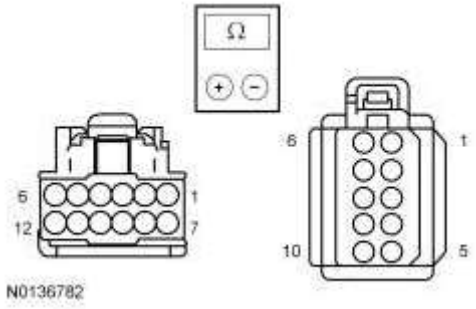


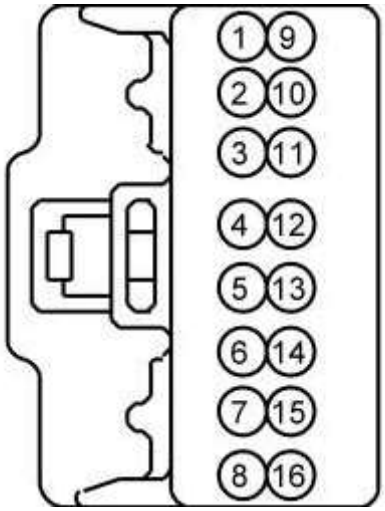
Are the resistances less than 3 ohms between the clockspring and steering wheel switches, and greater than 10,000 ohms between the clockspring and ground?

Yes	GO to R12.
No	INSTALL a new steering wheel. REFER to Section 211-04. CLEAR any DTCs present. TEST the system for normal operation.

R12 CHECK THE VOLTAGE CIRCUITS TO THE CLOCKSPRING

- Ignition OFF.
- Connect: ACM C290D .
- Connect: APIM C2283 (if equipped) .
- Ignition ON.
- Measure the **voltage** between:

Suspect Switch	Positive Lead	Negative Lead
VOL-, VOL+, SEEK-, SEEK+, or MEDIA	C2274A Pin 13 VME14 (GY/YE)	C2274A Pin 12 RME14 (BN/GN)
VOICE, PHONE, or OK	C2274A Pin 6 VME54 (BU/OG)	C2274A Pin 4 RME54 (WH/VT)



Is the voltage approximately 5 volts?

Yes	INSTALL a new clockspring. REFER to Section 501-20B. CLEAR any DTCs present. TEST the system for normal operation.
No	For vehicles with SYNC® and without navigation, GO to R14. For all other vehicles, GO to R13.

R13 CHECK FOR CORRECT ACM OPERATION

- Ignition OFF.
- Disconnect and inspect all the ACM connectors.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the ACM connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new ACM . REFER to Audio Control Module (ACM).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

R14 CHECK FOR CORRECT APIM OPERATION

- Ignition OFF.
- Disconnect and inspect the APIM connector.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the APIM connector. Make sure it seats and latches correctly.
- Wait at least 2 minutes for the APIM to re-initialize.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern,  **VIN required to access Guided Routine (APIM)**
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test S: The Audio System Does Not Operate Correctly From The Front Controls Interface Module (FCIM)

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

When a button is pressed on the Front Controls Interface Module (FCIM) , a signal is broadcast over the Medium Speed Controller Area Network (MS-CAN) to the modules in the audio system. The FCIM is also the customer interface with the HVAC module.

If the FCIM cannot communicate on the MS-CAN (due to loss of power, ground, etc.), the audio system remains in the operating state it was in prior to the failure. The steering wheel switches continue to operate.

- DTC U2013:63 (Switch Pack: Circuit / Component Protection Time-Out) — set by the FCIM (without navigation) and FCIM (with navigation) if a switch is detected as active for greater than 3 seconds during the self-test, or greater than 2 minutes during normal operation. When this occurs, the FCIM disables the switch until it detects it as no longer active.

This pinpoint test is intended to diagnose the following:

- FCIM

PINPOINT TEST S : THE AUDIO SYSTEM DOES NOT OPERATE CORRECTLY FROM THE FCIM

S1 RETRIEVE ALL CONTINUOUS DTCS

- Using the diagnostic scan tool, retrieve all continuous DTCs.

Is DTC U0184:00 or DTC U0255:00 present in any audio system module?

Yes	REFER to DTC Charts in this section.
No	GO to S2.

S2 CHECK FOR DTC U2013:63

- CLEAR the FCIM DTCs.
- REPEAT the FCIM self-test, making sure no FCIM buttons are pressed during the test.

Is DTC U2013:63 present?

Yes	INSTALL a new FCIM . REFER to Front Controls Interface Module (FCIM). TEST the system for normal operation.
No	GO to S3.

S3 CHECK FOR CORRECT FCIM OPERATION

- Ignition OFF.
- Disconnect and inspect the FCIM connector.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the FCIM connector. Make sure it seats and latches correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new FCIM . REFER to Front Controls Interface Module (FCIM).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test T: The Audio System Does Not Operate Correctly From The Front Display Interface Module (FDIM) (With Navigation)

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Refer to Wiring Diagrams Cell 130, Audio System/Navigation for schematic and connector information.

Normal Operation

The Front Display Interface Module (FDIM) touchscreen sends a voltage signal to the Audio Front Control Module (ACM) when a touch sector is pressed. The ACM then takes the appropriate action, which can be a change in the audio system setting or broadcasting the

information to the appropriate module through the Medium Speed Controller Area Network (MS-CAN) .

- DTC U0162:00 (Lost Communication With Navigation Display Module: No Sub Type Information) — set by the ACM (with navigation) if it does not detect the FDIM for greater than 5 seconds with the ignition in RUN. When this occurs, the touchscreen controls are inoperative and the FDIM may not display correct (if any) information.

This pinpoint test is intended to diagnose the following:

- Wiring, terminals or connectors
- FDIM
- ACM

PINPOINT TEST T : THE AUDIO SYSTEM DOES NOT OPERATE CORRECTLY FROM THE FDIM (WITH NAVIGATION)

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

T1 OBSERVE THE FDIM DISPLAY

- Turn the audio system on and observe the FDIM screen.

Is the FDIM display inoperative?

Yes	GO to Pinpoint Test W.
No	GO to T2.

T2 CHECK FOR AUDIO SYSTEM OPERATION FROM THE FCIM

- Carry out various audio system functions using the Front Controls Interface Module (FCIM) .

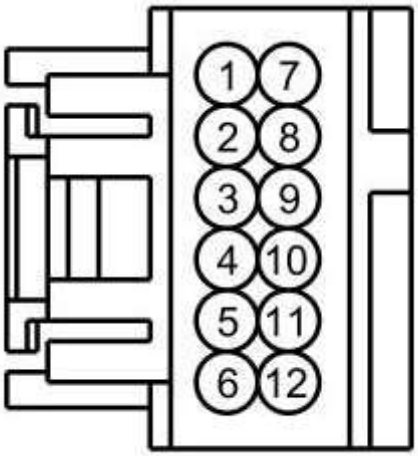
Does the audio system operate correctly from the FCIM ?

Yes	GO to T3.
No	GO to Pinpoint Test S.

T3 CHECK THE TOUCHSCREEN TRANSMIT AND RECEIVE CIRCUITS FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect: FDIM C2123 .
- Disconnect: ACM C290C .
- Ignition ON.
- Measure the **voltage** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C2123 Pin 4	CMN26 (BU/OG)	—	Ground
C2123 Pin 10	CMN24 (GY/VT)	—	Ground



Is any voltage present?

Yes	REPAIR the circuit in question. CLEAR any DTCs present. TEST the system for normal operation.
No	GO to T4.

T4 CHECK THE TOUCHSCREEN TRANSMIT AND RECEIVE CIRCUITS FOR AN OPEN OR SHORT TO GROUND

- Ignition OFF.
- Measure the **resistance** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C2123 Pin 4	CMN26 (BU/OG)	C290C Pin 10	CMN26 (BU/OG)
C2123 Pin 4	CMN26 (BU/OG)	—	Ground
C2123 Pin 10	CMN24 (GY/VT)	C290C Pin 5	CMN24 (GY/VT)
C2123 Pin 10	CMN24 (GY/VT)	—	Ground

N0139401

Are the resistances less than 3 ohms between the FDIM and the ACM , and greater than 10,000 ohms between the FDIM and ground?

Yes	GO to T5.
No	REPAIR the circuit in question. CLEAR any DTCs present. TEST the system for normal operation.

T5 ISOLATE THE FDIM

- Connect: ACM C290C .

- INSTALL a new FDIM . REFER to Front Display Interface Module (FDIM).
- Ignition ON.
- Attempt various commands from the FDIM touchscreen.

Does the system operate correctly?

Yes	The cause of the concern was an inoperative FDIM . The system is now operating correctly.
No	GO to T6.

T6 CHECK FOR CORRECT ACM OPERATION

- Ignition OFF.
- Disconnect and inspect all the ACM connectors.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the ACM connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new ACM . REFER to Audio Control Module (ACM).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test U: The Front Display Interface Module (FDIM) Is Inoperative (Without Navigation)

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Refer to Wiring Diagrams Cell 130, Audio System/Navigation for schematic and connector information.

Normal Operation

The Front Display Interface Module (FDIM) receives power at all times. The ignition switch position message is broadcast to the FDIM by the Smart Junction Box (SJB) via the Medium Speed Controller Area Network (MS-CAN) .

Information from the audio system, the climate control system, the SYNC® system, and the compass heading are shown on the FDIM display screen. If only one of these displays has a concern, GO to Pinpoint Test V.

This pinpoint test is intended to diagnose the following:

- FDIM

PINPOINT TEST U : THE FDIM IS INOPERATIVE (WITHOUT NAVIGATION)

U1 CHECK FOR DIAGNOSTIC SCAN TOOL COMMUNICATION WITH THE FDIM

- Ignition ON.
- Carry out the network test using the diagnostic scan tool.

Does the diagnostic scan tool communicate with the FDIM ?

Yes	GO to U2.
No	REFER to Section 418-00.

U2 CHECK FOR CORRECT FDIM OPERATION

- Ignition OFF.
- Disconnect and inspect the FDIM connector.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the FDIM connector. Make sure it seats and latches correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new FDIM . REFER to Front Display Interface Module (FDIM).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test V: An Individual Front Display Interface Module (FDIM) Display Is Inoperative (Without Navigation)

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

The Front Display Interface Module (FDIM) receives inputs via the Medium Speed Controller Area Network (MS-CAN) from the following modules:

- Audio Front Control Module (ACM) : audio system information
- Instrument Panel Cluster (IPC) : compass heading information
- Accessory Protocol Interface Module (APIM) : SYNC® system information
- HVAC module: climate control system information

If the FDIM loses the signal from any of these modules, only that specific display is inoperative.

For the compass display, this pinpoint test is intended to diagnose a concern of the compass display being blank. For any other concerns with the compass display, including the compass being inaccurate, REFER to Section 413-01.

This pinpoint test is intended to diagnose the following:

- FDIM

PINPOINT TEST V : AN INDIVIDUAL FDIM DISPLAY IS INOPERATIVE (WITHOUT NAVIGATION)

V1 OBSERVE THE FDIM DISPLAY

- Turn the audio system on and observe the FDIM screen.

Is the FDIM display inoperative?

Yes	GO to Pinpoint Test U.
No	GO to V2.

V2 CHECK FOR LOST COMMUNICATION DTCS SET IN THE FDIM

- Using the diagnostic scan tool, retrieve all continuous DTCs.

Is DTC U0155, U0184, or U0197 present in the FDIM ?

Yes	REFER to DTC Charts in this section.
No	GO to V3.

V3 CHECK THE FDIM DISPLAY SEGMENTS

- Carry out the audio display test. REFER to Audio Control Module (ACM) Self-Diagnostic Mode.

Do all of the FDIM segments illuminate?

Yes	GO to V4.
No	GO to V5.

V4 OBSERVE THE SPECIFIC INOPERATIVE DISPLAY

- Observe the inoperative FDIM display while carrying out the indicated diagnostic method:

Inoperative Display	Diagnostic Method	Expected Results
Compass	Drive the vehicle in an open area while observing the display.	The compass display illuminates, indicating a directional heading or a calibration error.
Audio system	Turn the audio system on, press the AM/FM button, and adjust the volume.	The FDIM display updates to show the change in audio setting.
SYNC® system (if equipped)	Turn the audio system on, press the phone button, and observe the display.	The FDIM display shows information relating to the phone.
Climate control system	Turn the climate control system on, adjust the fan to high speed, and set the temperature to various settings.	The FDIM display updates to show the change in climate control setting.

Does the inoperative display confirm the expected results?

Yes	The system is operating correctly at this time. INFORM the customer on the operation of the FDIM display.
No	If the compass heading is inaccurate or indicates a calibration error, REFER to Section 413-01 to diagnose the compass. For all other concerns, GO to V5.

V5 CHECK FOR CORRECT FDIM OPERATION

- Ignition OFF.
- Disconnect and inspect the FDIM connector.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the FDIM connector. Make sure it seats and latches correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new FDIM . REFER to Front Display Interface Module (FDIM).

No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test W: The Front Display Interface Module (FDIM) Is Inoperative (With Navigation)

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Refer to Wiring Diagrams Cell 130, Audio System/Navigation for schematic and connector information.

Normal Operation

The Audio Front Control Module (ACM) enables the Front Display Interface Module (FDIM) by sending voltage through the enable circuit.

Video display information is sent to the FDIM from the ACM through a dedicated video cable. The video cable is only serviced by overlaying a new cable.

If there is a fault in the video cable, the FDIM may illuminate very dimly and have a greyish appearance. This is because the enable circuit is still active and enables the illumination, but no video signal reaches the FDIM .

If the vehicle is equipped with a rear view camera, the video feed from the camera is hardwired to the FDIM .

For all other display information, including the climate control and SYNC® system displays, messages are sent to the ACM via the Medium Speed Controller Area Network (MS-CAN) . The ACM then alters the video feed to the FDIM based on the messages it receives.

This pinpoint test is intended to diagnose the following:

- Fuse
- Wiring, terminals or connectors
- Video cable
- FDIM
- ACM

PINPOINT TEST W : THE FDIM IS INOPERATIVE (WITH NAVIGATION)

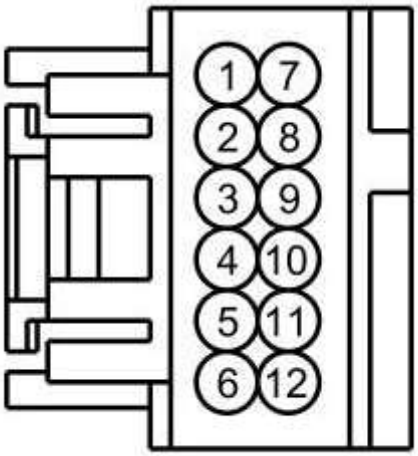
NOTICE: Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may damage the connector.

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

W1 CHECK THE FDIM VOLTAGE SUPPLY

- Ignition OFF.
- Disconnect: FDIM C2123 .
- Measure the **voltage** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C2123 Pin 1	SBP14 (BN/RD)	—	Ground



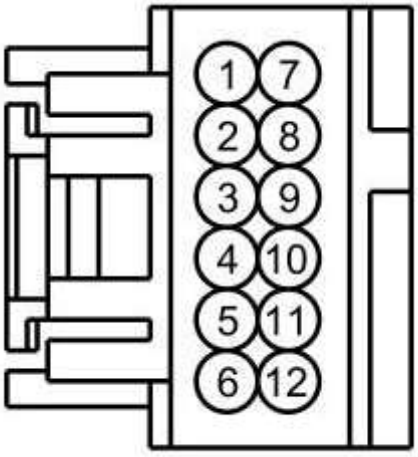
Is the voltage greater than 11 volts?

Yes	GO to W2.
No	VERIFY the Smart Junction Box (SJB) fuse 14 (10A) is OK. If OK, REPAIR the circuit. TEST the system for normal operation. If not OK, REFER to the Wiring Diagrams manual to identify the possible causes of the circuit short.

W2 CHECK THE FDIM GROUND CIRCUIT FOR CONTINUITY

- Disconnect: Negative Battery Cable .
- Measure the **resistance** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C2123 Pin 7	GD115 (BK/GY)	—	Ground



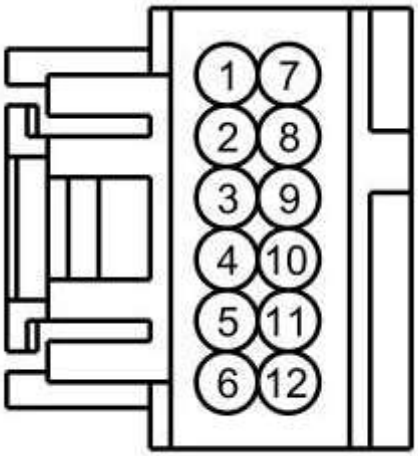
Is the resistance less than 3 ohms?

Yes	GO to W3.
No	REPAIR the circuit. TEST the system for normal operation.

W3 CHECK THE FDIM ENABLE CIRCUIT FOR CORRECT VOLTAGE

- Connect: Negative Battery Cable .
- Ignition ON.
- Turn the audio system on using the power button on the Front Controls Interface Module (FCIM) .
- Measure the **voltage** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C2123 Pin 5	CMN23 (WH/BU)	—	Ground



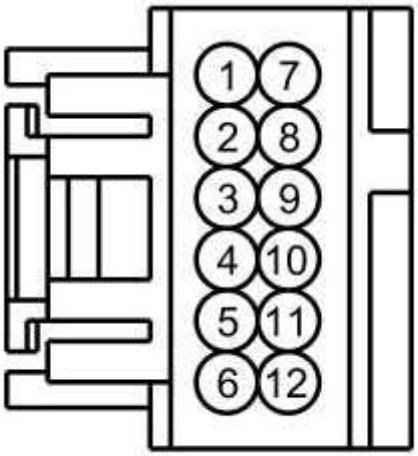
Is the voltage between 4.5 and 9.5 volts?

Yes	GO to W6.
No	GO to W4.

W4 CHECK THE FDIM ENABLE CIRCUIT FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect: ACM C290C .
- Ignition ON.
- Measure the **voltage** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C2123 Pin 5	CMN23 (WH/BU)	—	Ground



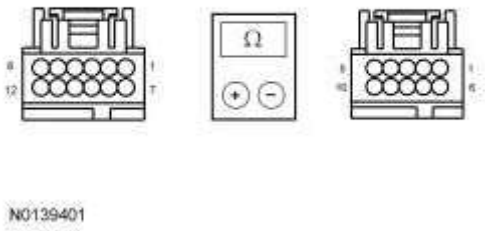
Is any voltage present?

Yes	REPAIR the circuit. TEST the system for normal operation.
No	GO to W5.

W5 CHECK THE FDIM ENABLE CIRCUIT FOR AN OPEN OR SHORT TO GROUND

- Ignition OFF.
- Measure the **resistance** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C2123 Pin 5	CMN23 (WH/BU)	C290C Pin 4	CMN23 (WH/BU)
C2123 Pin 5	CMN23 (WH/BU)	—	Ground



Is the resistance less than 3 ohms between the FDIM and the ACM , and greater than 10,000 ohms between the FDIM and ground?

Yes	GO to W6.
No	REPAIR the circuit. TEST the system for normal operation.

W6 ISOLATE THE VIDEO CABLE

- Connect: ACM C290C .
- Substitute each video cable one at a time by routing a new component. Do not remove the original antenna cable at this time.
- Connect: FDIM C2123 .
- Ignition ON.

- Operate the audio system and observe the FDIM screen.

Does the system operate correctly?

Yes	INSTALL a new video cable for the inoperative cable. REFER to Video Cable.
No	GO to W7.

W7 ISOLATE THE FDIM

- INSTALL a new FDIM . REFER to Front Display Interface Module (FDIM).
- Ignition ON.
- Operate the audio system and observe the FDIM screen.

Does the system operate correctly?

Yes	The cause of the concern was an inoperative FDIM . The system is now operating correctly.
No	GO to W8.

W8 CHECK FOR CORRECT ACM OPERATION

- Ignition OFF.
- Disconnect and inspect all the ACM connectors.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the ACM connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new ACM . REFER to Audio Control Module (ACM).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test X: An Individual FDIM Display Is Inoperative (With Navigation)

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

The Front Display Interface Module (FDIM) display provides information based on the video signal from the Audio Front Control Module (ACM) . The ACM receives inputs via the Medium Speed Controller Area Network (MS-CAN) from the following modules:

- Accessory Protocol Interface Module (APIM) : SYNC® system information (if equipped)
- HVAC module: climate control system information

If the ACM loses the signal from any of these modules, only that specific display is inoperative.

This pinpoint test is intended to diagnose the following:

- FDIM
- ACM

PINPOINT TEST X : AN INDIVIDUAL FRONT DISPLAY INTERFACE MODULE (FDIM) DISPLAY IS INOPERATIVE (WITH NAVIGATION)

X1 OBSERVE THE FDIM DISPLAY

- Turn the audio system on and observe the FDIM screen.

Is the FDIM display inoperative?

Yes	GO to Pinpoint Test W.
No	GO to X2.

X2 CHECK THE FDIM DISPLAY SEGMENTS

- Carry out the audio display Test. REFER to Audio Control Module (ACM) Self-Diagnostic Mode.

Do all of the FDIM segments illuminate?

Yes	GO to X3.
No	GO to X5.

X3 OBSERVE THE SPECIFIC INOPERATIVE DISPLAY

- Observe the inoperative FDIM display while carrying out the indicated diagnostic method:

Inoperative Display	Diagnostic Method	Expected Results
Audio system	Turn the audio system on, press the AM/FM button, and adjust the volume.	The FDIM display updates to show the change in audio setting.
SYNC® system (if equipped)	Turn the audio system on, press the phone button, and observe the display.	The FDIM display shows information relating to the phone.
Climate control system	Turn the climate control system on, adjust the fan to high speed, and set the temperature to various settings.	The FDIM display updates to show the change in climate control setting.

Does the inoperative display confirm the expected results?

Yes	The system is operating correctly at this time. INFORM the customer on the operation of the FDIM displays.
No	GO to X4.

X4 CHECK FOR LOST COMMUNICATION DTCS

- Ignition ON.
- CLEAR continuous DTCs from all modules.
- Ignition OFF.
- Ignition ON.
- Wait at least 10 seconds.
- Retrieve all continuous DTCs (from all modules).

Is DTC U0164, U0184, or U0197 (if equipped with the SYNC® system) present in any module?

Yes	REFER to DTC Charts in this section.
No	GO to X5.

X5 CHECK FOR CORRECT FDIM OPERATION

- Ignition OFF.
- Disconnect and inspect the FDIM connector.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the FDIM connector. Make sure it seats and latches correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new FDIM . REFER to Front Display Interface Module (FDIM). TEST the system for normal operation. If the concern is still present, GO to X6.
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

X6 CHECK FOR CORRECT ACM OPERATION

- Ignition OFF.
- Disconnect and inspect all the ACM connectors.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the ACM connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new ACM . REFER to Audio Control Module (ACM).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test Y: The Front Display Interface Module (FDIM) Does Not Display Video From The Audio Front Control Module (ACM) (With Navigation)

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Refer to Wiring Diagrams Cell 130, Audio System/Navigation for schematic and connector information.

Normal Operation

The Audio Front Control Module (ACM) transmits video to the Front Display Interface Module (FDIM) through dedicated video circuits. This video feed is separate from all other video sources, making it possible for the FDIM to operate correctly until a DVD video is played.

DVD playback through the ACM is only enabled when the vehicle is in PARK. In all other gears, only the DVD audio is played. This is normal operation.

This pinpoint test is intended to diagnose the following:

- Wiring, terminals or connectors
- FDIM
- ACM

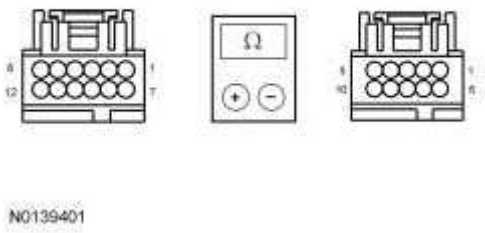
PINPOINT TEST Y : THE FDIM DOES NOT DISPLAY VIDEO FROM THE ACM (WITH NAVIGATION)

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

Y1 CHECK THE FDIM VIDEO FEED CIRCUITS FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect: ACM C290C .
- Disconnect: FDIM C2123 .
- Ignition ON.
- Measure the **voltage** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C2123 Pin 6	VMN20 (BN/VT)	C290C Pin 4	CMN23 (WH/BU)
C2123 Pin 12	RMN20 (WH/GN)	—	Ground



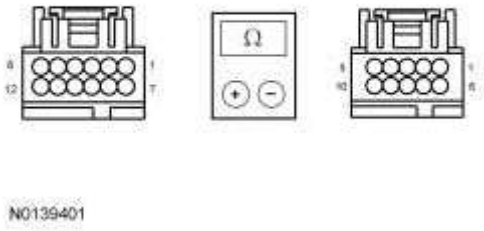
Is any voltage present?

Yes	REPAIR the circuit in question. TEST the system for normal operation.
No	GO to Y2.

Y2 CHECK THE FDIM VIDEO FEED CIRCUITS FOR AN OPEN OR SHORT TO GROUND

- Ignition OFF.
- Measure the **resistance** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C2123 Pin 6	VMN20 (BN/VT)	C290C Pin 3	VMN20 (BN/VT)
C2123 Pin 6	VMN20 (BN/VT)	—	Ground
C2123 Pin 12	RMN20 (WH/GN)	C290C Pin 8	RMN20 (WH/GN)
C2123 Pin 12	RMN20 (WH/GN)	—	Ground



N0139401

Are the resistances less than 3 ohms between the FDIM and the ACM , and greater than 10,000 ohms between the FDIM and ground?

No	REPAIR the circuit in question. TEST the system for normal operation.
Yes	GO to Y3.

Y3 ISOLATE THE FDIM

- Connect: ACM C290C .
- INSTALL a new FDIM . REFER to Front Display Interface Module (FDIM).
- Ignition ON.
- Operate the audio system and observe the FDIM screen.

Does the system operate correctly?

Yes	The cause of the concern was an inoperative FDIM . The system is now operating correctly.
No	GO to Y4.

Y4 CHECK FOR CORRECT ACM OPERATION

- Ignition OFF.
- Disconnect and inspect all the ACM connectors.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the ACM connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new ACM . REFER to Audio Control Module (ACM).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test Z: Voice Recognition Is Inoperative Or Does Not Operate Correctly

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Refer to Wiring Diagrams Cell 130, Audio System/Navigation for schematic and connector information.

Normal Operation — With SYNC® And Without Navigation

The VOICE switch is wired to the Accessory Protocol Interface Module (APIM) . When the VOICE switch is pressed, it changes a reference voltage signal, and the audio system enters voice recognition mode. A microphone contained in the overhead console receives the voice command and sends a signal to the APIM . The microphone is also used to detect outgoing audio during a phone call.

Normal Operation — With SYNC® And With Navigation

The VOICE switch is wired to the Audio Front Control Module (ACM) . When the VOICE switch is pressed, it changes a reference voltage signal, and the audio system enters voice recognition mode. A microphone contained in the overhead console receives the voice command and sends a signal to the APIM . The APIM receives the microphone input and also broadcasts it to the ACM . The first voice commands spoken determine which system handles the voice commands.

The microphone test is available through the diagnostic scan tool or through the ACM self-diagnostic mode. Running this test causes the ACM to produce a test tone. If the system is operating correctly, the microphone detects the tone and produces a signal to the ACM , indicating the tone was heard.

- DTC B1D79:01 (Microphone Input: General Electrical Failure) — set by the APIM during the microphone test when it does not receive an adequate signal from the microphone when the test tone is sounded.
- DTC B1D79:11 (Microphone Input: Circuit Short To Ground) — set by the APIM when a short to ground is detected on the microphone circuits.
- DTC B1D79:12 (Microphone Input: Circuit Short To Battery) — set by the APIM when a short to voltage is detected on the microphone circuits.
- DTC B1D79:13 (Microphone Input: Circuit Open) — set by the APIM when an open is detected on the microphone circuits.

This pinpoint test is intended to diagnose the following:

- Wiring, terminals, or connectors
- Microphone
- ACM (with navigation)
- APIM

PINPOINT TEST Z : VOICE RECOGNITION IS INOPERATIVE OR DOES NOT OPERATE CORRECTLY

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

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

Z1 CHECK THE OPERATION OF THE STEERING WHEEL SWITCHES

- Operate the audio system in radio tuner AM/FM mode.
- Press the VOICE button on the steering wheel switches.

Does the audio system enter voice recognition mode?

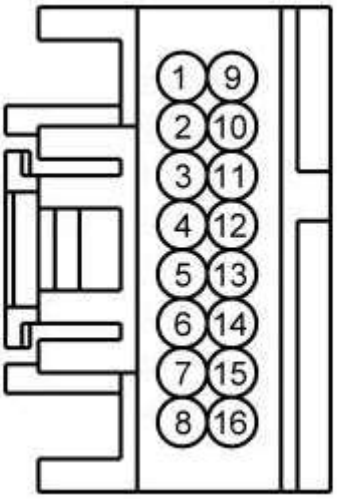
Yes	For vehicles with SYNC® and with navigation, GO to Z2. For vehicles with SYNC® and without navigation, GO to Z5.
No	GO to Pinpoint Test R to diagnose the steering wheel switches.

Z2 CHECK THE MICROPHONE SIGNAL TO THE ACM

NOTE: *ACM C290A must be disconnected after the ACM is powered on, or the ACM will not receive the RUN message over the network.*

- Operate the audio system in radio tuner AM/FM mode.
- Disconnect: ACM C290A .
- Press the VOICE button on the steering wheel switches.
- While speaking a command, measure the **AC voltage** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C290A Pin 11	VMM23 (BN/VT)	C290A Pin 12	RMM23 (WH/GN)



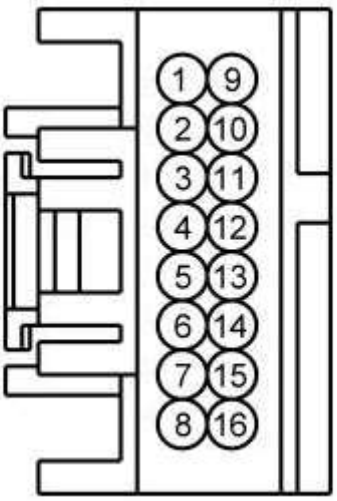
Is a fluctuating AC voltage present?

Yes	GO to Z10.
No	GO to Z3.

Z3 CHECK THE MICROPHONE CIRCUITS TO THE ACM FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect: APIM C2383 .
- Ignition ON.
- Measure the **voltage** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C290A Pin 11	VMM23 (BN/VT)	—	Ground
C290A Pin 12	RMM23 (WH/GN)	—	Ground



Is any voltage present?

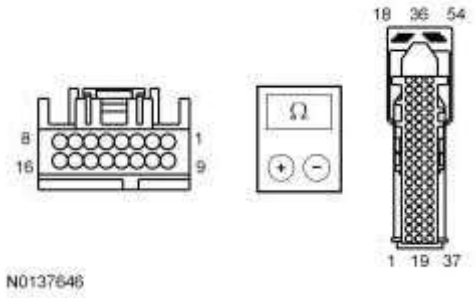
Yes	REPAIR the circuit in question. TEST the system for normal operation.

No	GO to Z4.

Z4 CHECK THE MICROPHONE CIRCUITS TO THE ACM FOR AN OPEN OR SHORT TO GROUND

- Ignition OFF.
- Measure the **resistance** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C290A Pin 11	VMM23 (BN/VT)	C2383 Pin 12, then ground	VMM23 (BN/VT)
C290A Pin 12	RMM23 (WH/GN)	C2383 Pin 13, then ground	RMM23 (WH/GN)



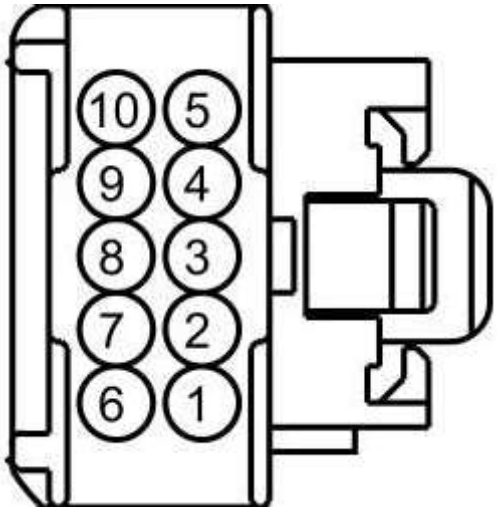
Are the resistances less than 3 ohms between the ACM and the APIM , and greater than 10,000 ohms between the ACM and ground?

Yes	GO to Z5.
No	REPAIR the circuit in question. TEST the system for normal operation.

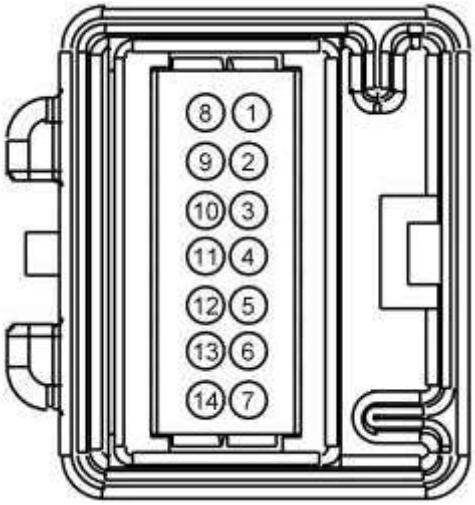
Z5 CHECK THE MICROPHONE CIRCUITS TO THE APIM FOR A SHORT TO VOLTAGE

- Disconnect: APIM C2383 .
- Disconnect: Overhead Console C930 (Coupe) or C9013 (Convertible) .
- Ignition ON.
- Measure the **voltage** between:

Vehicle	Positive Lead	Negative Lead	Circuit
Coupe	C930 Pin 9	Ground	VMM13 (YE)
	C930 Pin 10	Ground	RMM13 (BU)



Vehicle	Positive Lead	Negative Lead	Circuit
Convertible	C9013 Pin 12	Ground	VMM13 (YE)
	C9013 Pin 13	Ground	RMM13 (BU)



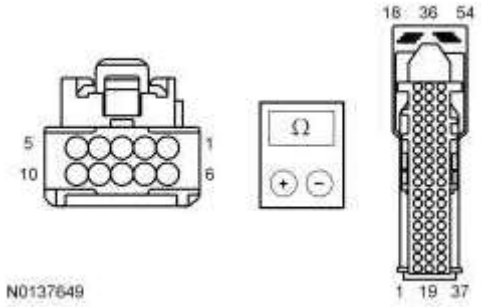
Is any voltage present?

Yes	REPAIR the circuit in question. TEST the system for normal operation.
No	GO to Z6.

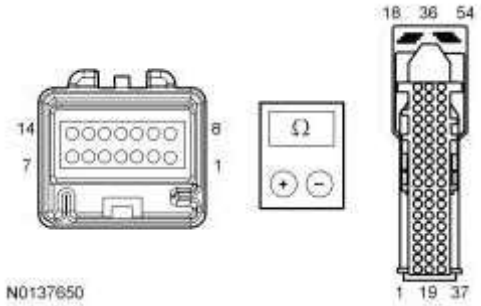
Z6 CHECK THE MICROPHONE CIRCUITS TO THE APIM FOR AN OPEN OR SHORT TO GROUND

- Ignition OFF.
- Measure the **resistance** between:

Vehicle	Positive Lead	Negative Lead	Circuit
Coupe	C930 Pin 9	C2383 Pin 18, then ground	VMM13 (YE/GN) (YE)
	C930 Pin 10	C2383 Pin 5, then ground	RMM13 (BU)
	C930 Pin 8	C2383 Pin 6	DMM13 (BK/GY)



Vehicle	Positive Lead	Negative Lead	Circuit
Convertible	C9013 Pin 12	C2383 Pin 18, then ground	VMM13 (YE/GN) (YE)
	C9013 Pin 13	C2383 Pin 5, then ground	RMM13 (BU)
	C9013 Pin 11	C2383 Pin 6	DMM13 (BK/GY)



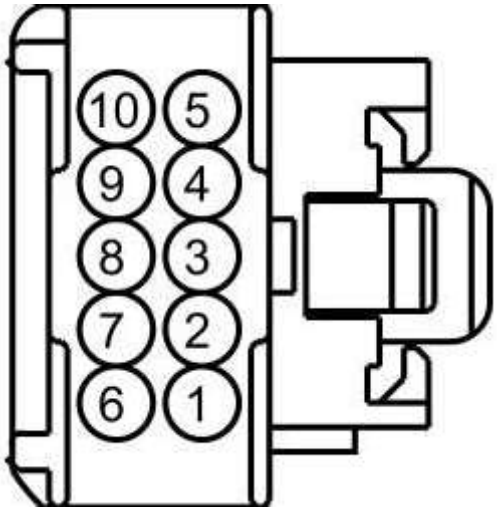
Are the resistances less than 3 ohms between the overhead console and the APIM , and greater than 10,000 ohms between the overhead console and ground?

Yes	GO to Z7.
No	REPAIR the circuit in question. TEST the system for normal operation.

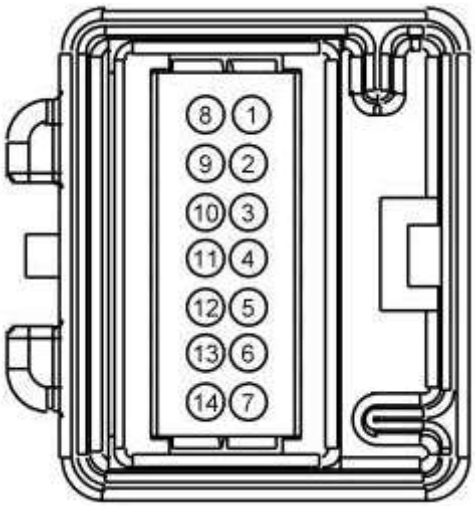
Z7 CHECK THE MICROPHONE CIRCUITS FOR A SHORT TOGETHER

- Ignition ON.
- Measure the **resistance** between:

Vehicle	Positive Lead	Negative Lead
Coupe	C930 Pin 9 VMM13 (YE)	C930 Pin 10 RMM13 (BU)
	C930 Pin 9 VMM13 (YE)	C930 Pin 8 DMM13 (BK/GY)
	C930 Pin 10 RMM13 (BU)	C930 Pin 8 DMM13 (BK/GY)



Vehicle	Positive Lead	Negative Lead
Convertible	C9013 Pin 12 VMM13 (YE)	C9013 Pin 13 RMM13 (BU)
	C9013 Pin 12 VMM13 (YE)	C9013 Pin 11 DMM13 (BK/GY)
	C9013 Pin 13 RMM13 (BU)	C9013 Pin 11DMM13 (BK/GY)



Is the resistance greater than 10,000 ohms?

Yes	GO to Z8.
No	REPAIR the circuits. TEST the system for normal operation.

Z8 ISOLATE THE MICROPHONE

- Ignition OFF.
- Connect: APIM C2383 .
- Install a new microphone. REFER to: Microphone
- Ignition ON.
- Operate the audio system in AM/FM mode.
- Operate the VOICE steering wheel switch and listen for the SYNC® audible prompt.
- Speak a command to test the voice recognition for normal operation.

Is the voice recognition functioning correctly?

Yes	The system is operating correctly at this time. The concern was caused by an inoperative microphone.
No	GO to Z9.

Z9 CHECK FOR CORRECT APIM OPERATION

- Disconnect and inspect the APIM connector.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the APIM connector. Make sure it seats and latches correctly.
- Wait at least 2 minutes for the APIM to re-initialize.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern,  **VIN required to access Guided Routine (APIM)** If the concern is still present, GO to Z9.
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Z10 CHECK FOR CORRECT ACM OPERATION

- Ignition OFF.
- Disconnect and inspect all the ACM connectors.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the ACM connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new ACM . REFER to Audio Control Module (ACM).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test AA: No Global Positioning System (GPS) Antenna Signal

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

The Global Positioning System (GPS) antenna provides information from the GPS satellite system to the Audio Front Control Module (ACM) . This information is used to calculate position and direction of travel.

A splitter is used in the front satellite radio antenna cable to split the signals between the satellite radio and the GPS . It is possible that a concern in the GPS signal line after the splitter may cause a navigation system concern without affecting the satellite radio.

- DTC B119F:01 (GPS Antenna: General Electrical Failure) — set by the ACM (with navigation) when any failure is detected in the GPS coaxial cable between the ACM and GPS /SDARS splitter.
- DTC B119F:13 (GPS Antenna: Circuit Open) — set by the ACM (with navigation) when an open is detected in the GPS coaxial cable between the ACM and GPS /SDARS splitter.

This pinpoint test is intended to diagnose the following:

- Obstructions in the antenna's line of sight
- Satellite radio antenna coaxial cable
- Satellite radio antenna
- ACM

PINPOINT TEST AA : NO GPS ANTENNA SIGNAL

AA1 CHECK THE NUMBER OF VISIBLE SATELLITES

- Drive the vehicle to an open location that is free from obstacles such as tall buildings or large trees.
- Access "GPS Info" in the Bezel Diagnostics menu. Audio Control Module (ACM) Self-Diagnostic Mode.
- If the "# Satellites:" value is less than "03," move the vehicle to another area and retest until a value of "03" or more is obtained.

Can a value of "03" or more be obtained?

Yes	The system is operating correctly at this time. The concern was a result of obstructions in the antenna's line of sight.
No	GO to AA2.

AA2 CHECK THE SATELLITE RADIO RECEPTION

- Drive the vehicle to an open location that is free from obstacles such as tall buildings or large trees.
- Enter the following diagnostic mode on the scan tool: ACM DataLogger .
- Monitor the satellite radio signal strength ACM PID (SAT_SIG_STR).
- If the PID reads "No Signal" or "Poor," move the vehicle to another area and retest until "Good," "Very Good," or "Excellent" PID values are obtained.

Can a "Good," "Very Good," or "Excellent" PID value be obtained?

Yes	INSTALL a new front satellite radio antenna cable. REFER to Antenna Cable — Satellite Radio. CLEAR any DTCs present. TEST the system for normal operation.
No	GO to AA3.

AA3 CHECK FOR ACM DTCS

- CLEAR the ACM DTCs.
- Carry out the ACM self-test.

Are any DTCs recorded in the ACM ?

Yes	• If DTC B119F:01 or DTC B119F:13 are present, INSTALL a new front satellite radio antenna cable. REFER to Antenna Cable — Satellite Radio. CLEAR the DTCs. TEST the system for normal operation. • If DTC B1A89:01 or DTC B1A89:13 are present, GO to Pinpoint Test B. • For all other DTCs, REFER to the ACM DTC Chart in Information and Entertainment System.
No	GO to AA4.

AA4 ISOLATE THE SATELLITE RADIO ANTENNA

- INSTALL a new satellite radio antenna. REFER to Antenna — Satellite Radio.
- Retest the system for normal operation.

Is the concern still present?

Yes	The concern was caused by an inoperative satellite radio antenna. The system is operating correctly at this time. CLEAR any DTCs present.
No	GO to AA5.

AA5 CHECK FOR CORRECT ACM OPERATION

- Ignition OFF.
- Disconnect and inspect all the ACM connectors.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the ACM connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new ACM . REFER to Audio Control Module (ACM).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test AB: The Position Cursor Is Inaccurate

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

The primary source of vehicle location for the navigation system is the Audio Front Control Module (ACM) receiving the position signal through the Global Positioning System (GPS) antenna (integral to the satellite radio antenna).

In addition, the ACM receives the navigation rolling wheel count signal from the Instrument Panel Cluster (IPC) , which gateways the signal from the ABS module. This secondary signal is used to calculate vehicle position when the GPS signal is lost. It also supports the adaptive learning function of the ACM , whereby the ACM can compensate for long-term differences between the GPS signal location and the actual distance traveled by the vehicle.

If DTC B119F:01 or DTC B119F:13 are present, GO to Pinpoint Test AA to diagnose a concern with the GPS antenna.

- DTC U2014:09 (Control Module Hardware: Component Failure) — set by the ACM (with navigation) when it detects a fault with the internal gyroscope. The gyroscope is not serviceable.

This pinpoint test is intended to diagnose the following:

- ACM

PINPOINT TEST AB : THE POSITION CURSOR IS INACCURATE

AB1 CHECK THE ACM FOR GPS SIGNAL-RELATED DTCS

- Retrieve the ACM continuous DTCs.

Is DTC B119F:01 or DTC B119F:13 present?

Yes	GO to Pinpoint Test AA.
No	GO to AB2.

AB2 CHECK FOR DTC U0155:00

- REVIEW the ACM continuous DTCs.

Is DTC U0155:00 present?

Yes	GO to Pinpoint Test AI.
No	GO to AB3.

AB3 CHECK FOR CORRECT ACM OPERATION

- Ignition OFF.
- Disconnect and inspect all the ACM connectors.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the ACM connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new ACM . REFER to Audio Control Module (ACM).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test AC: DTC B1318

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Refer to Wiring Diagrams Cell 130, Audio System/Navigation for schematic and connector information.

Normal Operation

- DTC B1318 (Battery Voltage Low) — set by the Front Display Interface Module (FDIM) (without navigation) when the supply voltage falls below 10 volts for greater than 10 seconds during normal operation or during the self-test.

This pinpoint test is intended to diagnose the following:

- Previous low battery voltage
- Wiring, terminals or connectors
- FDIM

PINPOINT TEST AC : DTC B1318

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

AC1 RECHECK FOR DTC B1318

- Ignition ON.
- Using a diagnostic scan tool, clear the FDIM DTCs.
- Wait at least 15 seconds.
- Using a diagnostic scan tool, repeat the self-test.

Is DTC B1318 still present?

Yes	GO to AC2.
No	The system is operating correctly at this time. The DTC may have been set due to a previous low battery voltage condition.

AC2 CHECK FOR CHARGING SYSTEM DTCS IN THE PCM

- Using a diagnostic scan tool, retrieve all CMDTCs .

Are any voltage-related DTCs set in the PCM ?

Yes	REFER to PCM DTC Chart in Section 414-00.
No	GO to AC3.

AC3 CHECK THE BATTERY CONDITION AND STATE OF CHARGE

- Check the battery condition and verify that the battery is fully charged. REFER to Battery Condition Test in Section 414-01.

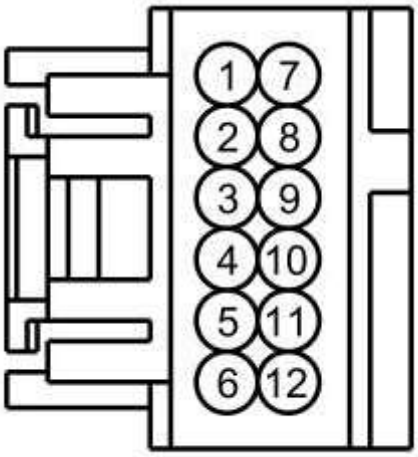
Is the battery OK and fully charged?

Yes	GO to AC4.
No	REFER to the Symptom Chart in Section 414-01.

AC4 CHECK THE FDIM VOLTAGE SUPPLY

- Ignition OFF.
- Measure and record the voltage at the battery.
- Disconnect: FDIM C2123.
- Ignition ON.
- Measure the **voltage** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C2123 Pin 12	SBP14 (BN/RD)	—	Ground



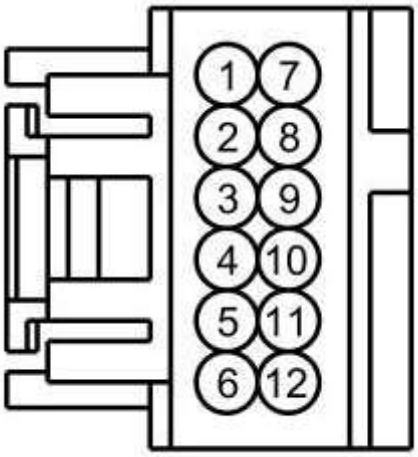
Is the voltage within 0.2 volts of the recorded battery voltage?

Yes	GO to AC5.
No	REPAIR the circuit for high resistance.

AC5 CHECK THE FDIM GROUND CIRCUIT FOR CONTINUITY

- Measure the **voltage** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C2123 Pin 12	SBP14 (BN/RD)	C2123 Pin 8	GD116 (BK/VT)



Is the voltage greater than 11 volts?

Yes	GO to AC6.
No	REPAIR the circuit for high resistance.

AC6 CHECK FOR CORRECT FDIM OPERATION

- Ignition OFF.
- Disconnect and inspect the FDIM connector.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the FDIM connector. Make sure it seats and latches correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new FDIM . REFER to Front Display Interface Module (FDIM).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test AD: DTC U0100:00

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

The Accessory Protocol Interface Module (APIM) receives network messages from the PCM via the High Speed Controller Area Network (HS-CAN) . These messages include the odometer reading and the fuel level.

As other modules outside of the audio system also receive these messages, all modules receiving a particular message should exhibit a symptom if the message is missing.

- DTC U0100:00 (Lost Communication With ECM /PCM "A": No Sub Type Information) — set by the APIM (if equipped) and GPSM when it is missing messages from the PCM over the HS-CAN for greater than 5 seconds with the ignition in RUN.

This pinpoint test is intended to diagnose the following:

- PCM

PINPOINT TEST AD : DTC U0100:00

AD1 CHECK FOR LOST COMMUNICATION DTCS
• Ignition ON. • CLEAR continuous DTCs from all modules. • Ignition OFF. • Ignition ON. • Wait at least 10 seconds. • Retrieve all continuous DTCs from all modules. **Is U0100:00 set in any modules?**

Yes	GO to AD2.
No	The system is operating correctly at this time. The DTC may have been set due to an intermittent fault in the network wiring.

AD2 CHECK FOR BATTERY VOLTAGE OUT-OF-RANGE DTCS
• Carry out the self-test for the following modules: ▪ APIM ▪ GPSM ▪ PCM ▪ Instrument Panel Cluster (IPC) **Is DTC U3003:16 or DTC U3003:17 recorded in any module?**

Yes	For the APIM and GPSM , REFER to DTC Charts in this section. For all other modules, REFER to Section 419-10.
No	GO to AD3.

AD3 CHECK FOR DTC U0100 OR DTC U0100:00 SET IN MULTIPLE MODULES
• REVIEW the recorded results from the self-test. **Is DTC U0100 or DTC U0100:00 set in more than one module?**

Yes	GO to AD4.
No	If there is an observable symptom, GO to Symptom Chart — General Audio System to diagnose the observed symptom. If there is no observable symptom, CHECK the wiring between the APIM and PCM and between the GPSM and PCM for a fault.

AD4 CHECK FOR CORRECT PCM OPERATION
• Ignition OFF. • Disconnect and inspect all the PCM connectors. • Repair: ▪ Corrosion (clean module pins or install new connectors or terminals) ▪ Damaged or bent pins (install new terminals or pins) ▪ Pushed-out pins (install new pins as necessary) • Reconnect the PCM connectors. Make sure they seat and latch correctly. • Operate the system and determine if the concern is still present. **Is the concern still present?**

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new PCM . REFER to Section 303-14.
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test AE: DTC U0140

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

Several audio system modules receive network messages from the Smart Junction Box (SJB) via the Medium Speed Controller Area Network (MS-CAN) . The following information is included in the messages:

- Ignition switch position
- Illumination dimmer control
- Accessory delay status

As more than one module receives these messages, all modules receiving a particular message should exhibit a symptom if the message is missing.

- DTC U0140 (Lost Communication With Body Control Module) — set by the Front Display Interface Module (FDIM) (without navigation) when network messages are missing from the SJB for greater than 5 seconds with the ignition in RUN.

This pinpoint test is intended to diagnose the following:

- SJB

PINPOINT TEST AE : DTC U0140

AE1 VERIFY THE CUSTOMER'S CONCERN
• Ignition ON. • Verify if there is an observable symptom present. **Is an observable symptom present?**

Yes	GO to AE2.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AE2 RECHECK FOR DTC U0140

- Ignition ON.
- Using a diagnostic scan tool, clear all CMDTCs .
- Ignition OFF.
- Ignition ON.
- Wait at least 10 seconds.
- Using a diagnostic scan tool, retrieve all CMDTCs .

Is DTC U0140 set in the FDIM ?

Yes	GO to AE3.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AE3 CHECK THE SJB FOR BATTERY VOLTAGE OUT-OF-RANGE DTCS

- Using a diagnostic scan tool, perform the SJB self-test.

Are any low or high voltage DTCs recorded in the SJB ?

Yes	REFER to SJB DTC Chart in Section 419-10.
No	GO to AE4.

AE4 CHECK FOR CORRECT SJB OPERATION

- Ignition OFF.
- Disconnect and inspect all the SJB connectors.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the SJB connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new SJB . REFER to Section 419-10.
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test AF: DTC U0140:00

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

Several audio system modules receive network messages from the Smart Junction Box (SJB) via the Medium Speed Controller Area Network (MS-CAN) . The following information is included in the messages:

- Ignition switch position
- Illumination dimmer control
- Accessory delay status

As more than one module receives these messages, all modules receiving a particular message should exhibit a symptom if the message is missing.

- DTC U0140:00 (Lost Communication With Body Control Module: No Sub Type Information) — set by the ACM (without navigation), ACM (with navigation), Accessory Protocol Interface Module (APIM) (if equipped), FCIM (without navigation), FCIM (with navigation), and Global Positioning System Module (GPSM) when network messages are missing from the SJB for greater than 5 seconds with the ignition in RUN.

This pinpoint test is intended to diagnose the following:

- SJB

PINPOINT TEST AF : DTC U0140:00

AF1 VERIFY THE CUSTOMER'S CONCERN

- Ignition ON.
- Verify if there is an observable symptom present.

Is an observable symptom present?

Yes	GO to AF2.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AF2 RECHECK FOR DTC U0140:00

- Ignition ON.
- Using a diagnostic scan tool, clear all CMDTCs .
- Ignition OFF.
- Ignition ON.
- Wait at least 10 seconds.
- Using a diagnostic scan tool, retrieve all CMDTCs .

Is DTC U0140:00 set in the ACM , APIM (if equipped), FCIM , or GPSM ?

Yes	GO to AF3.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AF3 CHECK THE SJB FOR BATTERY VOLTAGE OUT-OF-RANGE DTCS

- Using a diagnostic scan tool, perform the SJB self-test.

Are any low or high voltage DTCs recorded in the SJB ?

Yes	REFER to SJB DTC Chart in Section 419-10.
No	GO to AF4.

AF4 CHECK FOR BATTERY VOLTAGE OUT-OF-RANGE DTCS

- Using a diagnostic scan tool, perform the self-test for the following modules:
  - ACM
  - APIM (if equipped)
  - FCIM
  - GPSM

Are low or high voltage DTCs recorded in the ACM , APIM (if equipped), FCIM , or GPSM ?

Yes	For DTC U3003:16, GO to Pinpoint Test AT For DTC U3003:17, GO to Pinpoint Test AU

No	GO to AF5.

AF5 CHECK FOR DTC U0140:00 SET IN MULTIPLE MODULES

- Review the recorded results from the self-test.

Is DTC U0140:00 set in more than one audio system module?

Yes	GO to AF6.
No	If there is an observable symptom, GO to Symptom Chart — General Audio System to diagnose the observed symptom. If there is no observable symptom, the system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AF6 CHECK FOR CORRECT SJB OPERATION

- Ignition OFF.
- Disconnect and inspect all the SJB connectors.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the SJB connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new SJB . REFER to Section 419-10.
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test AG: DTC U0151:00

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

The Accessory Protocol Interface Module (APIM) receives the eCall status message from the Restraints Control Module (RCM) via the High Speed Controller Area Network (HS-CAN) . This message indicates the status of the emergency call system to the APIM .

- DTC U0151:00 (Lost Communication With Restraints Control Module: No Sub Type Information) — set by the APIM when it is missing the eCall status message from the RCM over the HS-CAN for greater than 5 seconds with the ignition in RUN.

This pinpoint test is intended to diagnose the following:

- RCM

PINPOINT TEST AG : DTC U0151:00

AG1 CHECK FOR LOST COMMUNICATION DTCS

- Ignition ON.
- CLEAR continuous DTCs from all modules.
- Ignition OFF.
- Ignition ON.

- Wait at least 10 seconds.
- Retrieve all continuous DTCs from all modules.

Is U0151:00 set in any modules?

Yes	GO to AG2.
No	The system is operating correctly at this time. The DTC may have been set due to an intermittent fault in the network wiring.

AG2 CHECK FOR BATTERY VOLTAGE OUT-OF-RANGE DTCS

- Carry out the self-test for the following modules:
  - APIM
  - PCM
  - RCM
  - Instrument Panel Cluster (IPC)

Is DTC U3003:16 or DTC U3003:17 recorded in any module?

Yes	For the APIM , REFER to DTC Charts in this section. For all other modules, REFER to Section 419-10.
No	GO to AG3.

AG3 CHECK FOR DTC U0151 OR DTC U0151:00 SET IN MULTIPLE MODULES

- REVIEW the recorded results from the self-test.

Is DTC U0151:00 set in more than one module?

Yes	GO to AG4.
No	If there is an observable audio system symptom, GO to Symptom Chart — General Audio System to diagnose the observed symptom. If there is an observable restraints system symptom, REFER to Section 501-20B to diagnose the symptom. If there is no observable symptom, CHECK the wiring between the APIM and the RCM for a fault.

AG4 CHECK FOR CORRECT RCM OPERATION

- Ignition OFF.
- Disconnect and inspect all the RCM connectors.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the RCM connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new RCM . REFER to Section 501-20B.
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test AH: DTC U0155

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

Several audio system modules receive network messages from the Instrument Panel Cluster (IPC) via the Medium Speed Controller Area Network (MS-CAN) . The following information is included in the messages:

- English/metric units
- Vehicle Identification Number (VIN)
- Transmission gear selected
- Vehicle speed

As more than one module receives these messages, all modules receiving a particular message should exhibit a symptom if the message is missing.

- DTC U0155 (Lost Communication with Instrument Panel Cluster (IPC) Control Panel) — set by the Front Display Interface Module (FDIM) (without navigation) when network messages are missing from the IPC for more than 5 seconds with the ignition in RUN.

This pinpoint test is intended to diagnose the following:

- IPC

PINPOINT TEST AH : DTC U0155

AH1 VERIFY THE CUSTOMER'S CONCERN

- Ignition ON.
- Verify if there is an observable symptom present.

Is an observable symptom present?

Yes	GO to AH2.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AH2 RECHECK FOR DTC U0155

- Ignition ON.
- Using a diagnostic scan tool, clear all CMDTCs .
- Ignition OFF.
- Ignition ON.
- Wait at least 10 seconds.
- Using a diagnostic scan tool, retrieve all CMDTCs .

Is DTC U0155 set in the FDIM ?

Yes	GO to AH3.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AH3 CHECK THE IPC FOR BATTERY VOLTAGE OUT-OF-RANGE DTCS

- Using a diagnostic scan tool, perform the IPC self-test.

Are any low or high voltage DTCs recorded in the IPC ?

Yes	REFER to IPC DTC Chart in Section 413-01.
No	GO to AH4.

AH4 CHECK FOR CORRECT IPC OPERATION

- Ignition OFF.
- Disconnect and inspect the IPC connector.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the IPC connector. Make sure it seats and latches correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new IPC. Refer to the appropriate Removal and Installation procedure in Section 413-01.
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test AI: DTC U0155:00

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

Several audio system modules receive network messages from the Instrument Panel Cluster (IPC) via the Medium Speed Controller Area Network (MS-CAN) . The following information is included in the messages:

- English/metric units
- Vehicle Identification Number (VIN)
- Transmission gear selected
- Vehicle speed

As more than one module receives these messages, all modules receiving a particular message should exhibit a symptom if the message is missing.

- DTC U0155:00 (Lost Communication With Instrument Panel Cluster (IPC) Control Module: No Sub Type Information) — set by the ACM (without navigation), ACM (with navigation), APIM (if equipped), and GPSM when network messages are missing from the IPC for more than 5 seconds with the ignition in RUN.

This pinpoint test is intended to diagnose the following:

- IPC

PINPOINT TEST AI : DTC U0155:00

AI1 VERIFY THE CUSTOMER'S CONCERN

- Ignition ON.
- Verify if there is an observable symptom present.

Is an observable symptom present?

Yes	GO to AI2.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AI2 RECHECK FOR DTC U0155:00

- Ignition ON.
- Using a diagnostic scan tool, clear all CMDTCs .
- Ignition OFF.
- Ignition ON.
- Wait at least 10 seconds.
- Using a diagnostic scan tool, retrieve all CMDTCs .

Is DTC U0155:00 set in the ACM , APIM (if equipped), or GPSM ?

Yes	GO to AI3.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AI3 CHECK THE IPC FOR BATTERY VOLTAGE OUT-OF-RANGE DTCS

- Using a diagnostic scan tool, perform the IPC self-test.

Are any low or high voltage DTCs recorded in the IPC ?

Yes	REFER to IPC DTC Chart in Section 413-01.
No	GO to AI4.

AI4 CHECK FOR BATTERY VOLTAGE OUT-OF-RANGE DTCS

- Using a diagnostic scan tool, perform the self-test for the following modules:
  - ACM
  - APIM (if equipped)
  - GPSM

Are low or high voltage DTCs recorded in the ACM , APIM (if equipped), or GPSM ?

Yes	For DTC U3003:16, GO to Pinpoint Test AT For DTC U3003:17, GO to Pinpoint Test AU
No	GO to AI5.

AI5 CHECK FOR DTC U0155:00 SET IN MULTIPLE MODULES

- Review the recorded results from the self-test.

Is DTC U0155:00 set in more than one audio system module?

Yes	GO to AI6.
No	If there is an observable symptom, GO to Symptom Chart — General Audio System to diagnose the observed symptom. If there is no observable symptom, the system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AI6 CHECK FOR CORRECT IPC OPERATION

- Ignition OFF.
- Disconnect and inspect the IPC connector.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)

- Reconnect the IPC connector. Make sure it seats and latches correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new IPC. Refer to the appropriate Removal and Installation procedure in Section 413-01.
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test AJ: DTC U0159:00

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

- DTC U0159:00 (Lost Communication With Parking Assist Control Module "A": No Sub Type Information) — set by the ACM (without navigation) and ACM (with navigation) when the volume cutback message is missing from the PAM for more than 5 seconds with the ignition in RUN. When the message is missing, the ACM defaults to no volume cutback when the parking aid tone is sounding.

This pinpoint test is intended to diagnose the following:

- PAM

PINPOINT TEST AJ : DTC U0159:00

AJ1 VERIFY THE CUSTOMER'S CONCERN

- Ignition ON.
- Verify if there is an observable symptom present.

Is an observable symptom present?

Yes	GO to AJ2.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AJ2 RECHECK FOR DTC U0159:00

- Ignition ON.
- Using a diagnostic scan tool, clear all CMDTCs .
- Ignition OFF.
- Ignition ON.
- Wait at least 10 seconds.
- Using a diagnostic scan tool, retrieve all CMDTCs .

Is DTC U0159:00 set in the ACM ?

Yes	GO to AJ3.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AJ3 CHECK THE PAM FOR BATTERY VOLTAGE OUT-OF-RANGE DTCS

- Using a diagnostic scan tool, perform the PAM self-test.

Are any low or high voltage DTCs recorded in the PAM ?

Yes	REFER to PAM DTC Chart in Section 413-13.
No	GO to AJ4.

AJ4 CHECK THEACM FOR BATTERY VOLTAGE OUT-OF-RANGE DTCS

- Using a diagnostic scan tool, perform the ACM self-test.

Are any low or high voltage DTCs recorded in the ACM ?

Yes	For DTC U3003:16, GO to Pinpoint Test AT For DTC U3003:17, GO to Pinpoint Test AU
No	GO to AJ5.

AJ5 CHECK FOR CORRECT PAM OPERATION

- Ignition OFF.
- Disconnect and inspect the PAM connector.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the PAM connector. Make sure it seats and latches correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new PAM . REFER to Section 413-13.
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test AK: DTC U0164

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

Some audio system modules receive network messages from the HVAC module via the Medium Speed Controller Area Network (MS-CAN) . The following information is included in the messages:

- HVAC indication status
- Outside temperature

As more than one module receives these messages, all modules receiving a particular message should exhibit a symptom if the message is missing.

- DTC U0164 (Lost Communication With HVAC Control Module - EATC) — set by the Front Display Interface Module (FDIM) (without navigation) when network messages are missing from the HVAC module for more than 5 seconds with the ignition in RUN.

This pinpoint test is intended to diagnose the following:

- HVAC module

PINPOINT TEST AK : DTC U0164

AK1 VERIFY THE CUSTOMER'S CONCERN

- Ignition ON.
- Verify if there is an observable symptom present.

Is an observable symptom present?

Yes	GO to AK2.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AK2 RECHECK FOR DTC U0164

- Ignition ON.
- Using a diagnostic scan tool, clear all CMDTCs .
- Ignition OFF.
- Ignition ON.
- Wait at least 10 seconds.
- Using a diagnostic scan tool, retrieve all CMDTCs .

Is DTC U0164 set in the FDIM ?

Yes	GO to AK3.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AK3 CHECK THE HVAC MODULE FOR BATTERY VOLTAGE OUT-OF-RANGE DTCS

- Using a diagnostic scan tool, perform the HVAC module self-test.

Are any low or high voltage DTCs recorded in the HVAC module?

Yes	REFER to HVAC module DTC Chart in Section 412-00.
No	GO to AK4.

AK4 CHECK FOR DTC B1318 SET IN THE FDIM

- Using a diagnostic scan tool, perform the FDIM self-test.

Is DTC B1318 set in the FDIM ?

Yes	GO to Pinpoint Test AC
No	GO to AK5.

AK5 CHECK FOR CORRECT HVAC MODULE OPERATION

- Ignition OFF.
- Disconnect and inspect all the HVAC module connectors.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the HVAC module connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new HVAC module. REFER to Section 412-01.
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test AL: DTC U0164:00

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

Some audio system modules receive network messages from the HVAC module via the Medium Speed Controller Area Network (MS-CAN) . The following information is included in the messages:

- HVAC indication status
- Outside temperature

As more than one module receives these messages, all modules receiving a particular message should exhibit a symptom if the message is missing.

- DTC U0164:00 (Lost Communication With HVAC Control Module - EATC) — set by the Audio Front Control Module (ACM) (with navigation) when network messages are missing from the HVAC module for more than 5 seconds with the ignition in RUN.

This pinpoint test is intended to diagnose the following:

- HVAC module

PINPOINT TEST AL : DTC U0164:00

AL1 VERIFY THE CUSTOMER'S CONCERN

- Ignition ON.
- Verify if there is an observable symptom present.

Is an observable symptom present?

Yes	GO to AL2.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AL2 RECHECK FOR DTC U0164

- Ignition ON.
- Using a diagnostic scan tool, clear all CMDTCs .
- Ignition OFF.
- Ignition ON.
- Wait at least 10 seconds.
- Using a diagnostic scan tool, retrieve all CMDTCs .

Is DTC U0164 set in the Audio Front Control Module (ACM) ?

Yes	GO to AL3.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AL3 CHECK THE HVAC MODULE FOR BATTERY VOLTAGE OUT-OF-RANGE DTCS

- Using a diagnostic scan tool, perform the HVAC module self-test.

Are any low or high voltage DTCs recorded in the HVAC module?

Yes	REFER to HVAC module DTC Chart in Section 412-00.
No	GO to AL4.

AL4 CHECK THE ACM FOR BATTERY VOLTAGE OUT-OF-RANGE DTCS

- Using a diagnostic scan tool, perform the ACM self-test.

Are any low or high voltage DTCs recorded in the ACM ?

Yes	For DTC U3003:16, GO to Pinpoint Test AT For DTC U3003:17, GO to Pinpoint Test AU
No	GO to AL5.

AL5 CHECK FOR CORRECT HVAC MODULE OPERATION

- Ignition OFF.
- Disconnect and inspect all the HVAC module connectors.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the HVAC module connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new HVAC module. REFER to Section 412-01.
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test AM: DTC U016A:00

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

- DTC U016A:00 (Lost Communication With Global Positioning System Module (GPSM) : No Sub Type Information) — set by the Accessory Protocol Interface Module (APIM) when it is missing network messages from the Global Positioning System Module (GPSM) over the Medium Speed Controller Area Network (MS-CAN) for greater than 5 seconds with the ignition in RUN.

This pinpoint test is intended to diagnose the following:

- GPSM

PINPOINT TEST AM : DTC U016A:00

AM1 CHECK THE APIM DTCS

NOTE: *If new modules were installed prior to the DTC being set, the module configuration may be incorrectly set during Programmable Module Installation (PMI) or the PMI may not have been carried out.*

- CLEAR the APIM DTCs.
- Ignition OFF.
- Ignition ON.
- Wait at least 10 seconds.
- REPEAT the APIM self-test.

Is DTC U016A:00 still present?

Yes	GO to AM2.
No	The system is operating correctly at this time. The DTC may have been set due to an intermittent fault in the network wiring.

AM2 VERIFY THE CUSTOMER CONCERN

- Ignition ON.
- Verify that there is an observable symptom present.

Is an observable symptom present?

Yes	GO to AM3.
No	The system is operating correctly at this time. The DTC may have been set due to an intermittent fault in the network wiring. CHECK the MS-CAN wiring between the APIM and the GPSM for a fault.

AM3 CHECK THE COMMUNICATION NETWORK

- Ignition ON.
- Carry out the network test using the diagnostic scan tool.

Does the GPSM pass the network test?

Yes	GO to AM4.
No	REFER to Section 418-00.

AM4 CHECK FOR BATTERY VOLTAGE OUT-OF-RANGE DTCS

- Carry out the self-test for the following modules:
  - APIM
  - GPSM

Is DTC U3003:16 or DTC U3003:17 recorded in either module?

Yes	REFER to DTC Charts in this section.
No	GO to AM5.

AM5 CHECK FOR CORRECT GPSM OPERATION

- Ignition OFF.
- Disconnect and inspect the GPSM connector.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the GPSM connector. Make sure it seats and latches correctly.

- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new GPSM . REFER to Global Positioning System Module (GPSM).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test AN: DTC U0184

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

Several audio system modules receive network messages from the Audio Front Control Module (ACM) via the Medium Speed Controller Area Network (MS-CAN) . These messages consist of various audio system related information.

As more than one module receives these messages, all modules receiving a particular message should exhibit a symptom if the message is missing.

- DTC U0184 [Lost Communication With Radio (ACM)] — set by the Front Display Interface Module (FDIM) (without navigation) when network messages are missing from the ACM for more than 5 seconds with the ignition in RUN.

This pinpoint test is intended to diagnose the following:

- ACM

PINPOINT TEST AN : DTC U0184

AN1 VERIFY THE CUSTOMER'S CONCERN

- Ignition ON.
- Verify if there is an observable symptom present.

Is an observable symptom present?

Yes	GO to AN2.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AN2 RECHECK FOR DTC U0184

- Ignition ON.
- Using a diagnostic scan tool, clear all CMDTCs .
- Ignition OFF.
- Ignition ON.
- Wait at least 10 seconds.
- Using a diagnostic scan tool, retrieve all CMDTCs .

Is DTC U0184 set in the FDIM ?

Yes	GO to AN3.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AN3 CHECK THE ACM FOR BATTERY VOLTAGE OUT-OF-RANGE DTCS

- Using a diagnostic scan tool, perform the ACM self-test.

Are any low or high voltage DTCs recorded in the ACM ?

Yes	For DTC U3003:16, GO to Pinpoint Test AT For DTC U3003:17, GO to Pinpoint Test AU
No	GO to AN4.

AN4 CHECK FOR DTC B1318 SET IN THE FDIM

- Using a diagnostic scan tool, perform the FDIM self-test.

Is DTC B1318 set in the FDIM ?

Yes	GO to Pinpoint Test AC
No	GO to AN5.

AN5 CHECK FOR CORRECT ACM OPERATION

- Ignition OFF.
- Disconnect and inspect all the ACM connectors.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the ACM connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new ACM . REFER to Audio Control Module (ACM).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test AO: DTC U0184:00

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

Several audio system modules receive network messages from the Audio Front Control Module (ACM) via the Medium Speed Controller Area Network (MS-CAN) . These messages consist of various audio system related information.

As more than one module receives these messages, all modules receiving a particular message should exhibit a symptom if the message is missing.

- DTC U0184:00 (Lost Communication With Radio: No Sub Type Information) — set by the Accessory Protocol Interface Module (APIM) (if equipped), FCIM (without navigation), and FCIM (with navigation) when network messages are missing from the ACM for greater than 5 seconds with the ignition in RUN.

This pinpoint test is intended to diagnose the following:

- ACM

PINPOINT TEST AO : DTC U0184:00

AO1 VERIFY THE CUSTOMER'S CONCERN

- Ignition ON.
- Verify if there is an observable symptom present.

Is an observable symptom present?

Yes	GO to AO2.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AO2 RECHECK FOR DTC U0184:00

- Ignition ON.
- Using a diagnostic scan tool, clear all CMDTCs .
- Ignition OFF.
- Ignition ON.
- Wait at least 10 seconds.
- Using a diagnostic scan tool, retrieve all CMDTCs .

Is DTC U0184:00 set in the FCIM ?

Yes	GO to AO3.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AO3 CHECK FOR BATTERY VOLTAGE OUT-OF-RANGE DTCS

- Using a diagnostic scan tool, perform the self-test for the following modules:
  - ACM
  - APIM
  - FCIM

Are low or high voltage DTCs recorded in the ACM , APIM , or FCIM ?

Yes	For DTC U3003:16, GO to Pinpoint Test AT For DTC U3003:17, GO to Pinpoint Test AU
No	GO to AO4.

AO4 CHECK FOR CORRECT ACM OPERATION

- Ignition OFF.
- Disconnect and inspect all the ACM connectors.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the ACM connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new ACM . REFER to Audio Control Module (ACM).

No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test AP: DTC U0197

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

Several audio system modules receive network messages from the Accessory Protocol Interface Module (APIM) via the Medium Speed Controller Area Network (MS-CAN) . These messages consist of various audio system related information.

As more than one module receives these messages, all modules receiving a particular message should exhibit a symptom if the message is missing.

- DTC U0197 (Lost Communication With Telephone Control Module) — set by the FDIM (without navigation) when network messages are missing from the APIM for more than 5 seconds with the ignition in RUN.

This pinpoint test is intended to diagnose the following:

- APIM

PINPOINT TEST AP : DTC U0197

AP1 VERIFY THE CUSTOMER'S CONCERN

- Ignition ON.
- Verify if there is an observable symptom present.

Is an observable symptom present?

Yes	GO to AP2.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AP2 RECHECK FOR DTC U0197

- Ignition ON.
- Using a diagnostic scan tool, clear all CMDTCs .
- Ignition OFF.
- Ignition ON.
- Wait at least 10 seconds.
- Using a diagnostic scan tool, retrieve all CMDTCs .

Is DTC U0197 set in the FDIM ?

Yes	GO to AP3.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AP3 CHECK THE APIM FOR BATTERY VOLTAGE OUT-OF-RANGE DTCS

- Using a diagnostic scan tool, perform the APIM self-test.

Are any low or high voltage DTCs recorded in the APIM ?

Yes	For DTC U3003:16, GO to Pinpoint Test AT For DTC U3003:17, GO to Pinpoint Test AU
No	GO to AP4.

AP4 CHECK FOR DTC B1318 SET IN THE FDIM

- Using a diagnostic scan tool, perform the FDIM self-test.

Is DTC B1318 set in the FDIM ?

Yes	GO to Pinpoint Test AC
No	GO to AP5.

AP5 CHECK FOR CORRECT APIM OPERATION

- Ignition OFF.
- Disconnect and inspect the APIM connector.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the APIM connector. Make sure it seats and latches correctly.
- Wait at least 2 minutes for the APIM to re-initialize.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern,  **VIN required to access Guided Routine (APIM)**
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test AQ: DTC U0197:00

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

Several audio system modules receive network messages from the Accessory Protocol Interface Module (APIM) via the Medium Speed Controller Area Network (MS-CAN) . These messages consist of various audio system related information.

As more than one module receives these messages, all modules receiving a particular message should exhibit a symptom if the message is missing.

- DTC U0197:00 (Lost Communication With Telephone Control Module: No Sub Type Information) — set by the ACM (without navigation) and ACM (with navigation) when network messages are missing from the APIM (if equipped) for more than 5 seconds with the ignition in RUN.

This pinpoint test is intended to diagnose the following:

- APIM

PINPOINT TEST AQ : DTC U0197:00

AQ1 VERIFY THE CUSTOMER'S CONCERN

- Ignition ON.
- Verify if there is an observable symptom present.

Is an observable symptom present?

Yes	GO to AQ2.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AQ2 RECHECK FOR DTC U0197:00

- Ignition ON.
- Using a diagnostic scan tool, clear all CMDTCs .
- Ignition OFF.
- Ignition ON.
- Wait at least 10 seconds.
- Using a diagnostic scan tool, retrieve all CMDTCs .

Is DTC U0197:00 set in the ACM ?

Yes	GO to AQ3.
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

AQ3 CHECK FOR BATTERY VOLTAGE OUT-OF-RANGE DTCS

- Using a diagnostic scan tool, perform the self-test for the following modules:
  - ACM
  - APIM

Are low or high voltage DTCs recorded in the ACM or APIM ?

Yes	For DTC U3003:16, GO to Pinpoint Test AT For DTC U3003:17, GO to Pinpoint Test AU
No	GO to AQ4.

AQ4 CHECK FOR CORRECT APIM OPERATION

- Ignition OFF.
- Disconnect and inspect the APIM connector.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the APIM connector. Make sure it seats and latches correctly.
- Wait at least 2 minutes for the APIM to re-initialize.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern,  **VIN required to access Guided Routine (APIM)**
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test AR: DTC U0255:00

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

- DTC U0255:00 (Lost Communication With Front Display Interface Module: No Sub Type Information) — set by the Audio Front Control Module (ACM) (without navigation) and Accessory Protocol Interface Module (APIM) (without navigation) when network messages are missing from the Front Display Interface Module (FDIM) (without navigation) over the Medium Speed Controller Area Network (MS-CAN) for greater than 5 seconds with the ignition in RUN.

This pinpoint test is intended to diagnose the following:

- FDIM (without navigation)

PINPOINT TEST AR : DTC U0255:00

NOTE: *Disregard the pinpoint test steps for the APIM if the concern is on a vehicle without the SYNC® system.*

AR1 CHECK THE ACM AND APIM DTCS

NOTE: *If new modules were installed prior to the DTC being set, the module configuration may be incorrectly set during Programmable Module Installation (PMI) or the PMI may not have been carried out.*

- CLEAR the ACM and APIM DTCs.
- Ignition OFF.
- Ignition ON.
- Wait at least 10 seconds.
- REPEAT the ACM and APIM self-tests.

Is DTC U0255:00 still present?

Yes	GO to AR2.
No	The system is operating correctly at this time. The DTC may have been set due to an intermittent fault in the network wiring.

AR2 VERIFY THE CUSTOMER CONCERN

- Ignition ON.
- Verify that there is an observable symptom present.

Is an observable symptom present?

Yes	GO to AR3.
No	The system is operating correctly at this time. The DTC may have been set due to an intermittent fault in the network wiring. CHECK the MS-CAN wiring between the FDIM and the module in question for a fault.

AR3 CHECK THE COMMUNICATION NETWORK

- Ignition ON.
- Carry out the network test using the diagnostic scan tool.

Does the FDIM pass the network test?

Yes	GO to AR4.
No	REFER to Section 418-00.

AR4 CHECK FOR BATTERY VOLTAGE OUT-OF-RANGE DTCS

- Carry out the self-test for the following modules:
  - ACM
  - APIM
  - FDIM

Is DTC B1318, DTC U3003:16, or DTC U3003:17 recorded in any module?

Yes	REFER to DTC Charts in this section.
No	INSTALL a new FDIM . REFER to Front Display Interface Module (FDIM). CLEAR the ACM and APIM DTCs. REPEAT the ACM and APIM self-tests. If DTC U0255:00 is still present in the ACM , INSTALL a new ACM . REFER to Audio Control Module (ACM). TEST the system for normal operation. If DTC U0255:00 is still present in the APIM ,  **VIN required to access Guided Routine (APIM)**

Pinpoint Test AS: DTC U0256:00

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

- DTC U0256:00 (Lost Communication With Front Controls Interface Module "A": No Sub Type Information) — set by the ACM (without navigation), ACM (with navigation), and Accessory Protocol Interface Module (APIM) when network messages are missing from the Front Controls Interface Module (FCIM) over the Medium Speed Controller Area Network (MS-CAN) for greater than 5 seconds with the ignition in RUN.

This pinpoint test is intended to diagnose the following:

- FCIM

PINPOINT TEST AS : DTC U0256:00

NOTE: *Disregard the pinpoint test steps for the APIM if the concern is on a vehicle without the SYNC® system.*

AS1 CHECK THE ACM AND FDIM DTCS

NOTE: *If new modules were installed prior to the DTC being set, the module configuration may be incorrectly set during Programmable Module Installation (PMI) or the PMI may not have been carried out.*

- CLEAR the ACM and APIM DTCs.
- Ignition OFF.
- Ignition ON.
- Wait at least 10 seconds.
- REPEAT the ACM and APIM self-tests.

Is DTC U0256:00 still present?

Yes	GO to AS2.
No	The system is operating correctly at this time. The DTC may have been set due to an intermittent fault in the network wiring.

AS2 VERIFY THE CUSTOMER CONCERN

- Ignition ON.

- Verify that there is an observable symptom present.

Is an observable symptom present?

Yes	GO to AS3.
No	The system is operating correctly at this time. The DTC may have been set due to an intermittent fault in the network wiring. CHECK the MS-CAN wiring between the FCIM and the module in question for a fault.

AS3 CHECK THE COMMUNICATION NETWORK

- Ignition ON.
- Carry out the network test using the diagnostic scan tool.

Does the FCIM pass the network test?

Yes	GO to AS4.
No	REFER to Section 418-00.

AS4 CHECK FOR BATTERY VOLTAGE OUT-OF-RANGE DTCS

- Carry out the self-test for the following modules:
  - ACM
  - APIM
  - FCIM

Is DTC U3003:16 or DTC U3003:17 recorded in any module?

Yes	REFER to DTC Charts in this section.
No	INSTALL a new FCIM . REFER to Front Controls Interface Module (FCIM). CLEAR the ACM and APIM DTCs. REPEAT the ACM and APIM self-tests. If U0256:00 is still present in the ACM , INSTALL a new ACM . REFER to Audio Control Module (ACM). TEST the system for normal operation. If DTC U0256:00 is still present in the APIM ,  **VIN required to access Guided Routine (APIM)**

Pinpoint Test AT: DTC U3003:16

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Refer to Wiring Diagrams Cell 130, Audio System/Navigation for schematic and connector information.

Normal Operation

- DTC U3003:16 (Battery Voltage: Circuit Voltage Below Threshold) — set by the ACM (without navigation), ACM (with navigation), APIM , FCIM (without navigation), FCIM (with navigation), and GPSM when the supply voltage falls below 10 volts for at least 10 seconds during normal operation, or for more than 250 milliseconds during the self-test.

This pinpoint test is intended to diagnose the following:

- Previous low battery voltage
- Wiring, terminals or connectors
- ACM
- APIM
- FCIM

- GPSM

PINPOINT TEST AT : DTC U3003:16

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

AT1 RECHECK FOR DTC U3003:16

- Ignition ON.
- Using a diagnostic scan tool, clear the DTCs for the module in question.
- Wait at least 15 seconds.
- Using a diagnostic scan tool, repeat the self-test for the module in question.

Is DTC U3003:16 still present?

Yes	GO to AT2.
No	The system is operating correctly at this time. The DTC may have been set due to a previous low battery voltage condition.

AT2 CHECK FOR CHARGING SYSTEM DTCS IN THE PCM

- Using a diagnostic scan tool, perform the PCM self-test.

Are any voltage-related DTCs set in the PCM ?

Yes	REFER to PCM DTC Chart in Section 414-00.
No	GO to AT3.

AT3 CHECK THE BATTERY CONDITION AND STATE OF CHARGE

- Check the battery condition and verify that the battery is fully charged. REFER to Battery Condition Test in Section 414-01.

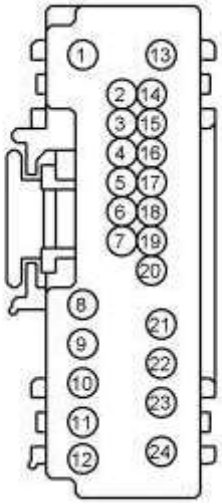
Is the battery OK and fully charged?

Yes	GO to AT4.
No	REFER to the Symptom Chart in Section 414-00.

AT4 CHECK THE MODULE VOLTAGE SUPPLY

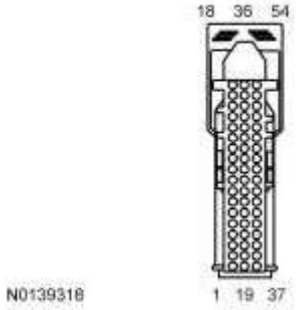
- Ignition OFF.
- Measure and record the voltage at the battery.
- Disconnect the audio system module setting DTC U3003:16.
- Ignition ON.
- Measure the voltage between the module setting DTC U3003:16 and ground.
- For the ACM , measure the **voltage** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C290D Pin 1	SBP39 (WH/RD)	—	Ground



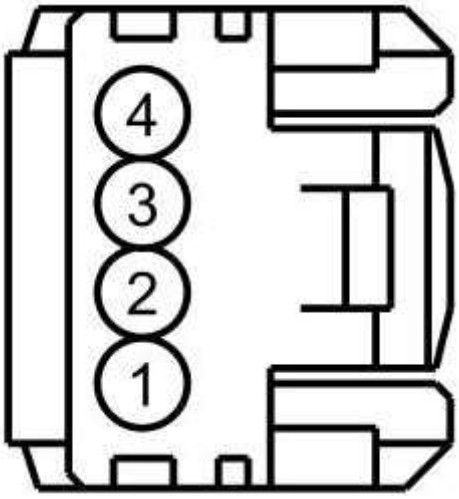
- For the APIM , measure the **voltage** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C2383 Pin 1	SBP03 (BU/RD	—	Ground



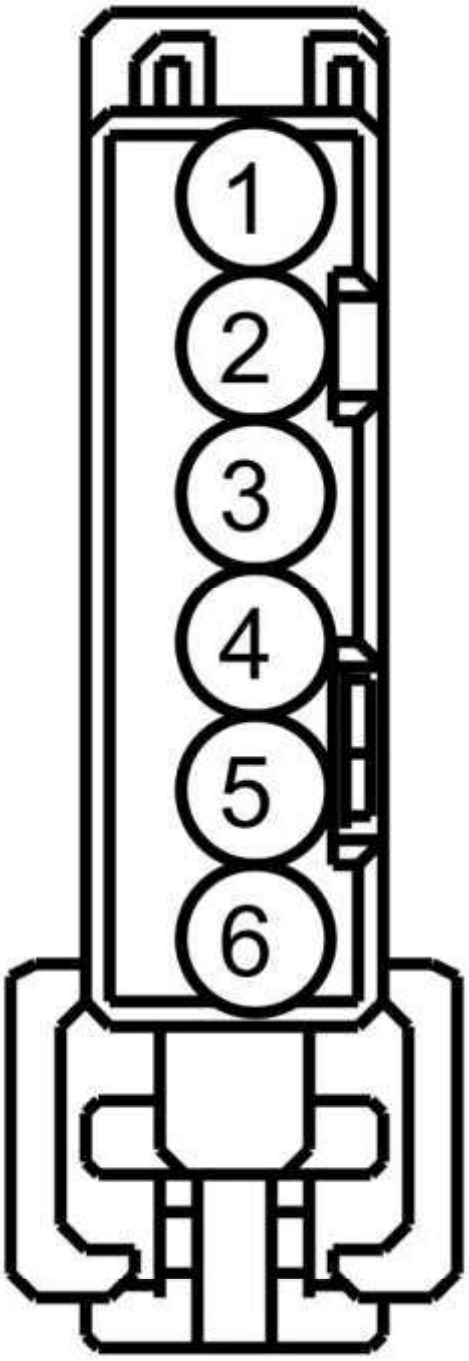
- For the FCIM , measure the **voltage** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C2402 Pin 1	SBP14 (BN/RD)	—	Ground



- For the GPSM , measure the **voltage** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C2398 Pin 1	SBP14 (BN/RD)	—	Ground



Is the voltage within 0.2 volts of the recorded battery voltage?

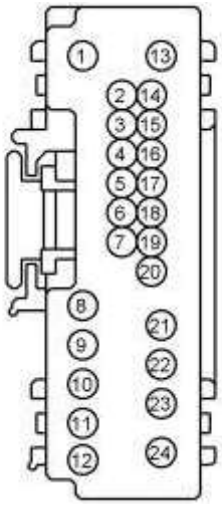
Yes	GO to AT5.

No	REPAIR the circuit for high resistance**.**

AT5 CHECK THE SUSPECT MODULE GROUND CIRCUIT FOR CONTINUITY

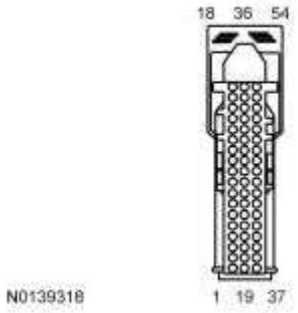
- Measure the voltage at the suspect module.
- For the ACM , measure the **voltage** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C290D Pin 1	SBP39 (WH/RD)	C290D Pin 13	GD115 (BK/GY)



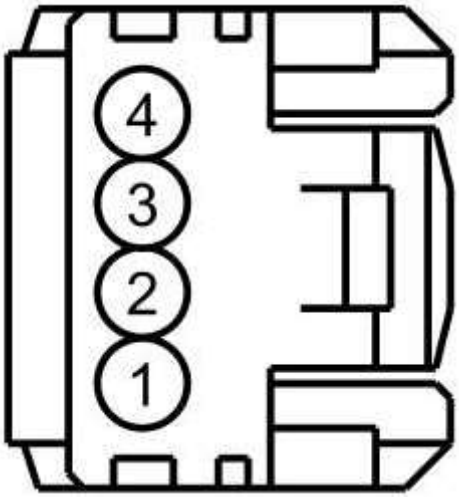
- For the APIM , measure the **voltage** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C2383 Pin 1	SBP03 (BU/RD	C2383 Pin 37	GD115 (BK/GY)
		C2383 Pin 38	GD115 (BK/GY)



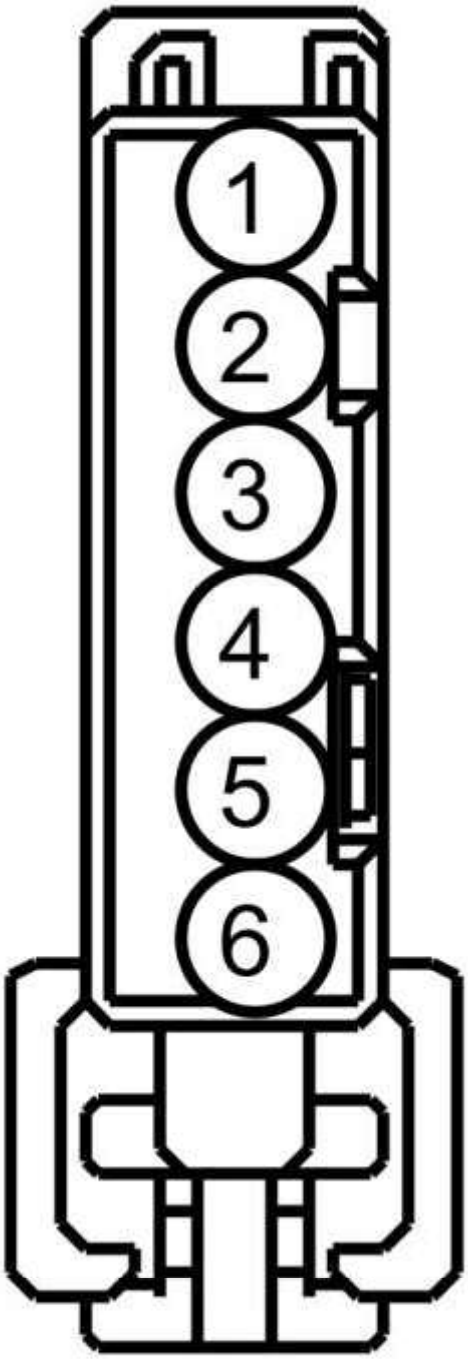
- For the FCIM , measure the **voltage** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C2402 Pin 1	SBP14 (BN/RD)	C2402 Pin 4	GD115 (BK/GY)



- For the GPSM , measure the **voltage** between:

Positive Lead		Negative Lead	
Pin	Circuit	Pin	Circuit
C2398 Pin 1	SBP14 (BN/RD)	C2398 Pin 6	GD115 (BK/GY)



Is the suspect module voltage greater than 11 volts?

Yes	For the ACM , GO to AT6. For the APIM , GO to AT7. For the FCIM , GO to AT8. For the GPSM , GO to AT9.
No	REPAIR the circuit for high resistance.

AT6 CHECK FOR CORRECT ACM OPERATION

- Ignition OFF.

- Disconnect and inspect all the ACM connectors.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the ACM connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new ACM . REFER to Audio Control Module (ACM).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

AT7 CHECK FOR CORRECT APIM OPERATION

- Ignition OFF.
- Disconnect and inspect the APIM connector.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the APIM connector. Make sure it seats and latches correctly.
- Wait at least 2 minutes for the APIM to re-initialize.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern,  **VIN required to access Guided Routine (APIM)**
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

AT8 CHECK FOR CORRECT FCIM OPERATION

- Ignition OFF.
- Disconnect and inspect the FCIM connector.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the FCIM connector. Make sure it seats and latches correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new FCIM . REFER to Front Controls Interface Module (FCIM).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

AT9 CHECK FOR CORRECT GPSM OPERATION

- Ignition OFF.

- Disconnect and inspect the GPSM connector.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the GPSM connector. Make sure it seats and latches correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new GPSM . REFER to Global Positioning System Module (GPSM).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

Pinpoint Test AU: DTC U3003:17

Diagnostic Overview

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. Refer to Diagnostic Methods in Section 100-00 for information about these practices.

Normal Operation

- DTC U3003:17 (Battery Voltage: Circuit Voltage Above Threshold) — set by the ACM (without navigation), ACM (with navigation), APIM , FCIM (without navigation), FCIM (with navigation), and GPSM when the supply voltage is more than 15.8 volts for more than 250 milliseconds during normal operation or the self-test.

This pinpoint test is intended to diagnose the following:

- ACM
- APIM
- FCIM
- GPSM

PINPOINT TEST AU : DTC U3003:17

AU1 RECHECK FOR DTC U3003:17

- Turn the engine off.
- Ignition ON.
- Using a diagnostic scan tool, clear the DTCs for the module in question.
- Wait at least 10 seconds.
- Using a diagnostic scan tool, perform the self-test for the module in question.

Is DTC U3003:17 present?

Yes	GO to AU2.
No	The system is operating correctly at this time. The DTC may have been set previously during battery charging or while jump starting the vehicle.

AU2 CHECK FOR HIGH VOLTAGE DTCS SET IN OTHER MODULES

- Ignition ON.
- Using a diagnostic scan tool, retrieve all CMDTCs .
- Wait at least 10 seconds.
- Using a diagnostic scan tool, perform the self-test for the module in question.

Are high voltage DTCs such as B1676, P0563, U3003:17 set in more than one module?

Yes	REFER to Section 414-00 to diagnose an overcharging condition.
No	GO to AU3.

AU3 CHECK THE BATTERY VOLTAGE

- Turn off all interior lights, exterior lights, and accessories.
- Start and run the engine at approximately 2,000 RPM for 3 minutes while monitoring the battery voltage.

Does the battery voltage rise to 15.5 volts or higher?

Yes	REFER to Section 414-00 to diagnose an overvoltage condition.
No	For the ACM , GO to AU4. For the APIM , GO to AU5. For the FCIM , GO to AU6. For the GPSM , GO to AU7.

AU4 CHECK FOR CORRECT ACM OPERATION

- Ignition OFF.
- Disconnect and inspect all the ACM connectors.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the ACM connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new ACM . REFER to Audio Control Module (ACM).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

AU5 CHECK FOR CORRECT APIM OPERATION

- Ignition OFF.
- Disconnect and inspect the APIM connector.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the APIM connector. Make sure it seats and latches correctly.
- Wait at least 2 minutes for the APIM to re-initialize.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern,  **VIN required to access Guided Routine (APIM)**
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

AU6 CHECK FOR CORRECT FCIM OPERATION

- Ignition OFF.
- Disconnect and inspect the FCIM connector.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the FCIM connector. Make sure it seats and latches correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new FCIM . REFER to Front Controls Interface Module (FCIM).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

AU7 CHECK FOR CORRECT GPSM OPERATION

- Ignition OFF.
- Disconnect and inspect the GPSM connector.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the GPSM connector. Make sure it seats and latches correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSBs address this concern, INSTALL a new GPSM . REFER to Global Positioning System Module (GPSM).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.