and the subwoofer amplifier, harness side; and between the suspect subwoofer speaker, harness side and ground as follows:

Subwoofer Speaker Connector-Pin	Subwoofer Amplifier Connector-Pin	Circuit
C4161 Pin 1	C4157B Pin 4	800 (GY/LB)
C4161 Pin 2	C4157B Pin 3	801 (TN/YE)
C4161 Pin 3	C4158B Pin 4	806 (PK/LB)
C4161 Pin 4	C4158B Pin 3	807 (PK/LG)

Subwoofer Speaker Connector-Pin	Subwoofer Amplifier Connector-Pin	Circuit
C4162 Pin 1	C4160B Pin 4	802 (OG/RD)
C4162 Pin 2	C4160B Pin 3	803 (BN/PK)
C4162 Pin 3	C4159B Pin 4	825 (TN/LG)
C4162 Pin 4	C4159B Pin 3	827 (TN/WH)

Are the resistances less than 5 ohms between the subwoofer speaker and the subwoofer amplifier, and greater than 10,000 ohms between the subwoofer speaker and ground?

Yes	GO to F16.
No	REPAIR the circuit in question. TEST the system for normal operation.

F16 CHECK CIRCUITS 828 (VT/LB) AND 830 (PK/YE) FOR VOLTAGE

- Measure the voltage between the suspect subwoofer amplifier, harness side and ground as follows:

Luggage Compartment Subwoofer Amplifier Connector-Pin	Circuit
C4157A Pin 5	830 (PK/YE)
C4158A Pin 5	828 (VT/LB)
C4160A Pin 5	828 (VT/LB)
C4159A Pin 5	830 (PK/YE)

Is the voltage greater than 10 volts?

Yes	GO to F17.
No	REPAIR the circuit in question. TEST the system for normal operation.

F17 CHECK CIRCUIT 1204 (BK/OG) FOR AN OPEN

- Measure the resistance between the suspect subwoofer amplifier, harness side and ground as follows:

Luggage Compartment Subwoofer Amplifier Connector-Pin	Circuit
C4157A Pin 2	1204 (BK/OG)

Luggage Compartment Subwoofer Amplifier Connector-Pin	Circuit
C4158A Pin 2	1204 (BK/OG)
C4160A Pin 2	1204 (BK/OG)
C4159A Pin 2	1204 (BK/OG)

Is the resistance less than 5 ohms?

Yes	GO to F18.
No	REPAIR the circuit. TEST the system for normal operation.

F18 CHECK CIRCUITS 176 (PK/LG) AND 179 (OG/RD) FOR AC VOLTAGE

- Ignition ON.
- Turn the audio unit on.
- Measure the AC voltage between the suspect subwoofer amplifier audio input circuit, harness side, and the suspect subwoofer amplifier audio return circuit, harness side as follows:

Subwoofer Amplifier Connector-Pin	Circuit
C4157A Pin 7 C4157A Pin 8	179 (OG/RD) 176 (PK/LG)
C4158A Pin 7 C4158A Pin 8	179 (OG/RD) 176 (PK/LG)
C4160A Pin 7 C4160A Pin 8	179 (OG/RD) 176 (PK/LG)
C4159A Pin 7 C4159A Pin 8	179 (OG/RD) 176 (PK/LG)

Is there a fluctuating AC voltage?

Yes	GO to F20.
No	GO to F19.

F19 CHECK CIRCUITS 176 (PK/LG) AND 179 (OG/RD) FOR AN OPEN AND A SHORT TO GROUND

- Ignition OFF.

- Disconnect: Audio Unit C290B .
- Measure the resistance between the suspect subwoofer amplifier, harness side and the audio unit, harness side; and between the suspect subwoofer amplifier, harness side and ground as follows:

Subwoofer Amplifier Connector-Pin	Audio Unit Connector-Pin	Circuit
C4157A Pin 8	C290B Pin 5	176 (PK/LG)
C4157A Pin 7	C290B Pin 6	179 (OG/RD)
C4158A Pin 8	C290B Pin 5	176 (PK/LG)
C4158A Pin 7	C290B Pin 6	179 (OG/RD)
C4160A Pin 8	C290B Pin 5	176 (PK/LG)
C4160A Pin 7	C290B Pin 6	179 (OG/RD)
C4159A Pin 8	C290B Pin 5	176 (PK/LG)
C4159A Pin 7	C290B Pin 6	179 (OG/RD)

Are the resistances less than 5 ohms between the subwoofer amplifier and the audio unit, and greater than 10,000 ohms between the subwoofer amplifier and ground?

Yes	GO to F22.
No	REPAIR the circuit in question. TEST the system for normal operation.

F20 CHECK CIRCUIT 174 (GY/BK) FOR VOLTAGE

- Measure the voltage between the suspect subwoofer amplifier, harness side and ground as follows:

Subwoofer Amplifier Connector-Pin	Circuit
C4157A Pin 1	174 (GY/BK)
C4158A Pin 1	174 (GY/BK)
C4160A Pin 1	174 (GY/BK)
C4159A Pin 1	174 (GY/BK)

Is any voltage present?

Yes	SEND the subwoofer amplifier to an authorized repair facility. TEST the system for normal operation after the repair.
No	GO to F21.

F21 CHECK CIRCUIT 174 (GY/BK) FOR AN OPEN AND A SHORT TO GROUND

- Ignition OFF.
- Disconnect: Audio Unit C290B .
- Measure the resistance between the suspect subwoofer amplifier, harness side and the audio unit, harness side; and between the suspect subwoofer amplifier, harness side and ground as follows:

Subwoofer Amplifier Connector-Pin	Audio Unit Connector-Pin	Circuit
C4157A Pin 1	C290B Pin 8	174 (GY/BK)
C4158A Pin 1	C290B Pin 8	174 (GY/BK)
C4160A Pin 1	C290B Pin 8	174 (GY/BK)
C4159A Pin 1	C290B Pin 8	174 (GY/BK)

Are the resistances less than 5 ohms between the subwoofer amplifier and the audio unit, and greater than 10,000 ohms between the subwoofer amplifier and ground?

Yes	GO to F22.
No	REPAIR the circuit. TEST the system for normal operation.

F22 CHECK FOR CORRECT AUDIO UNIT OPERATION

- Disconnect the audio unit connectors.
- Check for:
  - corrosion
  - pushed-out pins
- Connect the audio unit connectors and make sure they seat correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	REMOVE the audio unit. REFER to Audio Unit in this section. SEND it to an authorized repair facility. TEST the system for normal operation after the repair.
No	The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.

Pinpoint Test G: Loud Popping Sound When Cycling The Ignition Switch

Normal Operation

Voltage is supplied to the audio unit through circuit 1000 (RD/BK) when the ignition switch is turned to the START position. The audio unit then immediately mutes all speaker outputs and subwoofer amplifier enable circuits to eliminate the possibility of speaker pops during engine cranking.

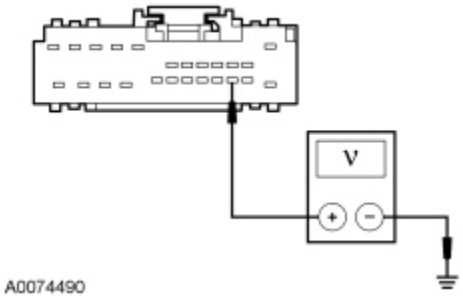
Possible Causes

- Fuse
- Circuit 1000 (RD/BK) open
- Circuit 173 (DG/VT) short to voltage
- Circuit 174 (GY/BK) short to voltage
- Subwoofer amplifier
- Audio unit

PINPOINT TEST G : LOUD POPPING SOUND WHEN CYCLING THE IGNITION SWITCH

G1 CHECK CIRCUIT 1000 (RD/BK) FOR VOLTAGE

- Ignition OFF.
- Disconnect: Audio Unit C290D .
- Disconnect: Smart Junction Box (SJB) Fuse 20 (10A).
- Ignition ON.
- With ignition switch in the RUN and START positions, measure the voltage between the audio unit C290D Pin 15 circuit 1000 (RD/BK), harness side and ground.



Is no voltage present with ignition switch in the RUN position, and greater than 10 volts with ignition switch in the START position?

Yes	GO to G2.
No	VERIFY the smart junction box (SJB) fuse 20 (10A) is OK. If OK, REPAIR the circuit. TEST the system for normal operation.

G2 CHECK FOR FRONT/REAR SUBWOOFER

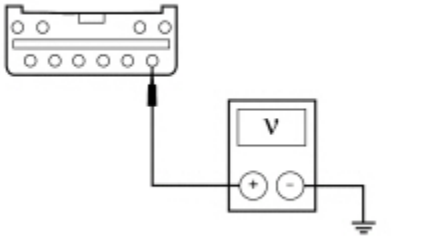
- Turn the audio unit on.

Does the concern involve just the front subwoofer(s)?

Yes	GO to G3.
No	GO to G6.

G3 CHECK CIRCUIT 173 (DG/VT) FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect: Subwoofer Amplifier C2993A, C2994A .
- Hold the key in the START position.
- Measure the voltage between the LH front subwoofer amplifier C2993A Pin 1, circuit 173 (DG/VT), harness side and ground; or between the RH front subwoofer amplifier C2994A Pin 1, circuit 173 (DG/VT), harness side and ground.



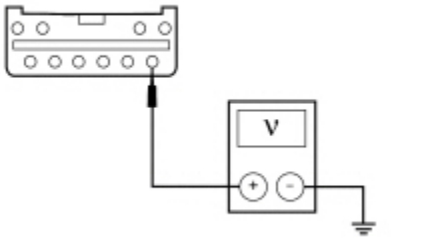
GK5296-A

Is any voltage present?

Yes	GO to G4.
No	SEND the subwoofer amplifier to an authorized repair facility. TEST the system for normal operation after the repair.

G4 CHECK CIRCUIT 173 (DG/VT) FOR A SHORT TO VOLTAGE WITH THE AUDIO UNIT DISCONNECTED

- Ignition OFF.
- Disconnect: Audio Unit C290B .
- Hold the key in the START position.
- Measure the voltage between the LH front subwoofer amplifier C2993A Pin 1, circuit 173 (DG/VT), harness side and ground; or between the RH front subwoofer amplifier C2994A Pin 1, circuit 173 (DG/VT), harness side and ground.



GK5296-A

Is any voltage present?

Yes	GO to G5.
No	SEND the subwoofer amplifier to an authorized repair facility. TEST the system for normal operation after the repair.

G5 CHECK THE SUBWOOFER AMPLIFIER

- Ignition OFF.
- Install a known good subwoofer amplifier.
- Start the engine.

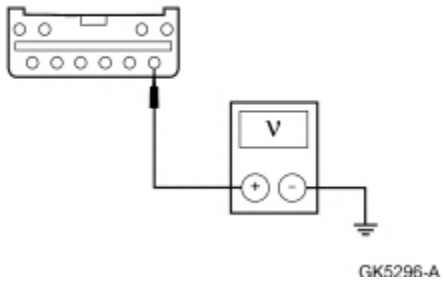
Is the popping sound still present?

Yes	GO to G8.
No	SEND the original subwoofer amplifier to an authorized audio system repair facility. TEST the system for normal operation after the repair.

G6 CHECK CIRCUIT 174 (GY/BK) FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect: Subwoofer Amplifier C4157A, C4158A, C4159 or C4160A .
- Hold the key in the START position.
- Measure the voltage between the suspect rear subwoofer amplifier, harness side and ground as follows:

Luggage Compartment Subwoofer Amplifier Connector-Pin	Circuit
C4157A Pin 1	174 (GY/BK)
C4158A Pin 1	174 (GY/BK)
C4160A Pin 1	174 (GY/BK)
C4159A Pin 1	174 (GY/BK)



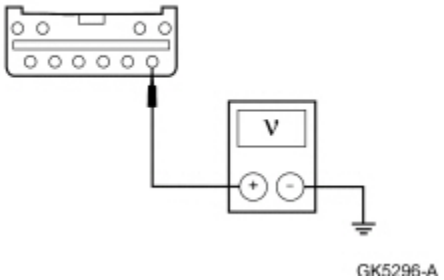
Is any voltage present?

Yes	GO to G7.
No	SEND the subwoofer amplifier to an authorized repair facility. TEST the system for normal operation after the repair.

G7 CHECK CIRCUIT 174 (GY/BK) FOR A SHORT TO VOLTAGE WITH THE AUDIO UNIT DISCONNECTED

- Ignition OFF.
- Disconnect: Audio Unit C290B .
- Hold the key in the START position.
- Measure the voltage between the suspect rear subwoofer amplifier, harness side and ground as follows:

Luggage Compartment Subwoofer Amplifier Connector-Pin	Circuit
C4157A Pin 1	174 (GY/BK)
C4158A Pin 1	174 (GY/BK)
C4160A Pin 1	174 (GY/BK)
C4159A Pin 1	174 (GY/BK)



Is any voltage present?

Yes	GO to G7.
No	SEND the subwoofer amplifier to an authorized repair facility. TEST the system for normal operation after the repair.

G8 CHECK FOR CORRECT AUDIO UNIT OPERATION

- Disconnect the audio unit connectors.
- Check for:
  - corrosion
  - pushed-out pins
- Connect the audio unit connectors and make sure they seat correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	REMOVE the audio unit. REFER to Audio Unit in this section. SEND it to an authorized repair facility. TEST the system for normal operation after the repair.
No	The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.