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2001 FORD Mustang OEM Service and Repair Workshop Manual

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# **DTC Fault Trigger Conditions**

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
DSP (audio digital signal processing module) U0184:00	Lost Communication With Radio: No Sub Type Information	Sets in continuous memory when the DSP (audio digital signal processing module) detects network messages are missing from the ACM (audio front control module) for more than 5 seconds.

## **Possible Sources**

- Network communication concern
- DSP (audio digital signal processing module) concern
- ACM (audio front control module)



- Ignition ON.
- Verify an observable symptom present.

# Is an observable symptom present?

No

CLEAR the DTC (diagnostic trouble code). The system is operating correctly at this time. The DTC (diagnostic trouble code) may have been set due to high network traffic or an intermittent fault condition.

# **AG2 CHECK THE NETWORK COMMUNICATION**

- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs) for the module in question (
   DSP (audio digital signal processing module) ) setting the DTC (diagnostic trouble code) .
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, carry out the self-test for the module in question ( DSP (audio digital signal processing module)) setting the DTC (diagnostic trouble code).

# Is DTC (diagnostic trouble code) U0184:00 still present?

Yes GO to AG6
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No

The system is operating correctly at this time. The DTC (diagnostic trouble code) may have been set due to high network traffic or an intermittent fault condition.

#### AG6 CHECK FOR OTHER CAUSES OF NETWORK COMMUNICATION CONCERN

#### NOTE

If new modules were installed prior to the DTC (diagnostic trouble code) being set, the module configuration can be incorrectly set during the PMI (programmable module installation) or the PMI (programmable module installation) may not have been carried out.

- Check the vehicle service history for recent service actions related to the ACM (audio front control module) and the module in question ( DSP (audio digital signal processing module) ) setting the DTC (diagnostic trouble code). If recent service history is found:
  - verify correct replacement module was installed
    - vehicle parts build list may be used to verify correct part fitment
  - verify the configuration of replacement module was correct
    - re-configure module using as-built data if prior configuration is suspect
  - verify the module was not obtained from a like vehicle and installed into vehicle with concern
    - return the swapped module to source vehicle and obtain new replacement module
- Operate the system and determine if the observable symptom is still present.

#### Is the observable symptom still present?

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# **DTC Fault Trigger Conditions**

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
ACM (audio front control module) U0198:00	Lost Communication With Telematic Control Module 'A': No Sub Type Information	Sets in continuous memory when the ACM (audio front control module) detects network messages are missing from the TCU (telematic control unit module) for more than 5 seconds.
DSP (audio digital signal processing module) U0198:00	Lost Communication With Telematic Control Module 'A': No Sub Type Information	Sets in continuous memory when the DSP (audio digital signal processing module) detects network messages are missing from the TCU (telematic control unit module) for more than 5 seconds.

#### **Possible Sources**

- Network communication concern
- ACM (audio front control module) concern
- DSP (audio digital signal processing module) concern
- TCU (telematic control unit module)

#### **AH1 VERIFY THE CONCERN**

- Ignition ON.
- Verify an observable symptom present.

# Is an observable symptom present?

No

CLEAR the DTC (diagnostic trouble code). The system is operating correctly at this time. The DTC (diagnostic trouble code) may have been set due to high network traffic or an intermittent fault condition.

## **AH2 CHECK THE NETWORK COMMUNICATION**

• Using a diagnostic scan tool, carry out the network test.

Does the TCU (telematic control unit module) pass the network test?

- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, carry out the self-test for the module in question ( ACM (audio front control module), DSP (audio digital signal processing module)) setting the DTC (diagnostic trouble code).

# Is DTC (diagnostic trouble code) U0198:00 still present?

Yes
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No

The system is operating correctly at this time. The DTC (diagnostic trouble code) may have been set due to high network traffic or an intermittent fault condition.

#### AH6 CHECK FOR OTHER CAUSES OF NETWORK COMMUNICATION CONCERN

#### **NOTE**

If new modules were installed prior to the DTC (diagnostic trouble code) being set, the module configuration can be incorrectly set during the PMI (programmable module installation) or the PMI (programmable module installation) may not have been carried out.

- Check the vehicle service history for recent service actions related to the TCU (telematic control unit module) and the module in question ( ACM (audio front control module), DSP (audio digital signal processing module)) setting the DTC (diagnostic trouble code). If recent service history is found:
  - verify correct replacement module was installed
    - vehicle parts build list may be used to verify correct part fitment
  - verify the configuration of replacement module was correct
    - re-configure module using as-built data if prior configuration is suspect
  - verify the module was not obtained from a like vehicle and installed into vehicle with concern
    - return the swapped module to source vehicle and obtain new replacement module
- Operate the system and determine if the observable symptom is still present.

## Is the observable symptom still present?

Yes	GO to	AH7

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
ACM (audio front control module) U0238:00	Lost Communication With Digital Audio Control Module 'D': No Sub Type Information	Sets in continuous memory when the ACM (audio front control module) detects network messages are missing from the DSP (audio digital signal processing module) for more than 5 seconds.

#### **Possible Sources**

- Network communication concern
- ACM (audio front control module) concern
- DSP (audio digital signal processing module)

#### **AI1 VERIFY THE CONCERN**

- Ignition ON.
- Verify an observable symptom present.

# Is an observable symptom present?



No

CLEAR the DTC (diagnostic trouble code). The system is operating correctly at this time. The DTC (diagnostic trouble code) may have been set due to high network traffic or an intermittent fault condition.

## AI2 CHECK THE NETWORK COMMUNICATION

• Using a diagnostic scan tool, carry out the network test.

# Does the DSP (audio digital signal processing module) pass the network test?

Yes	GO to	AI3

No

REFER to: Controller Area Network (CAN) Module Communications Network (418-00A Controller Area Network (CAN) Module Communications Network, Diagnosis and Testing).

No

The system is operating correctly at this time. The DTC (diagnostic trouble code) may have been set due to high network traffic or an intermittent fault condition.

#### AI6 CHECK FOR OTHER CAUSES OF NETWORK COMMUNICATION CONCERN

## NOTE

If new modules were installed prior to the DTC (diagnostic trouble code) being set, the module configuration can be incorrectly set during the PMI (programmable module installation) or the PMI (programmable module installation) may not have been carried out.

- Check the vehicle service history for recent service actions related to the audio DSP (audio digital signal processing module) module and the module in question (ACM (audio front control module)) setting the DTC (diagnostic trouble code). If recent service history is found:
  - verify correct replacement module was installed
    - vehicle parts build list may be used to verify correct part fitment
  - verify the configuration of replacement module was correct
    - re-configure module using as-built data if prior configuration is suspect
  - verify the module was not obtained from a like vehicle and installed into vehicle with concern
    - return the swapped module to source vehicle and obtain new replacement module
- Operate the system and determine if the observable symptom is still present.

## Is the observable symptom still present?

Yes	GO to	AI7

No

The system is operating correctly at this time. The concern may have been due to incorrect parts replacement procedures or incorrect module configuration.

## AI7 CHECK FOR CORRECT DSP (AUDIO DIGITAL SIGNAL PROCESSING MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect the DSP (audio digital signal processing module) connectors.
- Repair:
  - o corrosion (install new connectors or terminals clean module pins)
  - o damaged or bent pins install new terminals pins

Module: No Sub Type	
Information	

network messages are missing from the APIM (SYNC module) for more than 5 seconds.

#### **Possible Sources**

- Network communication concern
- ACM (audio front control module) concern
- DSP (audio digital signal processing module) concern
- APIM (SYNC module)

# **AJ1 VERIFY THE CONCERN**

- Ignition ON.
- Verify an observable symptom present.

# Is an observable symptom present?



No

CLEAR the DTC (diagnostic trouble code). The system is operating correctly at this time. The DTC (diagnostic trouble code) may have been set due to high network traffic or an intermittent fault condition.

# AJ2 CHECK THE NETWORK COMMUNICATION

• Using a diagnostic scan tool, carry out the network test.

## Does the APIM (SYNC module) pass the network test?

Yes	GO to	AJ3

No

REFER to: Controller Area Network (CAN) Module Communications Network (418-00A Controller Area Network (CAN) Module Communications Network, Diagnosis and Testing).

## AJ3 CHECK FOR NON-NETWORK DIAGNOSTIC TROUBLE CODES (DTCS)

• Using a diagnostic scan tool, carry out the self-test for the module in question (ACM (audio front control module), DSP (audio digital signal processing module)) setting the DTC (diagnostic trouble

set due to high network traffic or an intermittent fault condition.

# A J6 CHECK FOR OTHER CAUSES OF NETWORK COMMUNICATION CONCERN

## **NOTE**

If new modules were installed prior to the DTC (diagnostic trouble code) being set, the module configuration can be incorrectly set during the PMI (programmable module installation) or the PMI (programmable module installation) may not have been carried out.

- Check the vehicle service history for recent service actions related to the APIM (SYNC module) and the module in question ( ACM (audio front control module), DSP (audio digital signal processing module)) setting the DTC (diagnostic trouble code). If recent service history is found:
  - verify correct replacement module was installed
    - vehicle parts build list may be used to verify correct part fitment
  - verify the configuration of replacement module was correct
    - re-configure module using as-built data if prior configuration is suspect
  - verify the module was not obtained from a like vehicle and installed into vehicle with concern
    - return the swapped module to source vehicle and obtain new replacement module
- Operate the system and determine if the observable symptom is still present.

# Is the observable symptom still present?

Yes	GO to	AJ7

No

The system is operating correctly at this time. The concern may have been due to incorrect parts replacement procedures or incorrect module configuration.

# AJ7 CHECK FOR CORRECT APIM (SYNC MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect the APIM (SYNC module) connectors.
- Repair:
  - o corrosion (install new connectors or terminals clean module pins)
  - o damaged or bent pins install new terminals pins
  - o pushed-out pins install new pins as necessary

### **Possible Sources**

- Previous low battery voltage
- Wiring, terminals, or connectors
- Charging system concern
- ACM (audio front control module)
- APIM (SYNC module)
- DSP (audio digital signal processing module)
- TCU (telematic control unit module)

# **AK1 RECHECK FOR LOW VOLTAGE DIAGNOSTIC TROUBLE CODES (DTCS)**

- Ignition ON.
- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs) for the module in question setting the low voltage DTC (diagnostic trouble code).
- Wait 10 seconds.
- Using a diagnostic scan tool, carry out the self-test for the module in question setting the low voltage DTC (diagnostic trouble code) .

# Is DTC (diagnostic trouble code) U3003:16 still present?



No

The system is operating correctly at this time. The DTC (diagnostic trouble code) may have been set due to a previous low battery voltage condition.

## AK2 CHECK FOR CHARGING SYSTEM DIAGNOSTIC TROUBLE CODES (DTCS)