

2009 ACCESSORIES AND EQUIPMENT

Video Satellite (SDARV) - Electrical Diagnostics - Journey

DIAGNOSTIC CODE INDEX

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DTC	Description
B1539	SATELLITE VIDEO ANTENNA PERFORMANCE (NOT CONNECTED)
B210D	BATTERY VOLTAGE LOW
B210E	BATTERY VOLTAGE HIGH
B2287	SATELLITE VIDEO RECEIVER INTERNAL
U0010	CAN INTERIOR BUS
U0011	CAN INTERIOR BUS OFF PERFORMANCE
U0141	LOST COMMUNICATION WITH IPM (FCM/TIPM)
U0155	LOST COMMUNICATION WITH CLUSTER/CCN
U0184	LOST COMMUNICATION WITH RADIO

DIAGNOSIS AND TESTING

B1539-SATELLITE VIDEO ANTENNA PERFORMANCE (NOT CONNECTED)

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

- **When Monitored:**

With the ignition on and the Radio in Satellite Video Mode.

- **Set Condition:**

If the Satellite Video Module does not detect an antenna connection, this code will set.

Possible Causes
BAD SATELLITE VIDEO ANTENNA CONNECTION
OPEN SATELLITE VIDEO ANTENNA CABLE
OPEN SATELLITE VIDEO ANTENNA
SATELLITE VIDEO MODULE

Diagnostic Test

1. **CHECK CONNECTOR**

1. Turn the ignition off.
2. Disconnect the Satellite Video Antenna Cable connector at the Satellite Video Antenna.

3. Inspect the Satellite Video Antenna connection.

Was the Antenna connection clean and secure?

Yes

- Go to step 2

No

- Repair the Antenna connection as needed.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

2. SATELLITE VIDEO MODULE

NOTE: To continue with this test, you must secure a Known Good Satellite Video Antenna and Cable.

NOTE: Move vehicle outside approximately 9.14 m (30 ft.) from any structure.

1. Turn the ignition on.
2. With the scan tool, record, then erase the Satellite Video Module DTCs.
3. Turn the ignition off.
4. Connect a known good Satellite Video Antenna and Cable to the Satellite Video Module.
5. Turn the ignition and the Radio on.
6. Put the Radio in Satellite Video Mode.
7. With the scan tool, read the active Satellite Video Module DTCs.

Does the scan tool display: B1539 Satellite Video Antenna Performance (Not Connected) as Active?

Yes

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

No

- Go to step 3

3. SATELLITE VIDEO ANTENNA

1. With the scan tool, record, then erase the Satellite Video Module DTCs.
2. Turn the ignition off.

3. Disconnect the Satellite Video Antenna Cable connector at the Satellite Video Antenna.
4. Reconnect the original Satellite Video Antenna to the known good Satellite Video Antenna Cable.
5. Turn the ignition on.
6. Put the Radio in Satellite Video Mode.
7. With the scan tool, read the active Satellite Video Module DTCs.

Does the scan tool display: B1539 Satellite Video Antenna Performance (Not Connected) as Active?

Yes

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

No

- Go To step 4

4. SATELLITE VIDEO ANTENNA CABLE

1. With the scan tool, record, then erase the Satellite Video Module DTCs.
2. Turn the ignition off.
3. Disconnect the Satellite Video Antenna Cable connectors at the Satellite Video Antenna and the Satellite Video Module.
4. Reconnect the original Satellite Video Antenna Cable to the Satellite Video Antenna and the Satellite Video Module.
5. Turn the ignition on.
6. Put the Radio in Satellite Video Mode.
7. With the scan tool, read the active Satellite Video Module DTCs.

Does the scan tool display: B1539 Satellite Video Antenna Performance (Not Connected) as Active?

Yes

- Replace the Satellite Video Antenna Cable 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 condition that caused this symptom is currently not present. Check for an intermittent condition by inspecting the related wiring harness for chafed, pierced, pinched, and partially broken wires. Also, inspect the related connectors for broken, bent, pushed out, spread,

corroded, or contaminated terminals. Repair as necessary.

- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**.

B210D-BATTERY VOLTAGE LOW

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

Battery voltage less than 9 volts for more than 15 seconds.

Possible Causes
BATTERY
GENERATOR
POWERTRAIN CONTROL MODULE (PCM)

Diagnostic Test

1. CHECK FOR ANY POWERTRAIN CONTROL MODULES DTCS

NOTE: Make sure the Battery is in good condition. Using the Midtronics Battery Tester, test the Battery before continuing.

NOTE: Inspect the vehicle for after market accessories that may exceed the Generator System output.

NOTE: Make sure the generator drive belt is in good operating condition.

NOTE: Inspect the fuses in the IPM. If an open fuse is found, use the wire diagram/schematic as a guide, inspect the wiring and connectors for damage.

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

Does the scan tool display any active battery or charging DTCS?

Yes

- Refer to **DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure** and perform the appropriate battery or charging system diagnostic procedure.

No

- Check the above conditions that can cause a low voltage condition. Repair as necessary.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure**.

B210E-BATTERY VOLTAGE HIGH

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

Battery voltage greater than 16 volts for more than 15 seconds.

Possible Causes
BATTERY
GENERATOR
POWERTRAIN CONTROL MODULE (PCM)

Diagnostic Test

1. CHECK FOR ANY POWERTRAIN CONTROL MODULES DTCS

NOTE: Make sure the Battery is in good condition. Using the Midtronics Battery Tester, test the Battery before continuing.

NOTE: Inspect the vehicle for after market accessories that may exceed the Generator System output.

NOTE: Make sure the generator drive belt is in good operating condition.

NOTE: Inspect the fuses in the IPM. If an open fuse is found, use the wire diagram/schematic as a guide, inspect the wiring and connectors for damage.

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

Does the scan tool display any active battery or charging system DTCs?

Yes

- Refer to **DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure** and perform the appropriate battery or charging system diagnostic procedure.

No

- Check the above conditions that can cause a high voltage condition. Repair as necessary.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

B2287-SATELLITE VIDEO RECEIVER INTERNAL

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

• When Monitored:

With the ignition on.

• Set Condition:

The Satellite Video Receiver detects an internal failure.

Possible Causes
SATELLITE VIDEO RECEIVER

Diagnostic Test

1. DVD PLAYER

If DTC: B2287-SATELLITE VIDEO RECEIVER INTERNAL is active, view repair.

Repair

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

U0010-CAN INTERIOR BUS

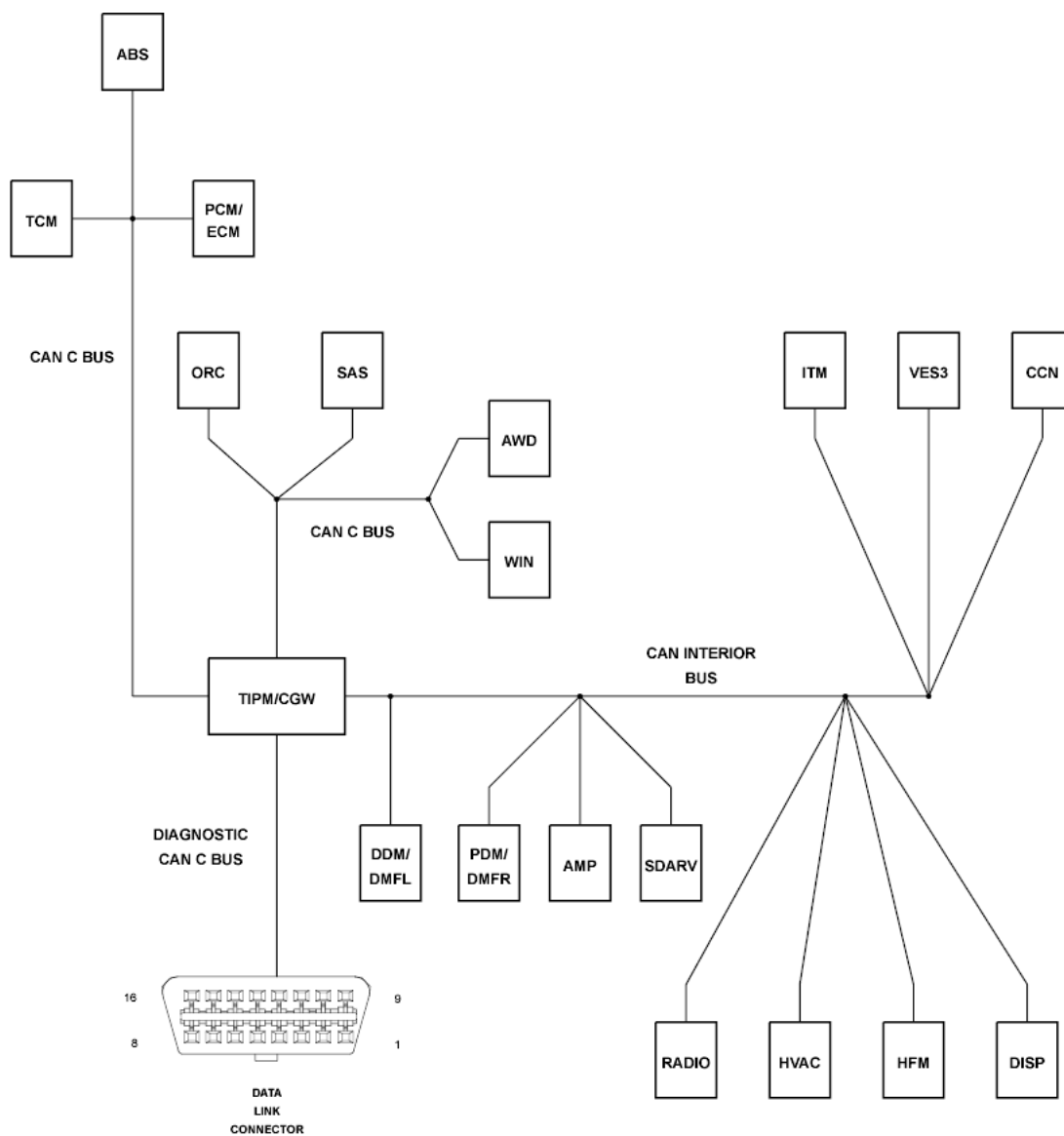


Fig. 1: CAN Interior Bus Circuit Schematic
Courtesy of CHRYSLER LLC

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

- **When Monitored:**

Continuously when the ignition is on.

Battery voltage between 10 and 16 volts.

IOD fuse installed.

- **Set Condition:**

The Totally Integrated Power Module (TIPM) detects a short to ground on the CAN Interior Bus (125K) (+) circuit or a short to voltage on the CAN Interior Bus (125K) (-) circuit.

Possible Causes
(D265) CAN INTERIOR BUS (125K) (+) CIRCUIT SHORTED TO GROUND
(D264) CAN INTERIOR BUS (125K) (-) CIRCUIT SHORTED TO VOLTAGE
ANY CAN INTERIOR BUS MODULE
TOTALLY INTEGRATED POWER MODULE

Diagnostic Test

1. VERIFY DTC IS ACTIVE

NOTE: Make sure the IOD fuse is installed and the battery is fully charged before proceeding.

NOTE: This module will not be able to communicate when this fault is active and therefore will only display this DTC as stored. To diagnose this DTC, use a scan tool and check for DTCs in the TIPM. If DTCs are active. Refer to DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Diagnosis and Testing and perform the appropriate diagnostic procedure. If no DTCs are active, but there are stored Lost Communication DTCs. Refer to Non-DTC Diagnostics/Communication - Diagnosis and Testing and perform the appropriate No Response diagnostic procedure. If no DTCs are set, perform the BODY VERIFICATION TEST. Refer to DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure .

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

Is this DTC active?

Yes

- Refer to DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Diagnosis and Testing and perform the diagnostic procedure for this DTC.

No

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

U0011-CAN INTERIOR BUS OFF PERFORMANCE

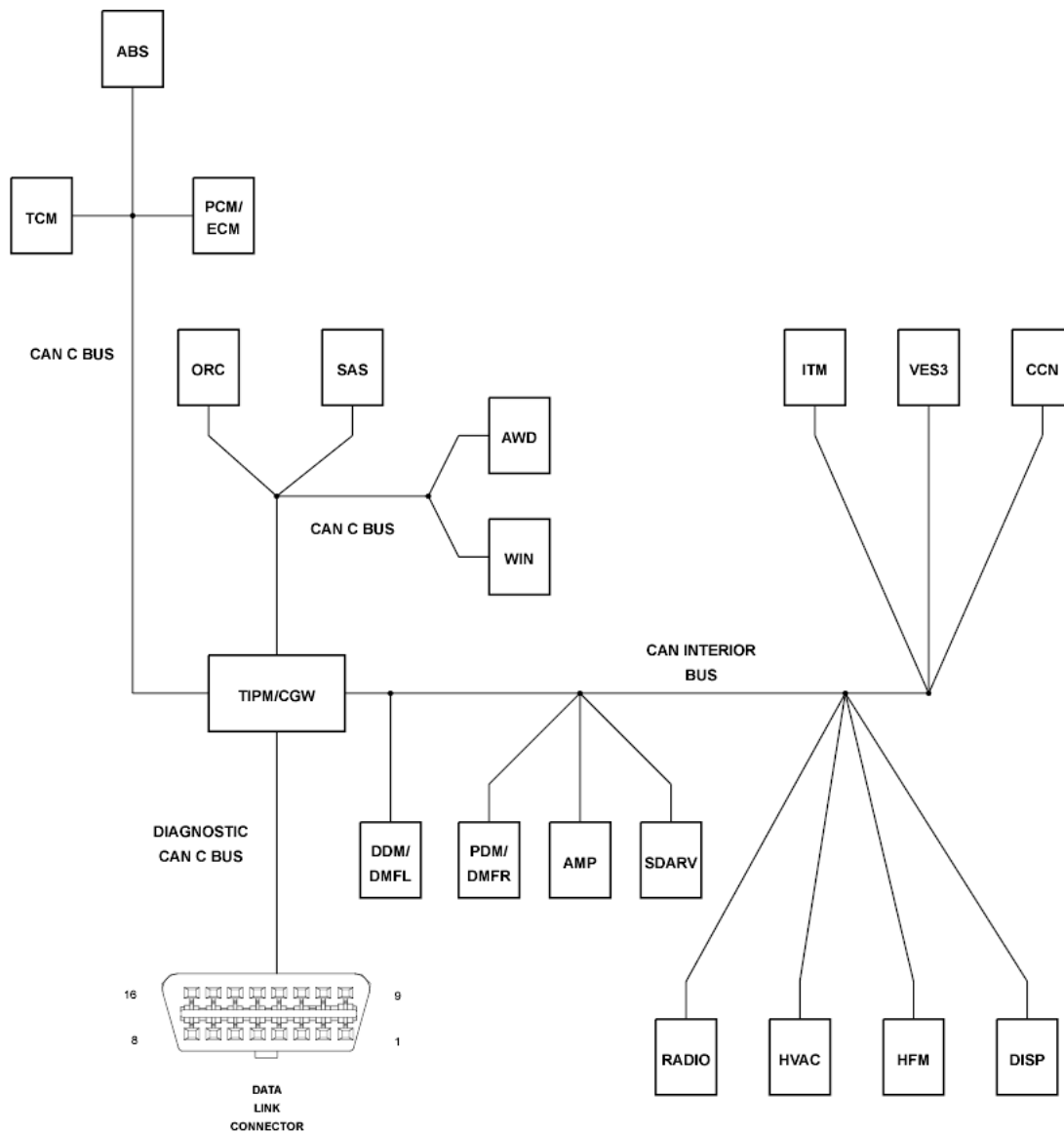


Fig. 2: CAN Interior Bus Circuit Schematic
Courtesy of CHRYSLER LLC

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.

• **Set Condition:**

The Radio Display Module (DISP) detects the CAN Interior Bus circuits shorted to ground, shorted together or shorted to voltage.

Possible Causes

(D265) CAN INTERIOR BUS (125K) (+) CIRCUIT SHORTED TO GROUND
 (D264) CAN INTERIOR BUS (125K) (-) CIRCUIT SHORTED TO GROUND
 (D265) CAN INTERIOR BUS (125K) (+) CIRCUIT SHORTED TO (D264) CAN INTERIOR BUS (125K) (-) CIRCUIT
 (D265) CAN INTERIOR BUS (125K) (+) CIRCUIT SHORTED TO VOLTAGE
 (D264) CAN INTERIOR BUS (125K) (-) CIRCUIT SHORTED TO VOLTAGE
 ANY CAN INTERIOR BUS MODULE
 TOTALLY INTEGRATED POWER MODULE (TIPM)

Diagnostic Test

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

NOTE: Make sure the IOD fuse is installed and the battery is fully charged before proceeding.

1. Turn the ignition on.
2. Using the scan tool, read active Radio Display Module (DISP) DTCs.

Is this DTC active?

Yes

- Refer to DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Diagnosis and Testing and perform the U0011-CAN INTERIOR BUS OFF PERFORMANCE diagnostic procedure.

No

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

U0141-LOST COMMUNICATION WITH IPM (FCM/TIPM)

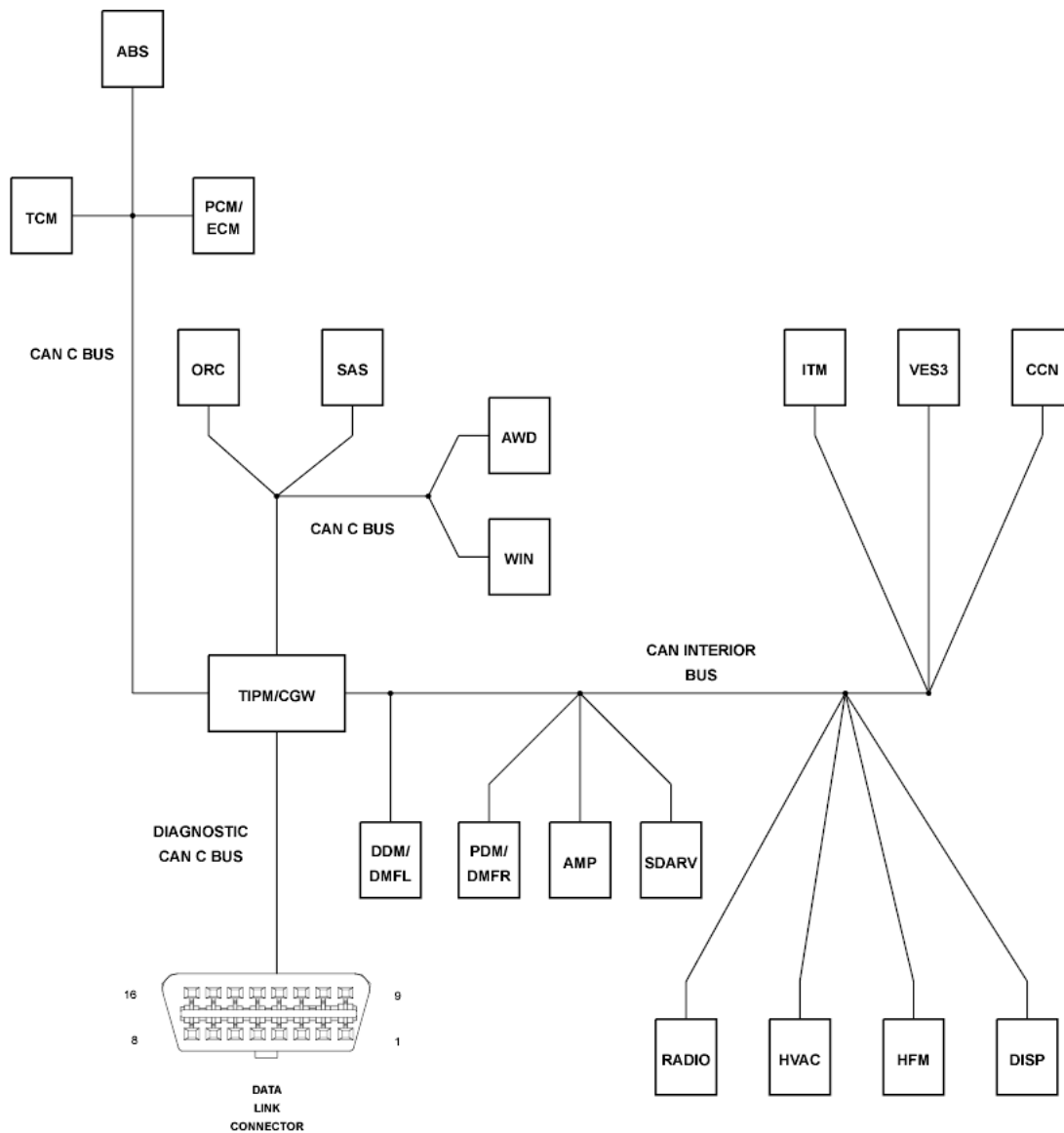


Fig. 3: CAN Interior Bus Circuit Schematic
Courtesy of CHRYSLER LLC

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.

• **Set Condition:**

Bus messages not received from the Totally Integrated Power Module (TIPM) for approximately two to five seconds.

Possible Causes

(D265) CAN INTERIOR BUS (125K) (+) CIRCUIT SHORTED TO VOLTAGE
 (D264) CAN INTERIOR BUS (125K) (-) CIRCUIT SHORTED TO GROUND
 DTCS RELATED TO BATTERY VOLTAGE, IGNITION, OR VIN MESSAGES
 TIPM NOT CONFIGURED CORRECTLY
 TIPM POWER AND GROUND
 TOTALLY INTEGRATED POWER MODULE (TIPM)
 RADIO DISPLAY MODULE (DISP)

Diagnostic Test

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

NOTE: Make sure the IOD fuse is installed and the battery is fully charged before proceeding.

1. Turn the ignition on.
2. Using the scan tool, read active Radio Display Module (DISP) 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.

U0155-LOST COMMUNICATION WITH CLUSTER/CCN

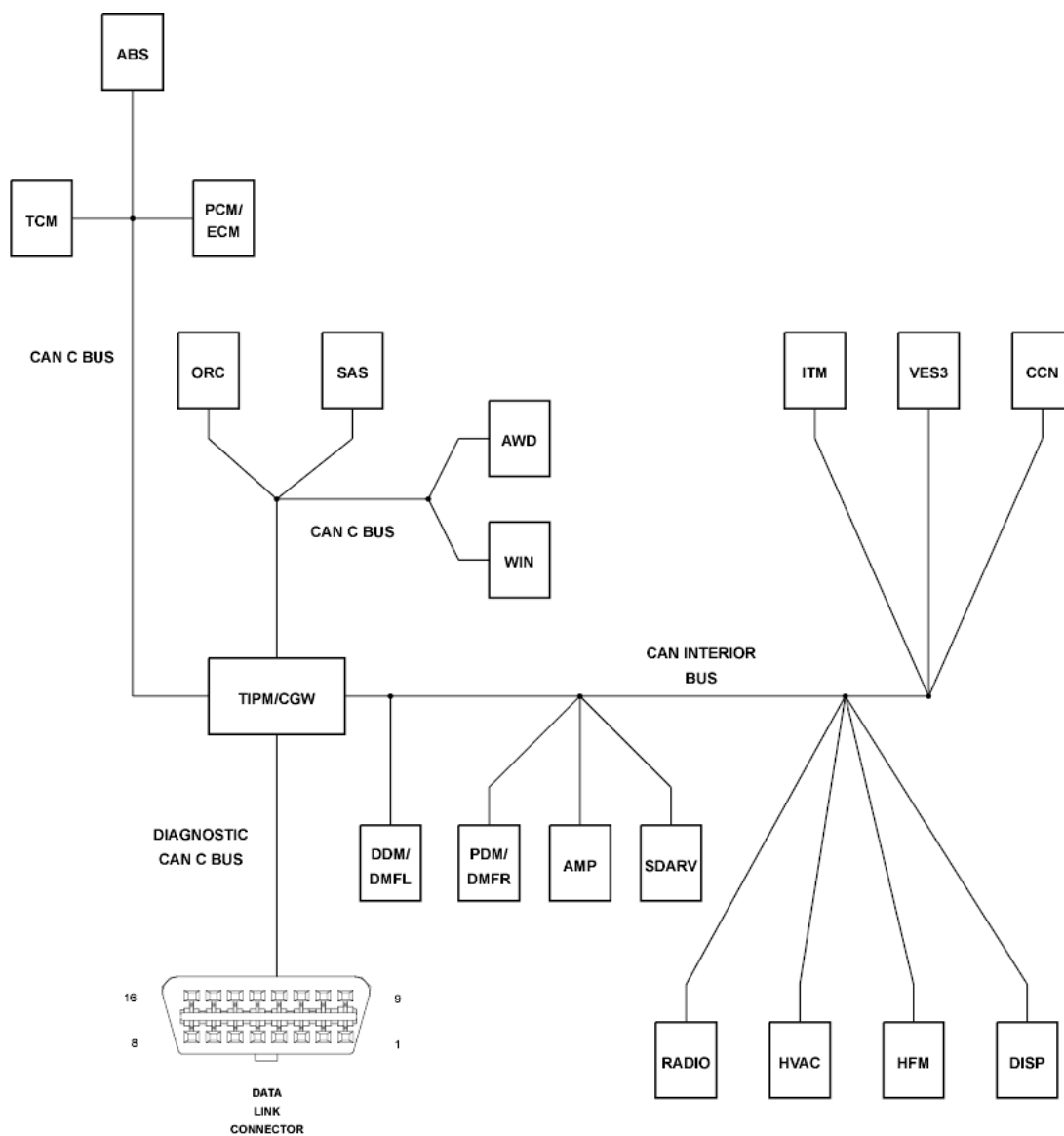


Fig. 4: CAN Interior Bus Circuit Schematic
 Courtesy of CHRYSLER LLC

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

- **When Monitored:**

Continuously when the ignition is on.

The battery voltage is between 10 and 16 Volts.

Ignition Off Draw (IOD) fuse installed.

- **Set Condition:**

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

Possible Causes
(D265) CAN INTERIOR BUS (125K) (+) CIRCUIT SHORTED TO VOLTAGE (D264) CAN INTERIOR BUS (125K) (-) CIRCUIT SHORTED TO GROUND DTCS RELATED TO BATTERY VOLTAGE, IGNITION, OR VIN MESSAGES TIPM NOT CONFIGURED CORRECTLY CLUSTER POWER AND GROUND CLUSTER (CCN) RADIO DISPLAY MODULE (DISP)

Diagnostic Test

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

NOTE: Make sure the IOD fuse is installed and the battery is fully charged before proceeding.

1. Turn the ignition on.
2. Using the scan tool, read active Radio Display Module (DISP) DTCs.

Is this DTC active?

Yes

- Refer to DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Diagnosis and Testing and perform the U0155-LOST COMMUNICATION WITH CLUSTER/CCN diagnostic procedure.

No

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

U0184-LOST COMMUNICATION WITH RADIO

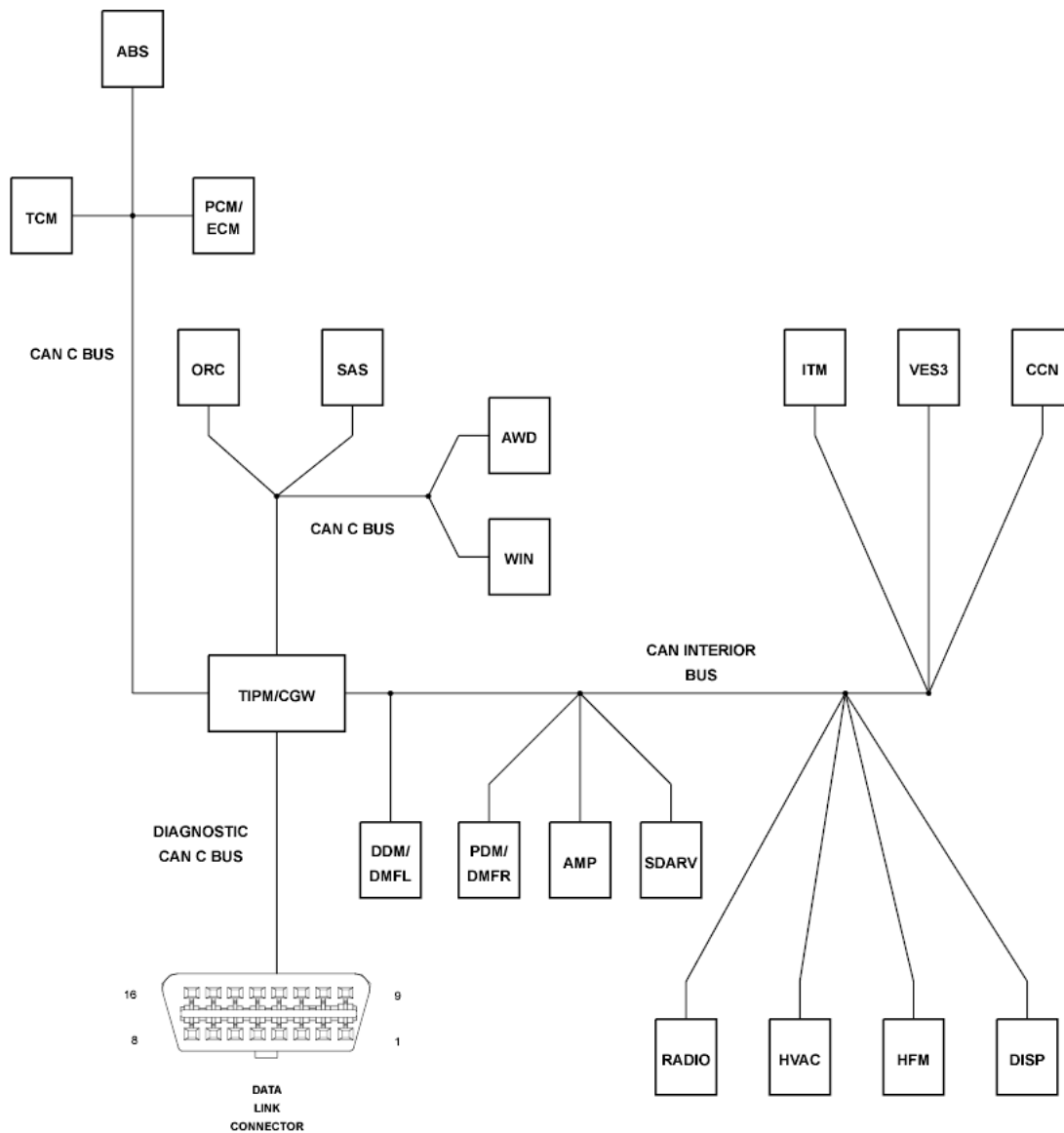


Fig. 5: CAN Interior Bus Circuit Schematic
Courtesy of CHRYSLER LLC

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

• **When Monitored:**

Continuously when the ignition is on.

The battery voltage between 10 and 16 Volts.

Ignition Off Draw (IOD) fuse installed.

• **Set Condition:**

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

Possible Causes

(D265) CAN INTERIOR BUS (125K) (+) CIRCUIT SHORTED TO VOLTAGE
 (D264) CAN INTERIOR BUS (125K) (-) CIRCUIT SHORTED TO GROUND
 DTCS RELATED TO BATTERY VOLTAGE, IGNITION, OR VIN MESSAGES
 TIPM NOT CONFIGURED CORRECTLY
 RADIO POWER AND GROUND
 RADIO
 RADIO DISPLAY MODULE (DISP)

Diagnostic Test

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

NOTE: Make sure the IOD fuse is installed and the battery is fully charged before proceeding.

1. Turn the ignition on.
2. Using the scan tool, read the active Radio Display Module (DISP) 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.