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1985 FORD Mustang OEM Service and Repair Workshop Manual

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Condition	Actions
No sound from all speakers	GO to Pinpoint Test C
The left speakers are inoperative when using Bluetooth and USB (universal serial bus) hub SYNC features	GO to Pinpoint Test P
The right speakers are inoperative when using Bluetooth and USB (universal serial bus) hub SYNC features	GO to Pinpoint Test P
Poor sound quality or distorted sound from one or more speakers (not all speakers)	GO to Pinpoint Test D
The instrument panel center speaker is inoperative	GO to Pinpoint Test I
The left A-pillar speaker is inoperative	GO to Pinpoint Test G
The right A-pillar speaker is inoperative	GO to Pinpoint Test G
The left front door speaker is inoperative	GO to Pinpoint Test I
The right front door speaker is inoperative	GO to Pinpoint Test I
The left rear door speaker is inoperative	GO to Pinpoint Test I
The right rear door speaker is inoperative	GO to Pinpoint Test I
The subwoofer speaker is inoperative	GO to Pinpoint Test I

Symptom Chart: Speakers and Sound Quality - 18 Speaker System

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices.

REFER to: [Diagnostic Methods](#)

(100-00 General Information, Description and Operation).

The left passenger headrest speaker is inoperative	GO to Pinpoint Test K
The right driver headrest speaker is inoperative	GO to Pinpoint Test K
The right passenger headrest speaker is inoperative	GO to Pinpoint Test K
The left overhead speaker is inoperative	GO to Pinpoint Test J
The right overhead speaker is inoperative	GO to Pinpoint Test J
The subwoofer speaker is inoperative	GO to Pinpoint Test J

Symptom Chart: Display Unit

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices.

REFER to: [Diagnostic Methods](#)

(100-00 General Information, Description and Operation).

Condition	Actions
The display unit is blank or black	GO to Pinpoint Test O
The display unit is not responsive to touch	GO to Pinpoint Test O
The display unit is slow to respond to touch	GO to Pinpoint Test O
The image on the display unit is incorrect, the image color is incorrect, or the image is distorted, flickering, or unclear	GO to Pinpoint Test O
The image on the display unit is locked or frozen	GO to Pinpoint Test O

Symptom Chart: SYNC Features/Media/Phone

USB (universal serial bus) ports - vehicles equipped with a touchscreen display	
The 911 Assist or Emergency Assistance Not Operational message displays	GO to Pinpoint Test U
SYNC AppLink is inoperative or does not operate correctly - vehicles equipped with a touchscreen display	GO to Pinpoint Test Z
FordPass is inoperative or does not operate correctly	GO to Pinpoint Test X
Android Auto™ or Apple CarPlay™ is inoperative	GO to Pinpoint Test AA
The vehicle Wi-Fi hotspot feature is inoperative, experiencing poor data speed or cannot stream any data	GO to Pinpoint Test Y
Automatic system updates do not occur or are delayed	REFER to: Module Configuration (418-01B Module Configuration - Vehicles With: Over-the-Air (OTA) Programming, Diagnosis and Testing).

Symptom Chart: Navigation/Compass

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices.

REFER to: [Diagnostic Methods](#)

(100-00 General Information, Description and Operation).

Condition	Actions
The compass is inoperative or does not operate correctly - SYNC 4 Low	GO to Pinpoint Test V
The compass is inoperative or does not operate correctly - SYNC 4	GO to Pinpoint Test W
Navigation is inoperative or does not operate correctly	GO to Pinpoint Test W
Traffic announcement is inoperative (vehicles equipped with a DAB (digital audio broadcasting) radio)	GO to Pinpoint Test B

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
ACM (audio front control module) B1A56:11	Antenna: Circuit Short To Ground	Sets in continuous memory and during the on-demand self-test when the ACM (audio front control module) detects a short to ground from the AM (amplitude modulation) / FM (frequency modulation) 1 antenna cable.
ACM (audio front control module) B1A56:15	Antenna: Circuit Short To Battery Or Open	Sets in continuous memory and during the on-demand self-test when the ACM (audio front control module) detects a short to voltage or an open from the AM (amplitude modulation) / FM (frequency modulation) 12 antenna cable.

Possible Sources

- Wiring, terminals, or connectors
- Ignition system
- Generator
- Antenna cable
- Antenna amplifier
- ACM (audio front control module)

NOTE

Prior to carrying out diagnostics, it may be beneficial to determine the cause using the Antenna Tool Kit (refer to the Rotunda catalog for the latest part number) or equivalent tool.

A1 CHECK THE AUDIO SYSTEM RECEPTION WITH THE ENGINE RUNNING AND WITH THE ENGINE OFF

NOTE

For hybrid vehicles, begin with test step A4.

- Ignition OFF.
- Operate the audio system in AM (amplitude modulation) / FM (frequency modulation) mode.
- Observe the radio reception.
- Start the engine and observe the radio reception.

Does the poor reception only occur with the engine running?

Are the ignition components OK?

Yes	USE a jumper cable to ground various parts of the vehicle to the frame (for example: engine, fenders, quarter panels, stone deflectors, air cleaner, and body sheet metal). When the noise is eliminated, PROVIDE a permanent ground where necessary.
No	REPAIR the ignition system as necessary.

A4 CHECK FOR ACM (AUDIO FRONT CONTROL MODULE) ANTENNA VOLTAGE OUTPUT

NOTE


The AM (amplitude modulation) / FM (frequency modulation) 1 antenna cable is also known as the audio unit antenna cable.

- Ignition OFF.
- Disconnect the AM (amplitude modulation) / FM (frequency modulation) 1 antenna cable from the ACM (audio front control module) .
- Ignition ON.

NOTE

Refer to the diagram at the beginning of this test to identify the correct cable connection to the ACM (audio front control module) .

Using the female Flex Probe 300-08058 (0.5 mm x 0.5 mm) or equivalent, measure:

Positive Lead	Measurement / Action	Negative Lead
AM (amplitude modulation) / FM (frequency modulation) 1 antenna cable core at the ACM (audio front control module) (component side)		Ground

Is the voltage greater than 11 volts?

Yes	GO to A5
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No	<p>IDENTIFY the antenna cable (or the antenna amplifier on vehicles equipped with the DAB (digital audio broadcasting) feature) with the open or short condition. INSTALL a new cable or antenna amplifier in question.</p> <p>REFER to: Audio Unit Antenna Cable - Vehicles With: 8 Inch Center Display Screen/12 Inch Center Display Screen (415-00 Information and Entertainment System - General Information, Removal and Installation).</p>
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A6 CHECK THE AM (AMPLITUDE MODULATION) / FM (FREQUENCY MODULATION) ANTENNA

- Ignition OFF.
- Install a new AM (amplitude modulation) / FM (frequency modulation) antenna.
REFER to: [Audio Unit Antenna](#)(415-00 Information and Entertainment System - General Information, Removal and Installation).
- Operate the audio system in AM (amplitude modulation) / FM (frequency modulation) (and DAB (digital audio broadcasting) if equipped) mode.

Is the reception OK?

Yes	The repair is complete.
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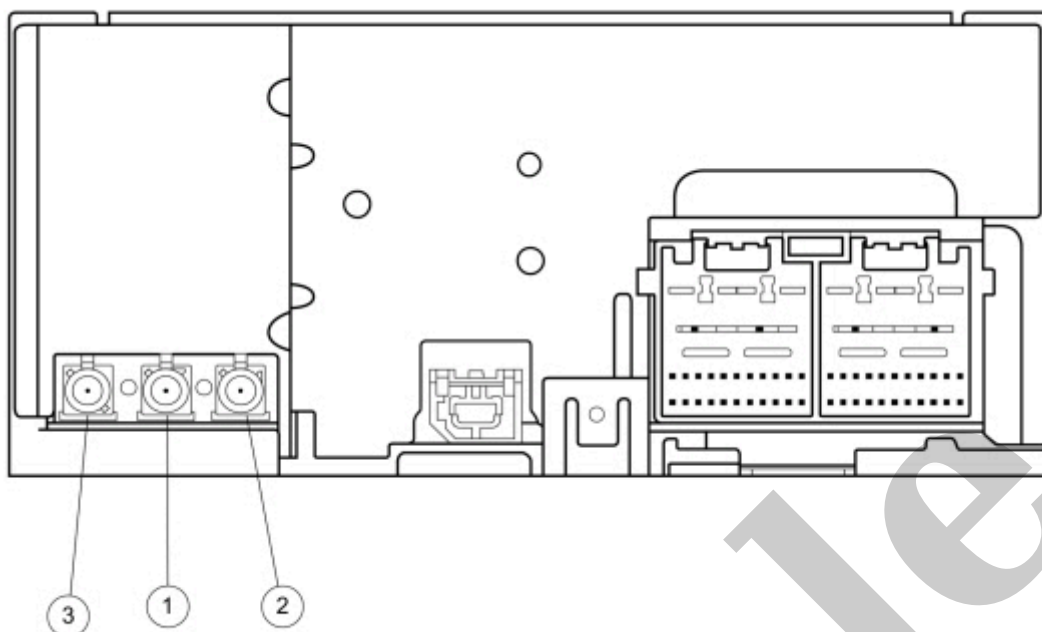
No	GO to A7
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A7 CHECK FOR CORRECT ACM (AUDIO FRONT CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all the ACM (audio front control 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 ACM (audio front control 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 (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and
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Item	Part Number	Description
1	—	Audio unit antenna connection
2	—	FM2 diversity antenna connection
3	—	Satellite radio connection

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
ACM (audio front control module) B1A89:11	Satellite Antenna: Circuit Short To Ground	Sets in continuous memory or during the on-demand self-test when the ACM (audio front control module) detects a short to ground from the satellite radio cable.
ACM (audio front control module) B1A89:13	Satellite Antenna: Circuit Open	Sets in continuous memory or during the on-demand self-test when the ACM (audio front control module) detects an open from the satellite radio cable.

No	For vehicles equipped with a satellite radio, GO to B2 For vehicles not equipped with a satellite radio, GO to B14
B2 CHECK FOR PROMOTIONAL CHANNEL 1	
<ul style="list-style-type: none"> Select channel 1. Does the satellite radio system receive channel 1 with normal sound quality?	
Yes	GO to B3
No	GO to B10
B3 VERIFY AN ACTIVE SUBSCRIPTION	
<ul style="list-style-type: none"> For a Sirius Radio concern, operate the audio system in satellite radio mode and observe the display. Does the display indicate the subscription has expired?	
Yes	GO to B4
No	For a SIRIUS on-demand streaming data concern, GO to B6 For all other satellite radio concerns, GO to B9
B4 CHECK THE VEHICLE SERVICE HISTORY FOR ACM (AUDIO FRONT CONTROL MODULE) REPLACEMENT	

No	ENABLE the Vehicle Connectivity and the SiriusXM with 360L settings.
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B7 CHECK FOR GWM (GATEWAY MODULE A) DIAGNOSTIC TROUBLE CODES (DTCs)

- Using a diagnostic scan tool, carry out the GWM (gateway module A) self-test.

Are any GWM (gateway module A) Diagnostic Trouble Codes (DTCs) present?

Yes	REFER to the Master DTC Chart.
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No	GO to B8
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B8 CHECK THE CELLULAR SIGNAL STRENGTH

- Drive the vehicle to an outdoor location that is free from obstacles such as tall buildings.
- Observe the cellular signal strength on the display unit.

Does the display indicate a good cellular strength signal of at least 2 bars?

Yes	GO to B9
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No	GO to Pinpoint Test X
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B9 VERIFY THE VIN (VEHICLE IDENTIFICATION NUMBER) AND THE ESN (ELECTRONIC SERIAL NUMBER) ON FILE MATCHES THE VIN (VEHICLE IDENTIFICATION NUMBER) AND THE ESN (ELECTRONIC SERIAL NUMBER) FROM THE VEHICLE

- Retrieve the satellite radio ESN (electronic serial number) by tuning to channel 0.
- Contact the SIRIUS Dealer Support.
- Make sure the VIN (vehicle identification number) and the ESN (electronic serial number) SIRIUS has on the file match the VIN (vehicle identification number) and the ESN (electronic serial number) retrieved from the vehicle.
- Drive the vehicle to an open location free from obstacles such as tall buildings or large trees.
- Operate the audio system in satellite radio mode.