

## 2009 ACCESSORIES AND EQUIPMENT

## Hands Free Module (HFM) - Electrical Diagnostics - Journey

## DIAGNOSTIC CODE INDEX

## DIAGNOSTIC CODE INDEX

| DTC                 | Description                            |
|---------------------|----------------------------------------|
| <b><u>B1438</u></b> | VOICE RECOGNITION SWITCH STUCK         |
| <b><u>B1439</u></b> | PHONE SWITCH STUCK                     |
| <b><u>B143B</u></b> | MICROPHONE 1 CIRCUIT LOW               |
| <b><u>B143C</u></b> | MICROPHONE 1 CIRCUIT HIGH              |
| <b><u>B143E</u></b> | MICROPHONE 2 CIRCUIT LOW               |
| <b><u>B143F</u></b> | MICROPHONE 2 CIRCUIT HIGH              |
| <b><u>U0141</u></b> | LOST COMMUNICATION WITH IPM (FCM/TIPM) |
| <b><u>U0184</u></b> | LOST COMMUNICATION WITH RADIO          |

## DIAGNOSIS AND TESTING

## B1438-VOICE RECOGNITION SWITCH STUCK

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

With the ignition on.

- **Set Condition:**

The Hands Free Phone Module (HFM) detects the Voice Recognition Switch active for greater than 20 seconds.

| Possible Causes |
|-----------------|
| RADIO           |

## Diagnostic Test

1. **CHECK FOR AN ACTIVE DTC**

1. Turn the ignition on.
2. Using the scan tool, record and erase DTCs.
3. Press the Voice Recognition Switch three times.
4. Using the scan tool, read DTCs.

Does the scan tool display this DTC as active?

**Yes**

- Replace the Radio Switch in accordance with the Service Information.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

**No**

- The conditions that originally set this DTC are no longer present. Check the connectors and power and ground circuits at the Radio and Hands Free Module for corrosion, pin fit, and push out terminals for possible causes.

### **B1439-PHONE SWITCH STUCK**

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

With the ignition on.

- **Set Condition:**

The Hands Free Phone Module (HFM) detects the Phone Switch active for greater than 20 seconds.

| Possible Causes |
|-----------------|
| RADIO           |

#### **Diagnostic Test**

##### **1. CHECK FOR AN ACTIVE DTC**

1. Turn the ignition on.
2. With the scan tool, record and erase DTCs.
3. Press the Phone switch three times.
4. With the scan tool, read DTCs.

Does the scan tool display this DTC as active?

**Yes**

- Replace the Radio in accordance with the Service Information.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

## 2009 Dodge Journey R/T

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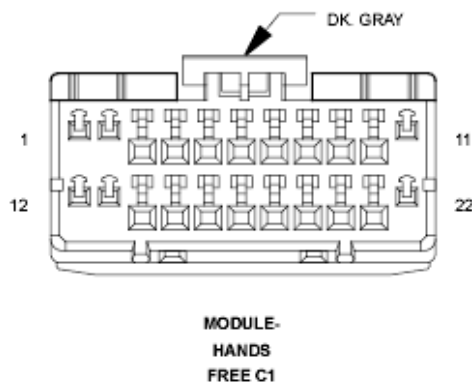
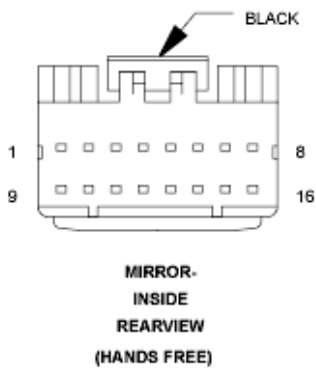
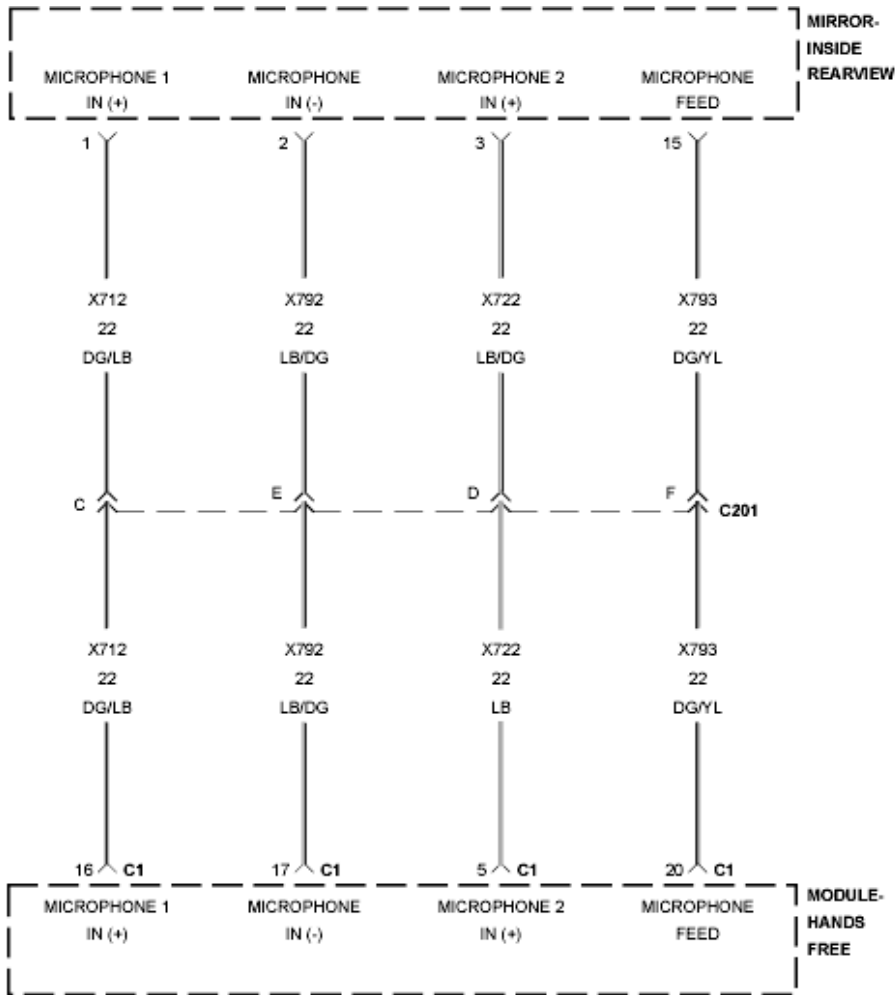
**No**

- The conditions that originally set this DTC are no longer present. Check the connectors and power and ground circuits at the Radio and Hands Free Module for corrosion, pin fit, and push out terminals for possible causes.

**B143B-MICROPHONE 1 CIRCUIT LOW**

## 2009 Dodge Journey R/T

2009 ACCESSORIES AND EQUIPMENT Hands Free Module (HFM) - Electrical Diagnostics - Journey



**Fig. 1: Microphone 1 IN Circuit Schematic**  
Courtesy of CHRYSLER LLC

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

With the ignition on.

- **Set Condition:**

The Hands Free Module (HFM) detects a short to ground or open on the (X712) Microphone 1 IN (+) circuit.

| Possible Causes                                      |
|------------------------------------------------------|
| (X712) MICROPHONE 1 IN (+) CIRCUIT OPEN              |
| (X712) MICROPHONE 1 IN (+) CIRCUIT SHORTED TO GROUND |
| INSIDE REARVIEW MIRROR                               |
| HANDS FREE MODULE (HFM)                              |

**Diagnostic Test**

**1. CHECK FOR ACTIVE DTC**

**NOTE:**        **Verify the connection of the Rearview Mirror harness connector.**

1. Turn the ignition on.
2. With the scan tool, read the active DTCs.

Does the scan tool display this DTC as active?

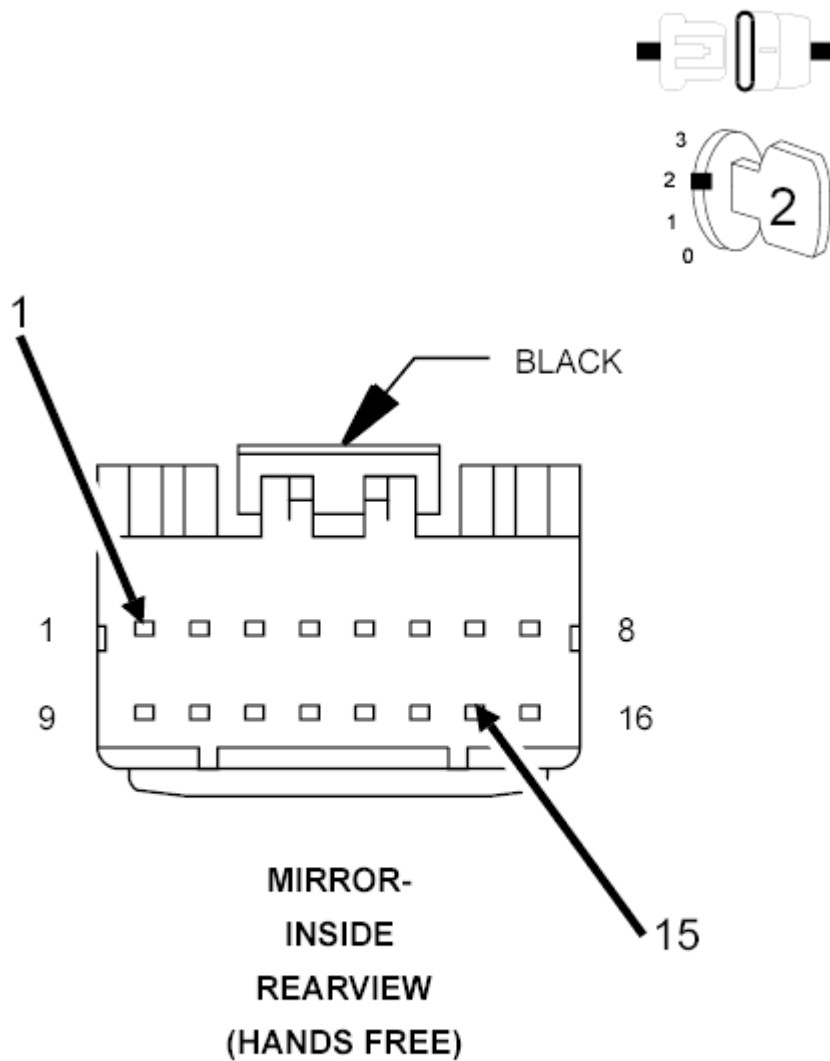
**Yes**

- Go to step 2

**No**

- If the DTC is stored, check for an intermittent condition. Visually inspect the related wiring harness connectors. Look for broken, bent, pushed out, or corroded terminals.

**2. INSIDE REARVIEW MIRROR**



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**Fig. 2: Checking Inside Rearview Mirror Harness Connector**  
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Inside Rearview Mirror harness connector.
3. Connect a jumper wire between the (X793) Microphone Feed and the (X712) Microphone 1 IN (+) circuits.
4. Turn the ignition on.
5. With the scan tool, read the DTCs.

## 2009 Dodge Journey R/T

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Does the scan tool display this DTC as active?

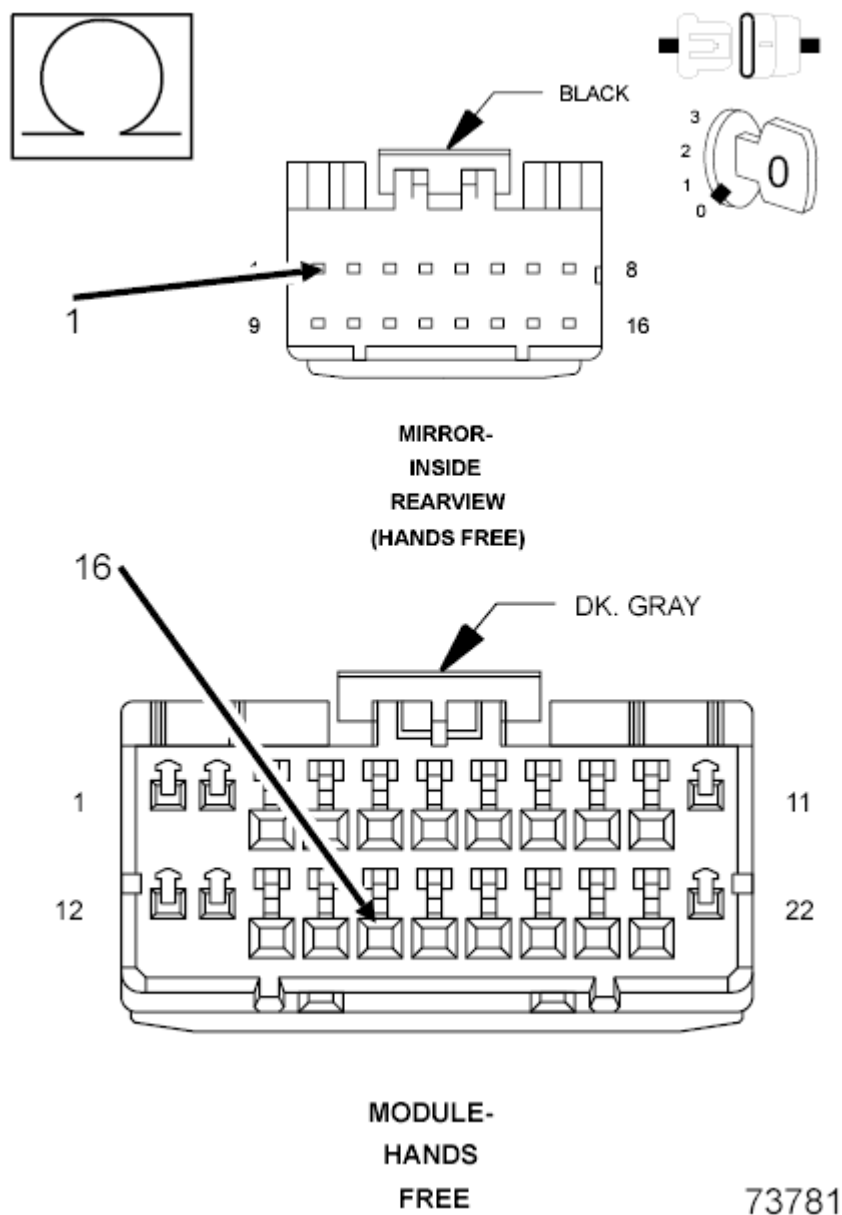
**Yes**

- Go to step 3

**No**

- Replace the Inside Rearview Mirror in accordance with the Service Information.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

### 3. (X712) MICROPHONE 1 IN (+) CIRCUIT OPEN



**Fig. 3: Checking Microphone 1 IN (+) Circuit Open**

Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Hands Free Module harness connector.
3. Measure the resistance of the (X712) Microphone 1 IN (+) circuit between the Inside Rearview Mirror and Hands Free Module harness connectors.

Is the resistance above 10K ohms?

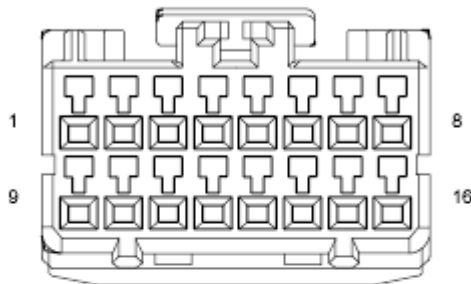
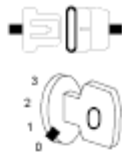
**Yes**

- Repair the (X712) Microphone 1 IN (+) circuit for an open.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

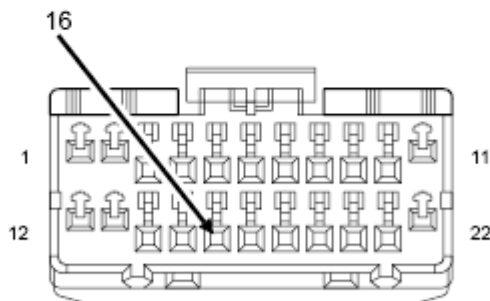
No

- Go to step 4

4. (X712) MICROPHONE 1 IN (+) CIRCUIT SHORTED TO GROUND



MIRROR-  
INSIDE  
REARVIEW  
(HANDS FREE)



MODULE-  
HANDS  
FREE

73773

**Fig. 4: Checking Microphone 1 IN (+) Circuit Shorted To Ground**  
Courtesy of CHRYSLER LLC

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2009 ACCESSORIES AND EQUIPMENT Hands Free Module (HFM) - Electrical Diagnostics - Journey

1. Turn the ignition off.
2. Measure the resistance between ground and the (X712) Microphone 1 IN (+) circuit.

Is the resistance below 10K Ohms?

### Yes

- Repair the (X712) Microphone 1 IN (+) circuit for short to ground.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

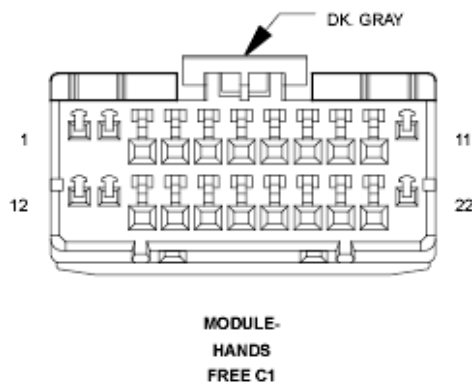
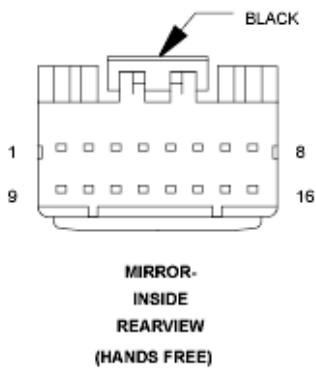
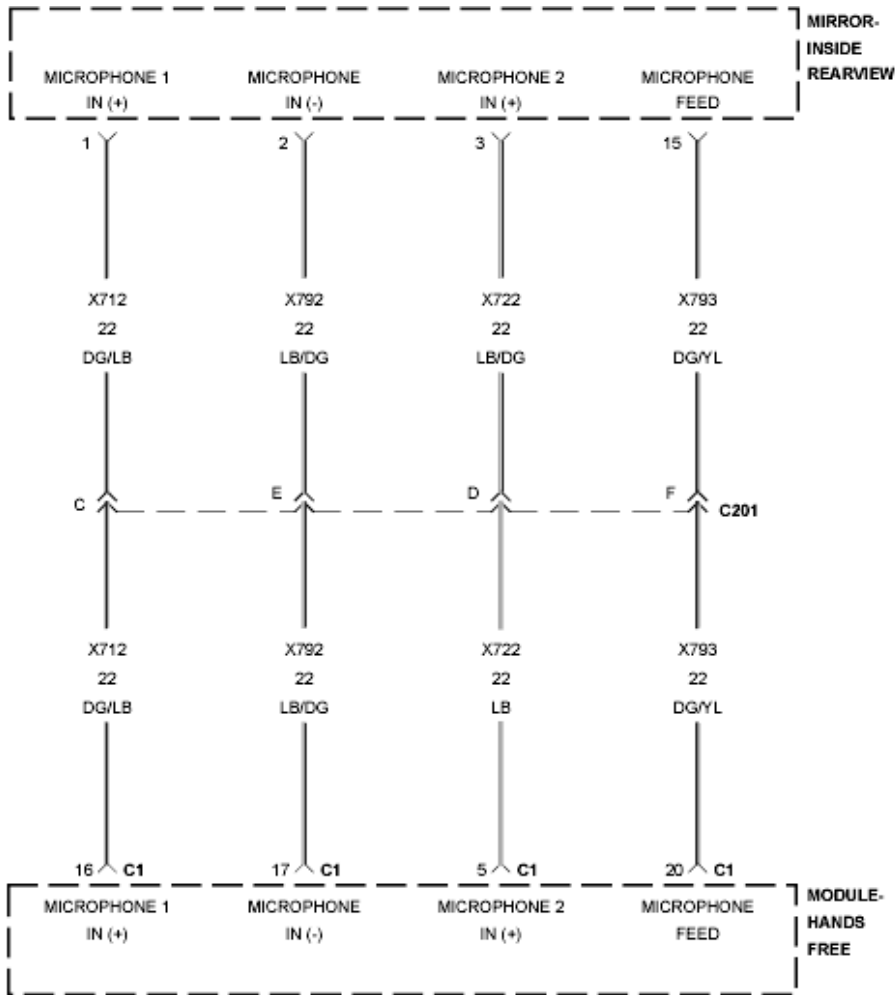
### No

- Replace the Hands Free Module in accordance with the Service Information.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

## B143C-MICROPHONE 1 CIRCUIT HIGH

## 2009 Dodge Journey R/T

2009 ACCESSORIES AND EQUIPMENT Hands Free Module (HFM) - Electrical Diagnostics - Journey



**Fig. 5: Microphone 1 IN Circuit Schematic**  
Courtesy of CHRYSLER LLC

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

With the ignition on.

- **Set Condition:**

The Hands Free Module detects a short to voltage on the (X712) Microphone 1 IN (+) circuit.

| Possible Causes                                                                                      |
|------------------------------------------------------------------------------------------------------|
| (X712) MICROPHONE 1 IN (+) CIRCUIT SHORTED TO VOLTAGE<br>INSIDE REARVIEW MIRROR<br>HANDS FREE MODULE |

**Diagnostic Test**

**1. CHECK FOR ACTIVE DTC**

**NOTE:**        **Verify the connection of the Rearview Mirror harness connector.**

1. Turn the ignition on.
2. With the scan tool, read the active DTCs.

Does the scan tool display this DTC as active?

**Yes**

- Go to step 2

**No**

- If the DTC is stored, check for an intermittent condition. Visually inspect the related wiring harness connectors. Look for broken, bent, pushed out, or corroded terminals.

**2. INSIDE REARVIEW MIRROR**

1. Turn the ignition off.
2. Disconnect the Rearview Mirror harness connector.
3. Turn the ignition on.
4. With the scan tool, read the active DTCs.

Does the scan tool display this DTC as active?

## 2009 Dodge Journey R/T

2009 ACCESSORIES AND EQUIPMENT Hands Free Module (HFM) - Electrical Diagnostics - Journey

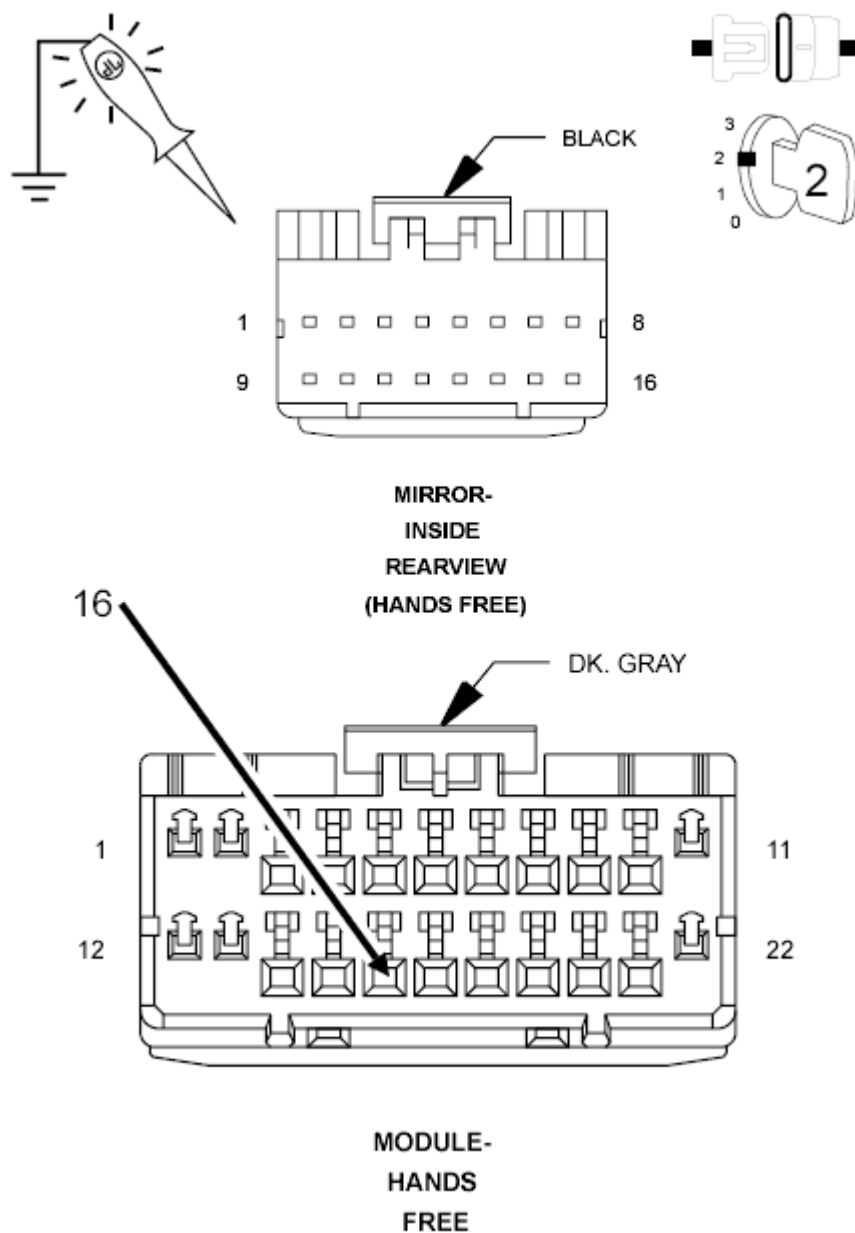
**Yes**

- Go to step 3

**No**

- Replace the Rearview Mirror in accordance with the Service Information.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**.

### 3. (X712) MICROPHONE 1 IN (+) CIRCUIT SHORTED TO VOLTAGE



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**Fig. 6: Checking Microphone 1 IN (+) Circuit Shorted To Voltage**  
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Hands Free Module harness connector.
3. Turn the ignition on.
4. Measure the voltage of the (X712) Microphone 1 IN (+) circuit.

Is voltage present?

## 2009 Dodge Journey R/T

2009 ACCESSORIES AND EQUIPMENT Hands Free Module (HFM) - Electrical Diagnostics - Journey

### Yes

- Repair the (X712) Microphone 1 IN (+) circuit for a short to voltage.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

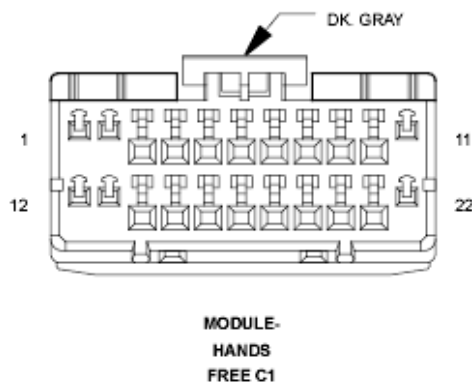
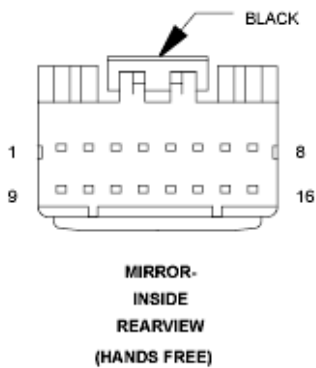
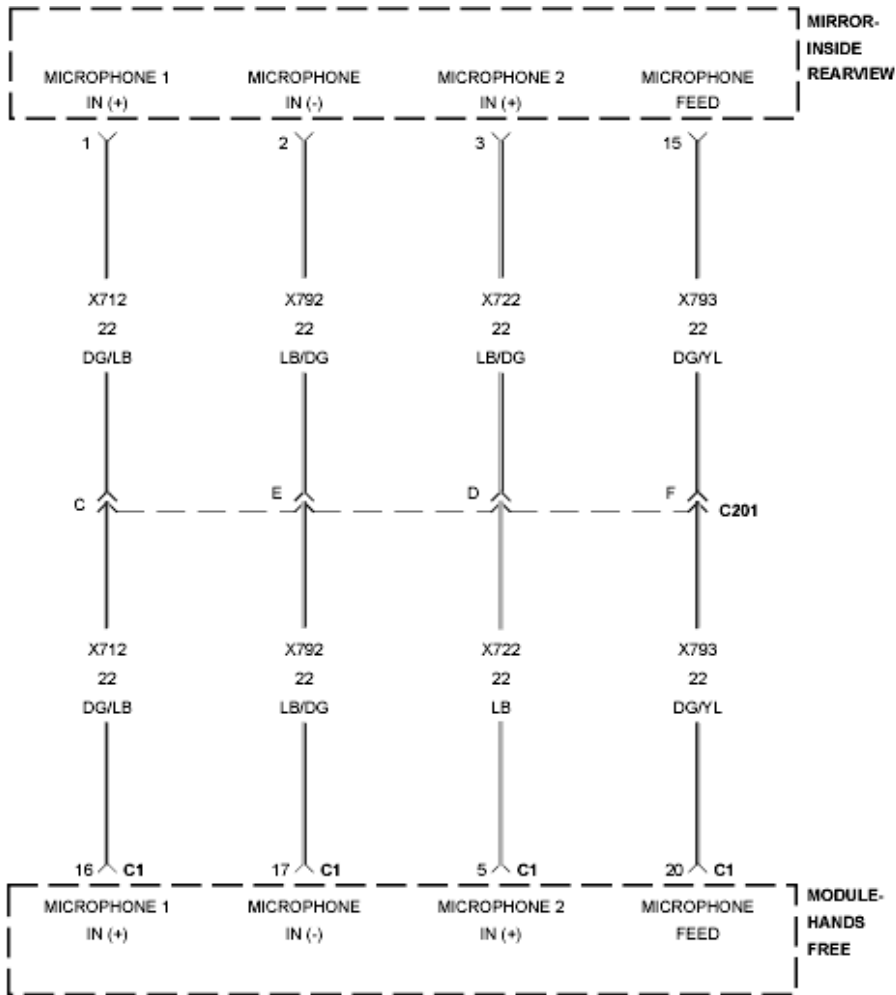
### No

- Replace the Hands Free Module in accordance with the Service Information.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

**B143E-MICROPHONE 2 CIRCUIT LOW**

## 2009 Dodge Journey R/T

2009 ACCESSORIES AND EQUIPMENT Hands Free Module (HFM) - Electrical Diagnostics - Journey



**Fig. 7: Microphone 1 IN Circuit Schematic**  
Courtesy of CHRYSLER LLC

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

With the ignition on.

- **Set Condition:**

The Hands Free Module (HFM) detects a short to ground or open on the (X722) Microphone 2 IN (+) circuit.

| Possible Causes                                      |
|------------------------------------------------------|
| (X722) MICROPHONE 2 IN (+) CIRCUIT OPEN              |
| (X722) MICROPHONE 2 IN (+) CIRCUIT SHORTED TO GROUND |
| INSIDE REARVIEW MIRROR                               |
| HANDS FREE MODULE (HFM)                              |

**Diagnostic Test**

**1. CHECK FOR ACTIVE DTC**

**NOTE:**        **Verify the connection of the Rearview Mirror harness connector.**

1. Turn the ignition on.
2. With the scan tool, read the active DTCs.

Does the scan tool display this DTC as active?

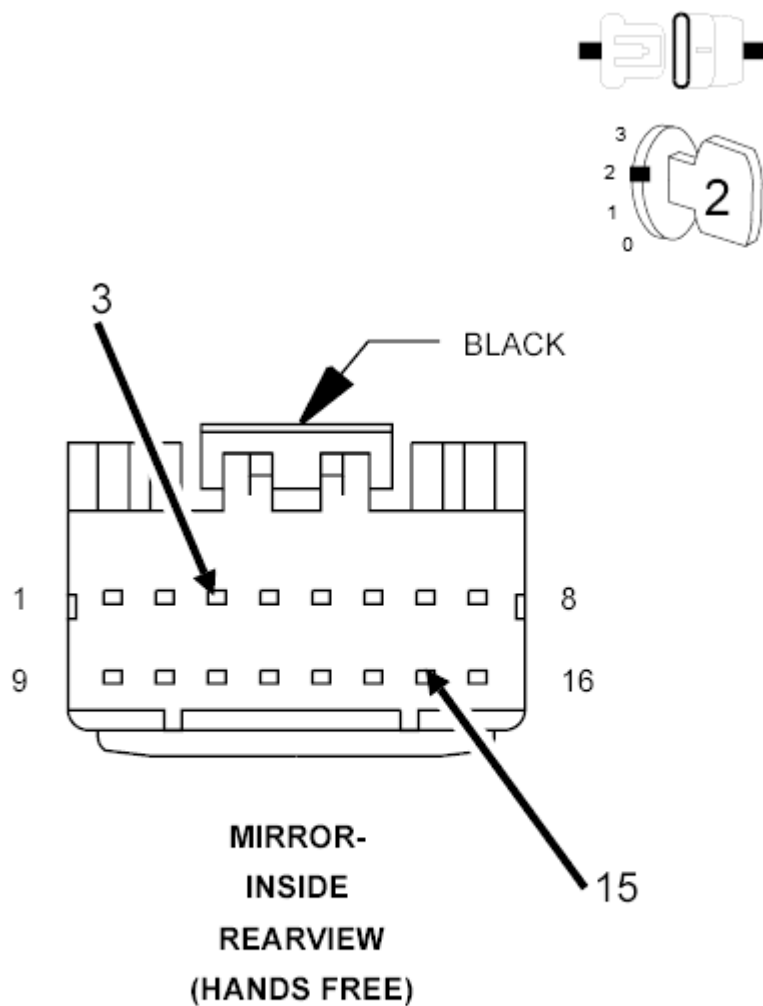
**Yes**

- Go to step 2

**No**

- If the DTC is stored, check for an intermittent condition. Visually inspect the related wiring harness connectors. Look for broken, bent, pushed out, or corroded terminals.

**2. INSIDE REARVIEW MIRROR**



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**Fig. 8: Checking Inside Rearview Mirror Harness Connector**  
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Inside Rearview Mirror harness connector.
3. Connect a jumper wire between the (X793) Microphone Feed and the (X722) Microphone 2 IN (+) circuits.
4. Turn the ignition on.
5. With the scan tool, read the DTCs.

Does the scan tool display this DTC as active?

## 2009 Dodge Journey R/T

2009 ACCESSORIES AND EQUIPMENT Hands Free Module (HFM) - Electrical Diagnostics - Journey

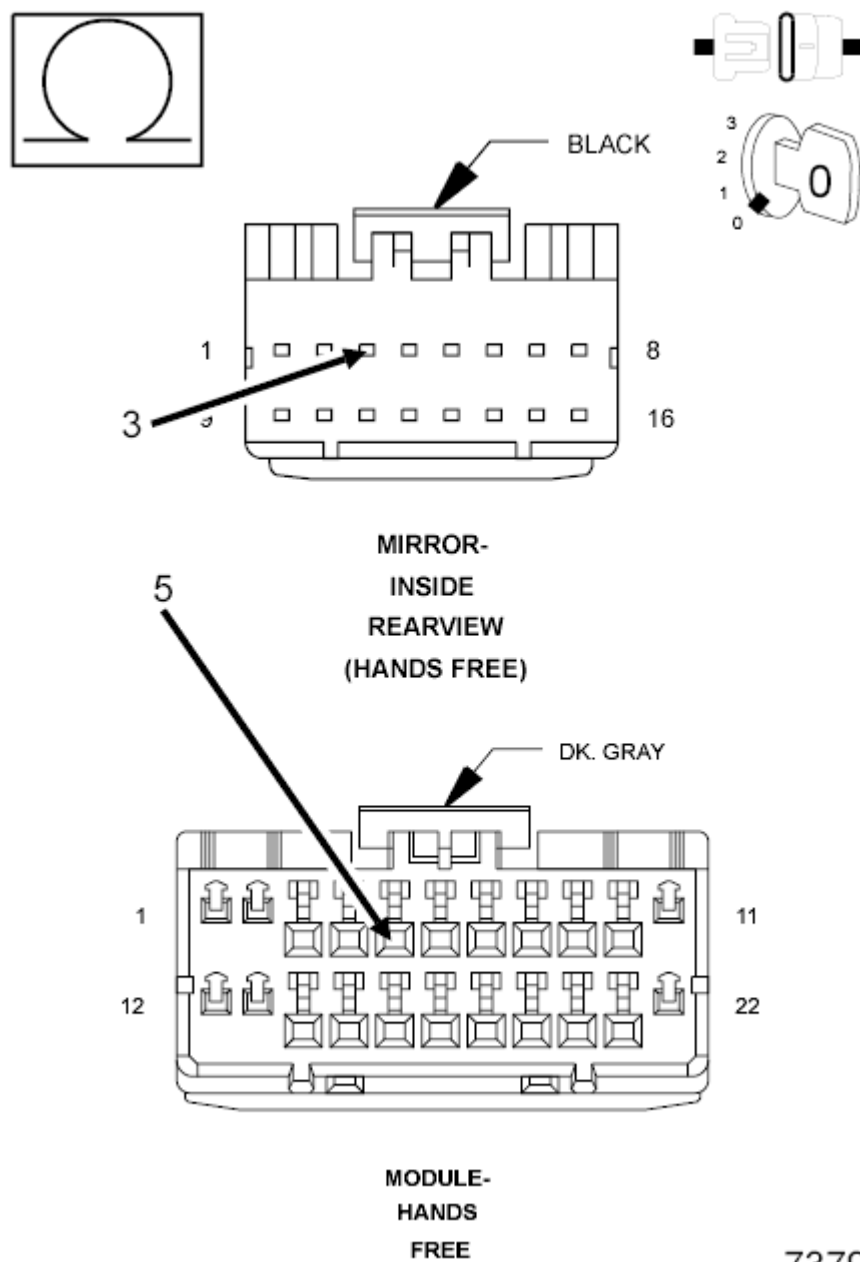
**Yes**

- Go to step 3

**No**

- Replace the Inside Rearview Mirror in accordance with the Service Information.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

### 3. (X722) MICROPHONE 2 IN (+) CIRCUIT OPEN



**Fig. 9: Checking Microphone 2 IN (+) Circuit Open**  
 Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Hands Free Module harness connector.
3. Measure the resistance of the (X722) Microphone 2 IN (+) circuit between the Inside Rearview Mirror and Hands Free Module harness connectors.

Is the resistance above 10K Ohms?

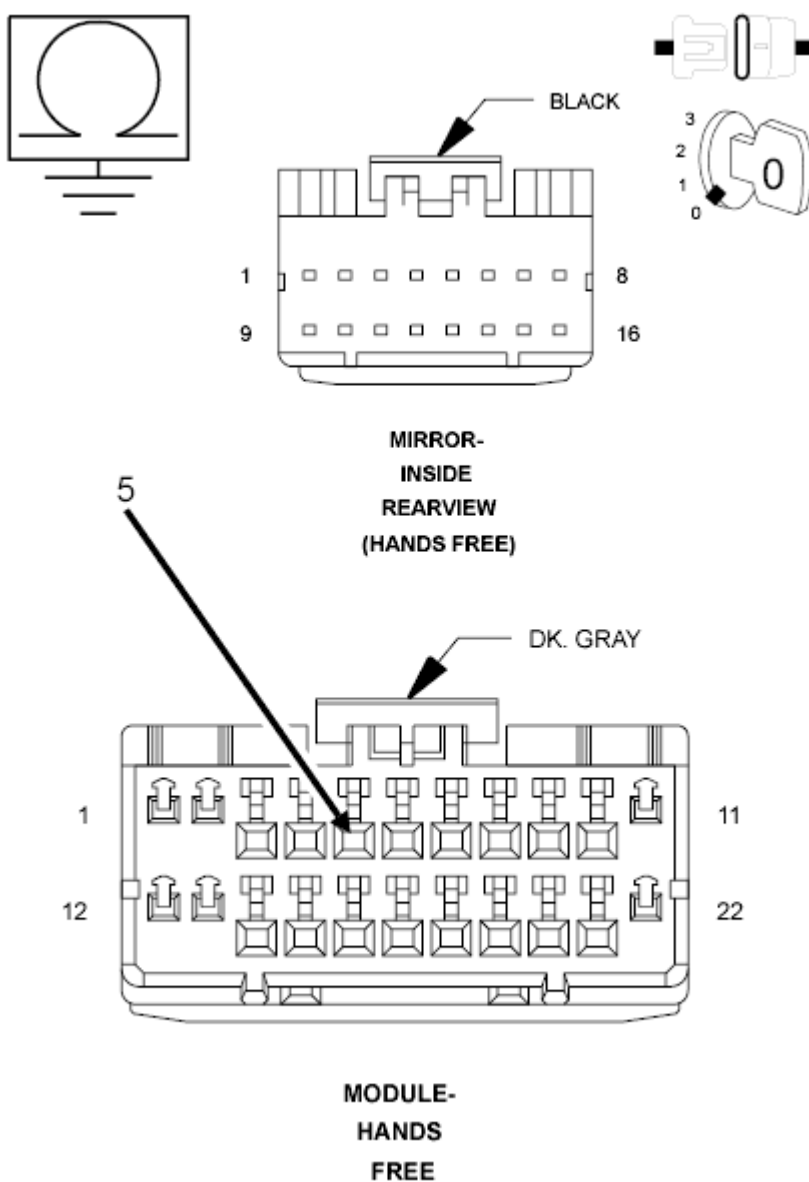
Yes

- Repair the (X722) Microphone 2 IN (+) circuit for an open.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**.

No

- Go to step 4

4. (X722) MICROPHONE 2 IN (+) CIRCUIT SHORTED TO GROUND



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Fig. 10: Checking Microphone 2 IN (+) Circuit Shorted To Ground

**Courtesy of CHRYSLER LLC**

1. Turn the ignition off.
2. Measure the resistance between ground and the (X722) Microphone 2 IN (+) circuit.

Is the resistance below 10K Ohms?

**Yes**

- Repair the (X722) Microphone 2 IN (+) circuit for short to ground.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

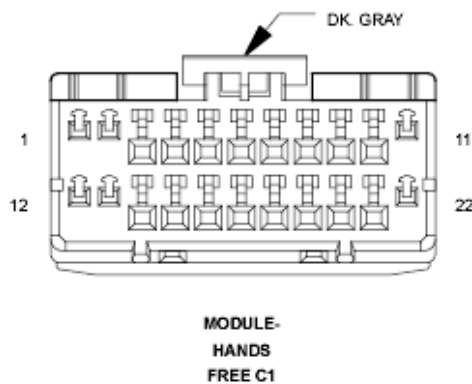
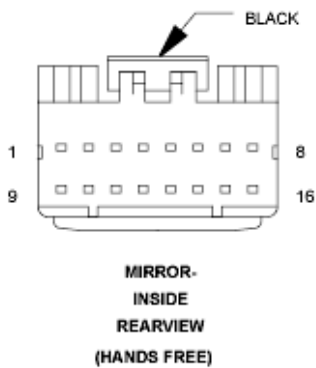
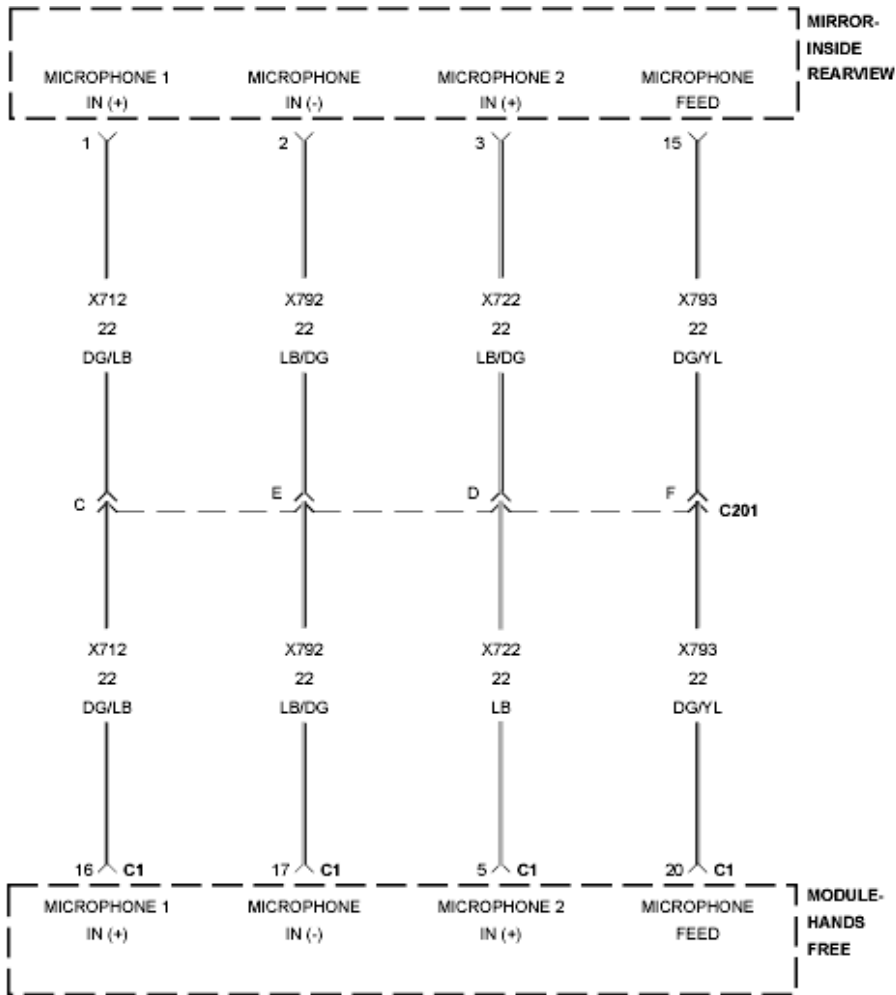
**No**

- Replace the Hands Free Module in accordance with the Service Information.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

**B143F-MICROPHONE 2 CIRCUIT HIGH**

## 2009 Dodge Journey R/T

2009 ACCESSORIES AND EQUIPMENT Hands Free Module (HFM) - Electrical Diagnostics - Journey



**Fig. 11: Microphone 1 IN Circuit Schematic**  
Courtesy of CHRYSLER LLC

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS** .

- **When Monitored:**

With the ignition on.

- **Set Condition:**

The Hands Free Module (HFM) detects a short to voltage on the (X722) Microphone 2 IN (+) circuit.

| Possible Causes                                                                                             |
|-------------------------------------------------------------------------------------------------------------|
| (X722) MICROPHONE 2 IN (+) CIRCUITS SHORTED TO VOLTAGE<br>INSIDE REARVIEW MIRROR<br>HANDS FREE MODULE (HFM) |

**Diagnostic Test**

**1. CHECK FOR ACTIVE DTC**

**NOTE:**        **Verify the connection of the Rearview Mirror harness connector.**

1. Turn the ignition on.
2. With the scan tool, read the active DTCs.

Does the scan tool display this DTC as active?

**Yes**

- Go to step 2

**No**

- If the DTC is stored, check for an intermittent condition. Visually inspect the related wiring harness connectors. Look for broken, bent, pushed out, or corroded terminals.

**2. INSIDE REARVIEW MIRROR**

1. Turn the ignition off.
2. Disconnect the Rearview Mirror harness connector.
3. Turn the ignition on.
4. With the scan tool, read the active DTCs.

Does the scan tool display this DTC as active?

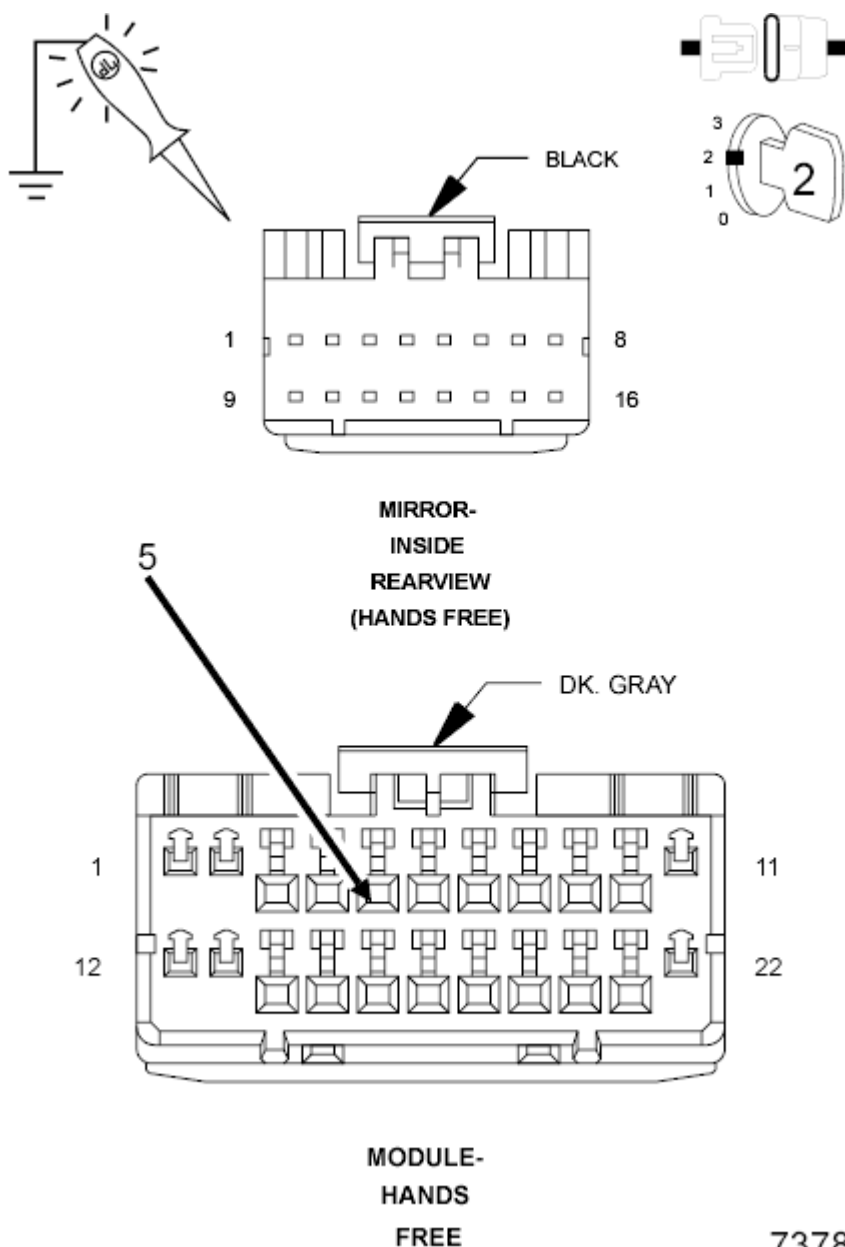
Yes

- Go to step 3

No

- Replace the Rearview Mirror in accordance with the Service Information.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**.

3. (X722) MICROPHONE IN 2 (+) CIRCUIT SHORTED TO VOLTAGE



**Fig. 12: Checking Microphone IN 2 (+) Circuit Shorted To Voltage**  
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Hands Free Module harness connector.
3. Turn the ignition on.
4. Measure the voltage of the (X722) Microphone IN 2 (+) circuit.

Is voltage present?

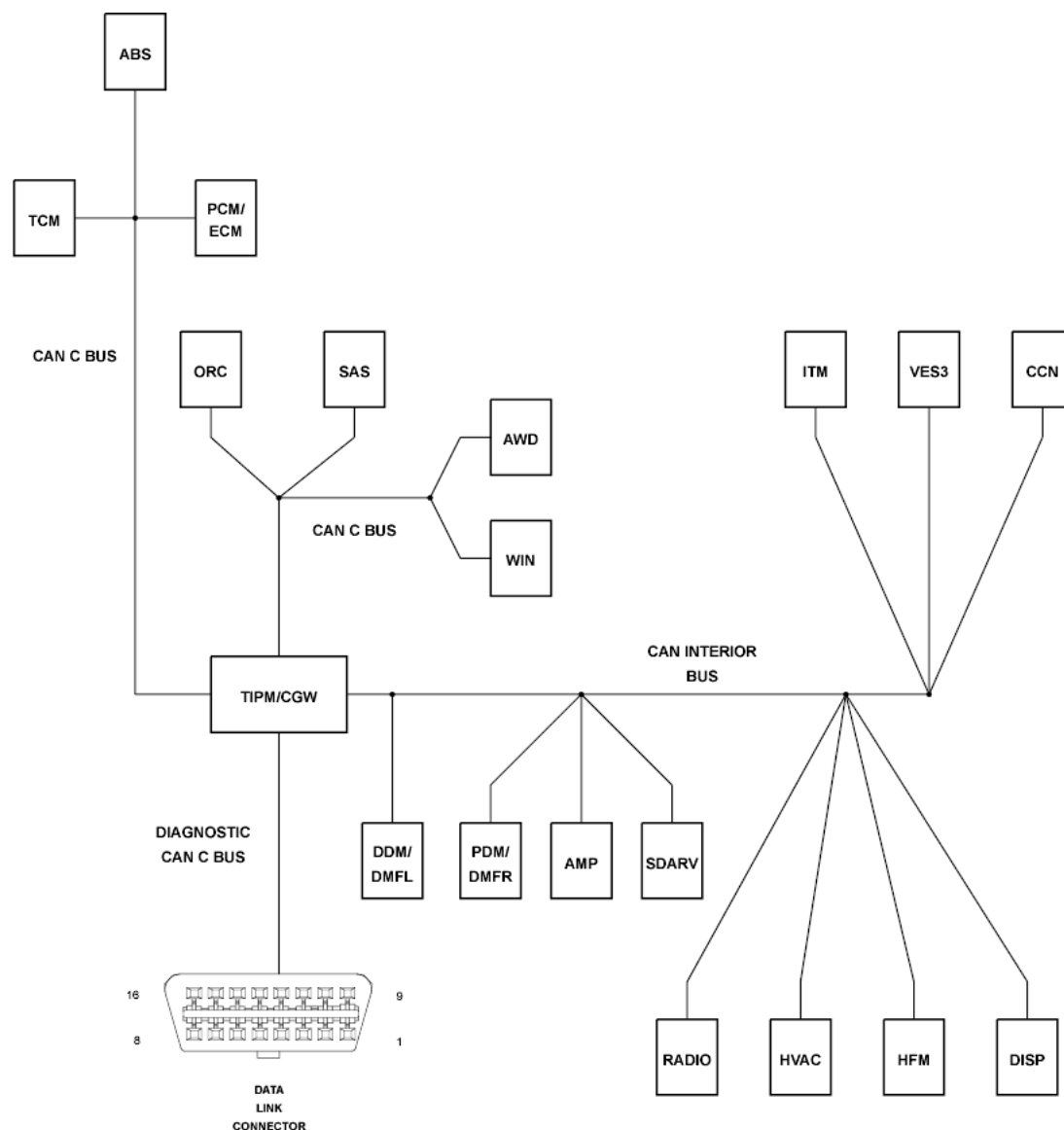
**Yes**

- Repair the (X722) Microphone IN 2 (+) circuit for a short to voltage.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

**No**

- Replace the Hands Free Module in accordance with the Service Information.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

**U0141-LOST COMMUNICATION WITH IPM (FCM/TIPM)**



**Fig. 13: CAN Interior Bus Circuit Schematic**  
 Courtesy of CHRYSLER LLC

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS**.

- **When Monitored:**

Continuously when the ignition is on.

Battery voltage between 10 and 16 volts.

Ignition Off Draw (IOD) fuse installed.

Totally Integrated Power Module (TIPM) is configured correctly.

- **Set Condition:**

Bus messages not received from the TIPM for approximately two to five seconds.

| Possible Causes                                            |
|------------------------------------------------------------|
| CAN BUS CIRCUITS OPEN OR SHORTED                           |
| DTCs RELATED TO BATTERY VOLTAGE, IGNITION, OR VIN MESSAGES |
| TIPM NOT CONFIGURED CORRECTLY                              |
| TOTALLY INTEGRATED POWER MODULE                            |
| TIPM POWER AND GROUND                                      |
| MODULE THAT SET THIS DTC                                   |

#### Diagnostic Test

#### 1. VERIFY THE DIAGNOSTIC TROUBLE CODE (DTC) IS ACTIVE

**NOTE:** Make sure the IOD fuse is installed and battery voltage is between 10 and 16 volts before proceeding.

1. With the scan tool, read active DTCs.

Is this DTC active?

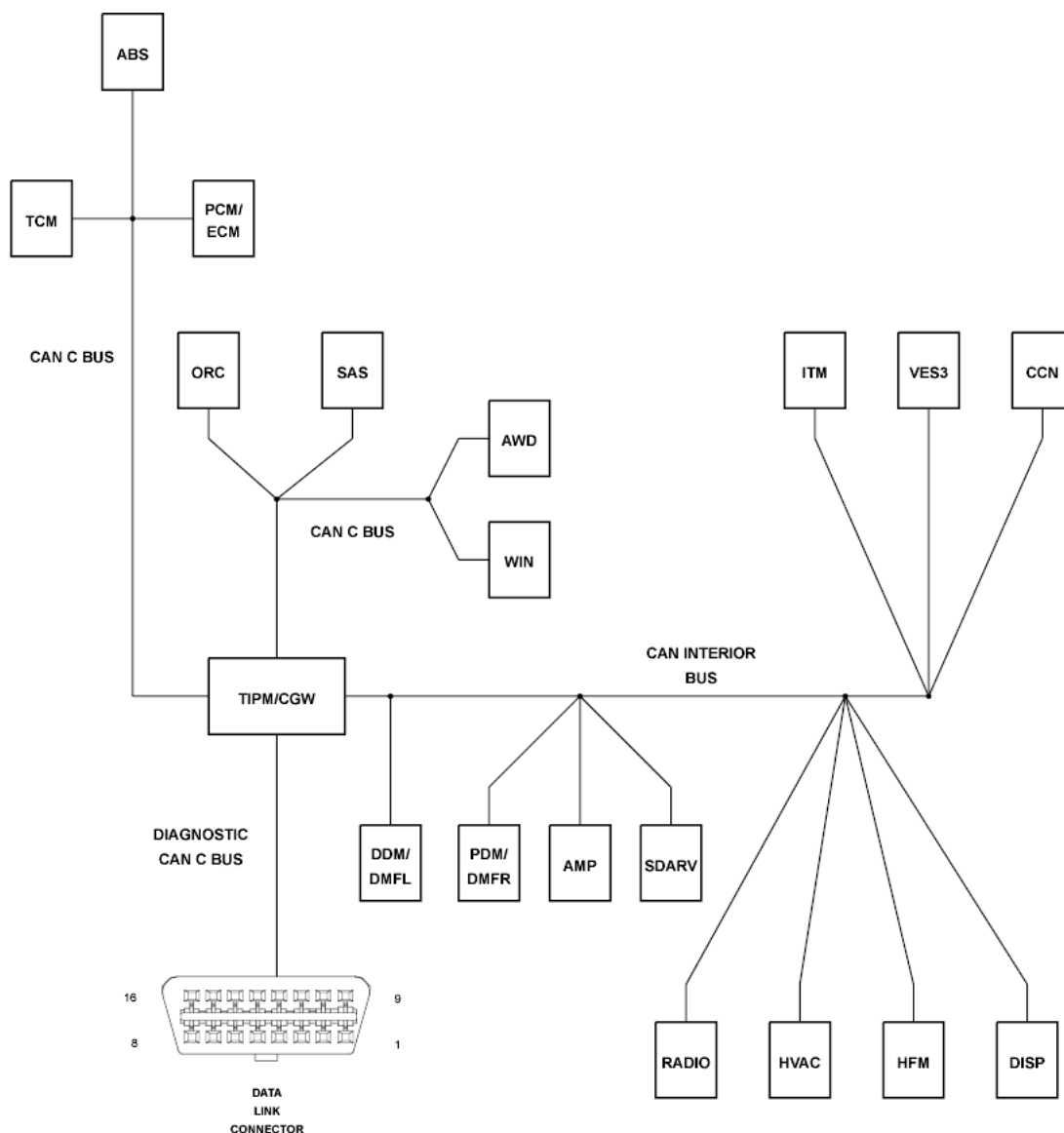
**Yes**

- Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Diagnosis and Testing** and perform the **U0141-LOST COMMUNICATION WITH IPM (FCM/TIPM)** diagnostic procedure.

**No**

- Refer to **Non-DTC Diagnostics/Communication - Diagnosis and Testing** and perform the Stored Lost Communication DTCs diagnostic procedure.

#### U0184-LOST COMMUNICATION WITH RADIO



**Fig. 14: CAN Interior Bus Circuit Schematic**  
 Courtesy of CHRYSLER LLC

For complete wiring diagrams, refer to **SYSTEM WIRING DIAGRAMS**.

- **When Monitored:**

Continuously when the ignition is on.

Battery voltage between 10 and 16 volts.

Ignition Off Draw (IOD) fuse installed.

Totally Integrated Power Module (TIPM) is configured correctly.

• **Set Condition:**

Bus messages not received from the Radio for approximately two to five seconds.

| Possible Causes                                            |
|------------------------------------------------------------|
| CAN BUS CIRCUITS OPEN OR SHORTED                           |
| DTCS RELATED TO BATTERY VOLTAGE, IGNITION, OR VIN MESSAGES |
| TIPM NOT CONFIGURED CORRECTLY                              |
| TOTALLY INTEGRATED POWER MODULE                            |
| TIPM POWER AND GROUND                                      |
| MODULE THAT SET THIS DTC                                   |

**Diagnostic Test**

**1. VERIFY THE DIAGNOSTIC TROUBLE CODE (DTC) IS ACTIVE**

**NOTE:** Ensure the IOD fuse is installed and battery voltage is between 10 and 16 volts before proceeding.

- With the scan tool, read active DTCs.

Is this DTC active?

**Yes**

- Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Diagnosis and Testing** and perform the **U0184-LOST COMMUNICATION WITH RADIO** diagnostic procedure.

**No**

- Refer to **Non-DTC Diagnostics/Communication - Diagnosis and Testing** and perform the Stored Lost Communication DTCs diagnostic procedure.