

DIAGNOSIS AND TESTING > SCAN TOOL WILL NOT COMMUNICATE WITH CAN C1

For a complete wiring diagram, refer to **SYSTEM WIRING DIAGRAMS** article .

DIAGNOSIS AND TESTING > SCAN TOOL WILL NOT COMMUNICATE WITH CAN C1 > THEORY OF OPERATION

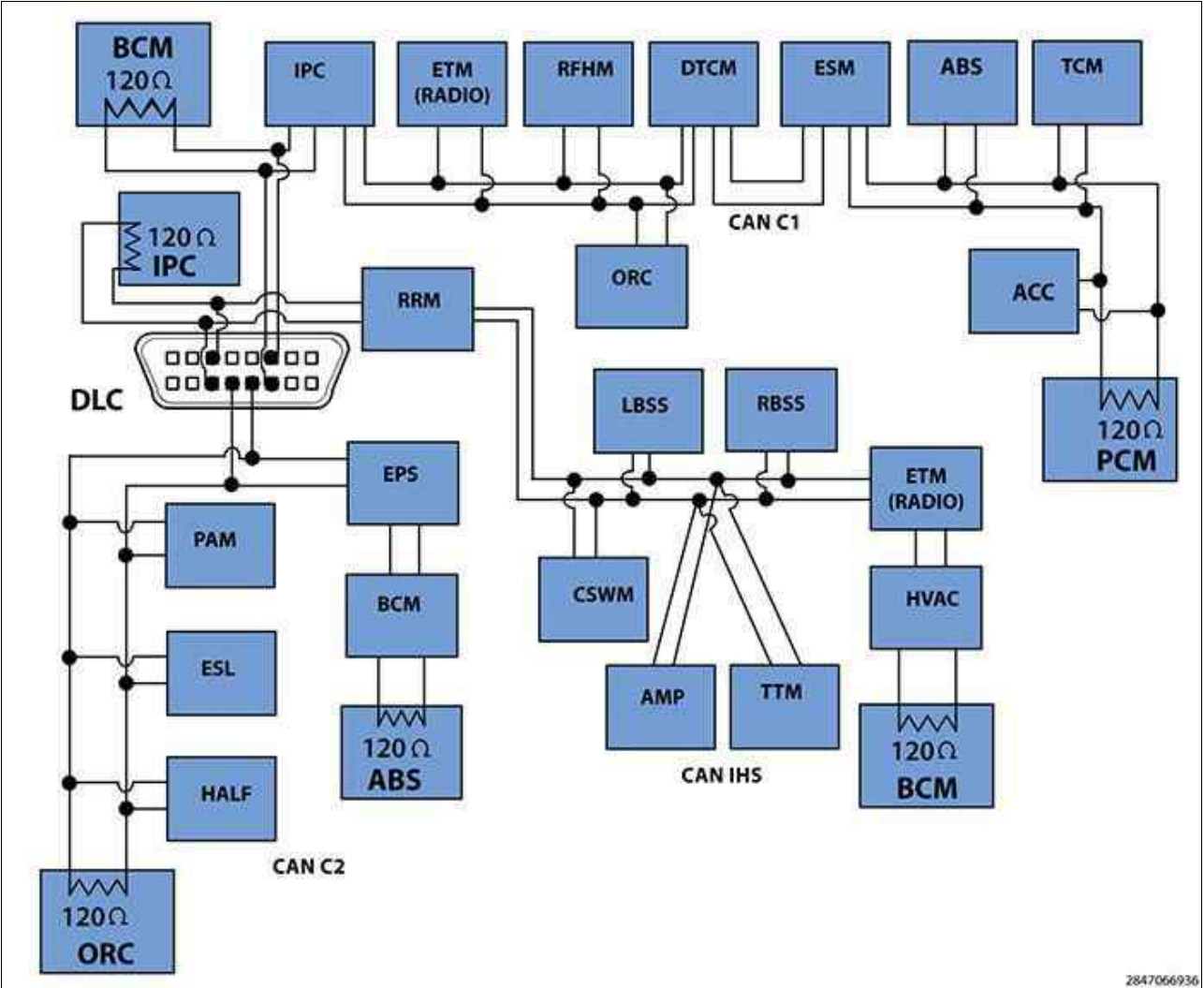
For an in-depth explanation of the CAN system operation, refer to the DESCRIPTION in COMMUNICATION, DESCRIPTION AND OPERATION .

DIAGNOSIS AND TESTING > SCAN TOOL WILL NOT COMMUNICATE WITH CAN C1 > POSSIBLE CAUSES

Possible Causes
CAN C1 CIRCUIT SHORTED TO GROUND
CAN C1 CIRCUIT SHORTED TO VOLTAGE
ANY MODULE ON THE CAN C1 BUS

Always perform the COMMUNICATION PRE-DIAGNOSTIC TROUBLESHOOTING PROCEDURE before proceeding. Refer to STANDARD PROCEDURE .

Fig 1: CAN Communication Circuit Schematic



Courtesy of CHRYSLER GROUP, LLC

NORMAL CAN CIRCUIT VOLTAGE TABLE

CIRCUIT	NORMAL VOLTAGE VALUES
CAN C1 (-)	1.5 - 2.5 volts
CAN C1 (+)	2.5 - 3.5 volts
Difference Between CAN C1 (+) and CAN C1 (-)	0.5 volt

DIAGNOSIS AND TESTING > SCAN TOOL WILL NOT COMMUNICATE WITH CAN C1 > DIAGNOSTIC TEST

- 1. DIVIDE THE CONTROLLER AREA NETWORK (CAN) TO ISOLATE THE PROBLEM

 NOTE:

This procedure assumes that the fault is active. The scan tool typically will not communicate with this bus while the fault is active.

 NOTE:

This procedure assumes that the scan tool is operating correctly. If necessary, connect scan tool to another vehicle to be certain that the scan tool is operating correctly.

1. Install the (special tool #CH7002, Break Out Box, J1962, 16-Way) on the Diagnostic Link Connector (DLC).

 NOTE:

Do not connect the scan tool to the (special tool #CH7002, Break Out Box, J1962, 16-Way) during the following tests.

2. Disconnect the Drivetrain Control Module (DTCM) harness connector(s) that contain the CAN C1 circuits.
3. Turn the ignition on.
4. Measure the voltage between ground and the CAN C1 (+) circuit at the DLC Breakout Box. Compare results to NORMAL CAN CIRCUIT VOLTAGE TABLE.
5. Measure the voltage between ground and the CAN C1 (-) circuit at the DLC Breakout Box. Compare results to NORMAL CAN CIRCUIT VOLTAGE TABLE.

Are the CAN C1 circuit voltages within the specified value for each circuit and within 0.5 volt of each other?

Yes

1. Go To Step 2

No

1. Go To Step 6

2. ISOLATE THE FAULTED CAN C1 CIRCUIT OR MODULE

1. Connect the DTCM harness connector.

 NOTE:

The following CAN C1 modules must be disconnected in the order shown

as follows:

1. Powertrain Control Module (PCM)
2. Adaptive Cruise Control (ACC)
3. Transmission Control Module (TCM)
4. Antilock Brake System (ABS)



NOTE:

Once a harness connector is disconnected from a module, leave it disconnected unless instructed otherwise.

2. Disconnect the harness connector of each module that is listed above, one at a time, while monitoring the voltage of each CAN C1 circuit at the (special tool #CH7002, Break Out Box, J1962, 16-Way) a significant change in voltage will indicate a faulty module. Refer to the noted voltage readings from Step 1.

Was a significant change in voltage observed when disconnecting one of the listed modules?

Yes

1. Replace the module that caused a significant change in voltage. Refer to the appropriate Service Information.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 3

3. DISCONNECT THE ELECTRONIC SHIFT MODULE (ESM)

1. Disconnect the ESM harness connector(s) while monitoring the voltage of each CAN C1 circuit at the (special tool #CH7002, Break Out Box, J1962, 16-Way).

Was a significant change in voltage observed when disconnecting the ESM?

Yes

1. Go To Step 4

No

1. Go To Step 5

4. CHECK CAN C1 CIRCUITS BETWEEN ESM AND PCM

1. Check the CAN C1 (+) circuits and CAN C1 (-) circuits between the ESM and the PCM for an open circuit, short to ground, and a short to another circuit.

Was a circuit problem found?

Yes

1. Repair the circuit(s) as necessary.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Replace the Electronic Shift Module (ESM) in accordance with the Service Information. (Refer to ELECTRONIC CONTROL MODULES - SERVICE INFORMATION).
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

5. CHECK CAN C1 CIRCUITS BETWEEN DTCM AND ESM

1. Check the CAN C1 (+) circuits and CAN C1 (-) circuits between the DTCM and the ESM for an open circuit, short to ground, and a short to another circuit.

Was a circuit problem found?

Yes

1. Repair the circuit(s) as necessary.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Replace the Drivetrain Control Module (DTCM) in accordance with the Service Information. Refer to MODULE, DRIVETRAIN CONTROL, REMOVAL AND INSTALLATION .
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

6. ISOLATE THE REMAINING FAULTED CAN C1 CIRCUIT OR MODULE

1. Connect the DTCM harness connector.



NOTE:

The following CAN C1 modules must be disconnected in the order shown as follows:

1. *Radio Frequency (RF) Hub*
2. *Entertainment Telematics Module (ETM) (Radio)*
3. *Occupant Restraint Controller (ORC)*



NOTE:

Once a harness connector is disconnected from a module, leave it disconnected.

2. Disconnect the harness connector of each module that is listed above, one at a time, while monitoring the voltage of each CAN C1 circuit at the (special tool #CH7002, Break Out Box, J1962, 16-Way). A significant change in voltage will indicate a faulty module. Refer to the noted voltage readings from Step 1.

Was a significant change in voltage observed when disconnecting one of the listed modules?

Yes

1. Replace the module that caused a significant change in voltage. Refer to the appropriate Service Information.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 7

7. DISCONNECT THE INSTRUMENT PANEL CLUSTER (IPC)

1. Disconnect the IPC harness connector(s) while monitoring the voltage of each CAN C1 circuit at the (special tool #CH7002, Break Out Box, J1962, 16-Way).

Was a significant change in voltage observed when disconnecting the IPC?

Yes

1. Go To Step 8

No

1. Go To Step 9

8. CHECK CAN C1 CIRCUITS BETWEEN IPC AND DTCM

1. Check the CAN C1 (+) circuits and CAN C1 (-) circuits between the IPC and the DTCM for an open circuit, short to ground, and a short to another circuit.

Was a circuit problem found?

Yes

1. Repair the circuit(s) as necessary.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Replace the Instrument Panel Cluster (IPC) in accordance with the Service Information. Refer to MODULE, INSTRUMENT PANEL CLUSTER, REMOVAL AND INSTALLATION .

2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

9. DISCONNECT THE BODY CONTROL MODULE (BCM)

1. Connect the IPC harness connector.
2. Disconnect the BCM harness connector(s) while monitoring the voltage of each CAN C1 circuit at the (special tool #CH7002, Break Out Box, J1962, 16-Way).

Was a significant change in voltage observed when disconnecting the BCM?

Yes

1. Replace the Body Control Module (BCM) in accordance with the Service Information. Refer to MODULE, BODY CONTROL, REMOVAL AND INSTALLATION .
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Repair the CAN C1 circuit(s) between the BCM, IPC, and DLC for an open circuit, short to ground, or a short to another circuit.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > SCAN TOOL WILL NOT COMMUNICATE WITH CAN C2

For a complete wiring diagram, refer to **SYSTEM WIRING DIAGRAMS** article .

DIAGNOSIS AND TESTING > SCAN TOOL WILL NOT COMMUNICATE WITH CAN C2 > THEORY OF OPERATION

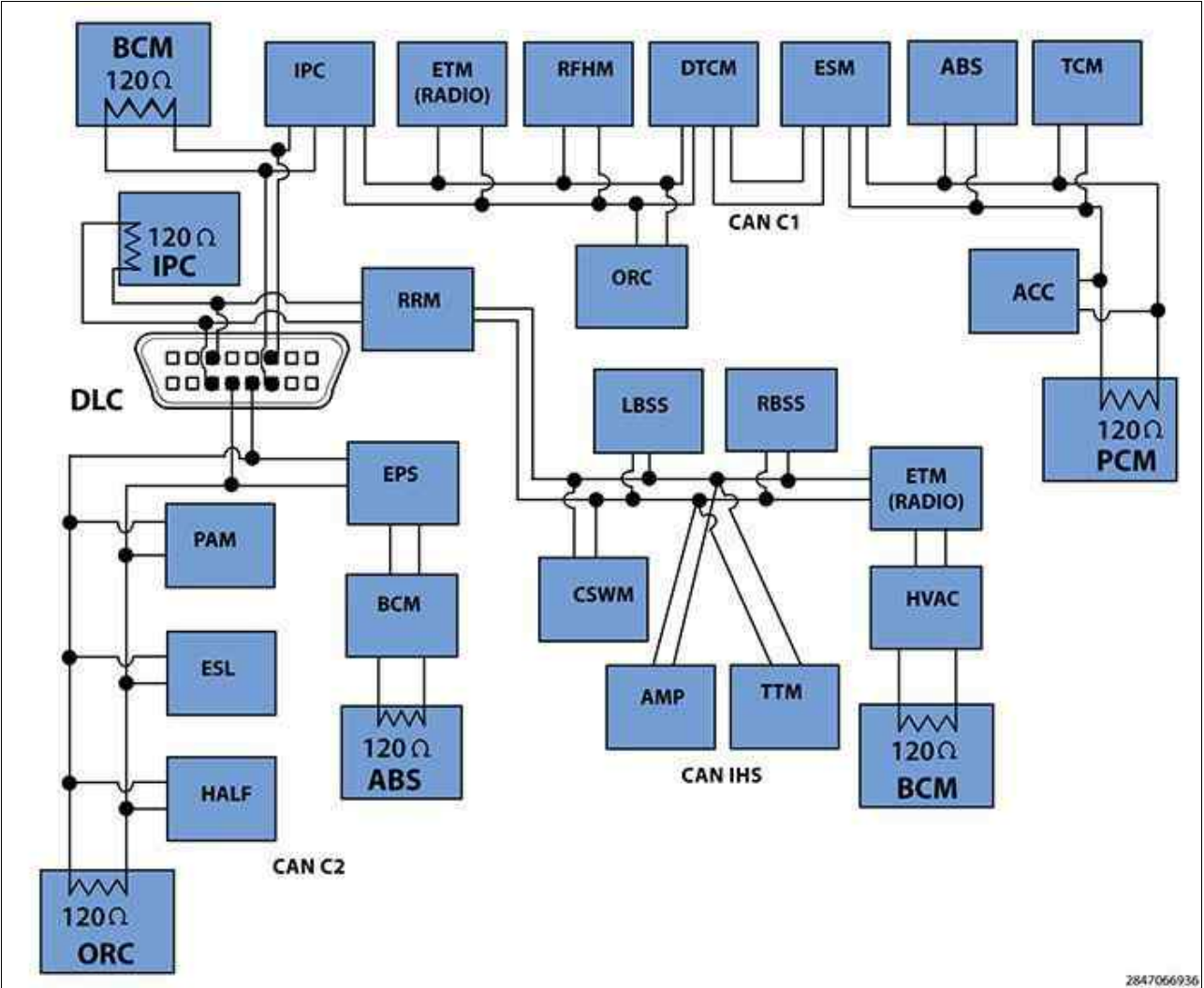
For an in-depth explanation of the CAN system operation, refer to the DESCRIPTION in COMMUNICATION, DESCRIPTION AND OPERATION .

DIAGNOSIS AND TESTING > SCAN TOOL WILL NOT COMMUNICATE WITH CAN C2 > POSSIBLE CAUSES

Possible Causes
CAN C2 CIRCUIT SHORTED TO GROUND
CAN C2 CIRCUIT SHORTED TO VOLTAGE
ANY MODULE ON THE CAN C2 BUS

Always perform the COMMUNICATION PRE-DIAGNOSTIC TROUBLESHOOTING PROCEDURE before proceeding. Refer to STANDARD PROCEDURE .

Fig 1: CAN Communication Circuit Schematic



Courtesy of CHRYSLER GROUP, LLC

NORMAL CAN CIRCUIT VOLTAGE TABLE

CIRCUIT	NORMAL VOLTAGE VALUES
CAN C2 (-)	1.5 - 2.5 volts
CAN C2 (+)	2.5 - 3.5 volts
Difference Between CAN C2 (+) and CAN C2 (-)	0.5 volt

DIAGNOSIS AND TESTING > SCAN TOOL WILL NOT COMMUNICATE WITH CAN C2 > DIAGNOSTIC TEST

- 1. DIVIDE THE CONTROLLER AREA NETWORK (CAN) TO ISOLATE THE PROBLEM

 NOTE:

This procedure assumes that the fault is active. The scan tool typically will not communicate with this bus while the fault is active.

 NOTE:

This procedure assumes that the scan tool is operating correctly. If necessary, connect scan tool to another vehicle to be certain that the scan tool is operating correctly.

1. Install the (special tool #CH7002, Break Out Box, J1962, 16-Way) on the Diagnostic Link Connector (DLC).

 NOTE:

Do not connect the scan tool to the (special tool #CH7002, Break Out Box, J1962, 16-Way) during the following tests.

2. Disconnect the Electric Power Steering (EPS) Module harness connector(s) that contain the CAN C2 circuits.
3. Turn the ignition on.
4. Measure the voltage between ground and the CAN C2 (+) circuit at the DLC Breakout Box. Compare results to NORMAL CAN CIRCUIT VOLTAGE TABLE.
5. Measure the voltage between ground and the CAN C2 (-) circuit at the DLC Breakout Box. Compare results to NORMAL CAN CIRCUIT VOLTAGE TABLE.

Are the CAN C2 circuit voltages within the specified value for each circuit and within 0.5 volt of each other?

Yes

1. Go To Step 2

No

1. Go To Step 6

2. DISCONNECT THE ANTILOCK BRAKE SYSTEM (ABS) MODULE

1. Connect the EPS Module harness connector.
2. Disconnect the ABS Module harness connector(s) while monitoring the voltage of each CAN C2 circuit at the (special tool #CH7002, Break Out Box, J1962, 16-Way).

Was a significant change in voltage observed when disconnecting the ABS Module ?

Yes

1. Using the schematics as a guide, check the ABS Module terminals and connectors for corrosion, damage or pushed out terminals. Pay particular attention to the power and ground circuits. If no problems are found, replace the Antilock Brake System (ABS) Module in accordance with the Service Information. Refer to MODULE, ANTI-LOCK BRAKE SYSTEM, REMOVAL AND INSTALLATION .
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 3

3. DISCONNECT THE BODY CONTROL MODULE (BCM)

1. Disconnect the BCM harness connector(s) while monitoring the voltage of each CAN C2 circuit at the (special tool #CH7002, Break Out Box, J1962, 16-Way).

Was a significant change in voltage observed when disconnecting the BCM ?

Yes

1. Go To Step 4

No

1. Go To Step 5

4. CHECK CAN CIRCUITS BETWEEN ABS MODULE AND BCM

1. Check the CAN C2 (+) circuits and CAN C2 (-) circuits between the ABS Module and the BCM for an open circuit, short to ground, and a short to another circuit.

Was a circuit problem found?

Yes

1. Repair the circuit(s) as necessary.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Using the schematics as a guide, check the BCM terminals and connectors for corrosion, damage or pushed out terminals. Pay particular attention to the power and ground circuits. If no problems are found, replace the Body Control Module (BCM) in accordance with the Service Information. Refer to MODULE, BODY CONTROL, REMOVAL AND INSTALLATION .
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

5. CHECK CAN CIRCUITS BETWEEN BCM AND EPS MODULE

1. Check the CAN C2 (+) circuits and CAN C2 (-) circuits between the BCM and the EPS Module for an open circuit, short to ground, and a short to another circuit.

Was a circuit problem found?

Yes

1. Repair the circuit(s) as necessary.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Using the schematics as a guide, check the EPS Module terminals and connectors for corrosion, damage or pushed out terminals. Pay particular attention to the power and ground circuits. If no problems are found, replace the Electronic Power Steering (EPS) Module in accordance with the Service Information. Refer to COLUMN, REMOVAL AND INSTALLATION .
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

6. ISOLATE THE FAULTED CAN C2 CIRCUIT OR MODULE

1. Connect the EPS Module harness connector.



NOTE:

The following CAN C2 modules must be disconnected in the order shown as follows:

1. *Occupant Restraint Controller (ORC)*
2. *Forward Facing Camera Module (FFCM) (HALF)*
3. *Electronic Steering Lock (ESL) Module*
4. *Park Assist Module (PAM)*



NOTE:

Once a harness connector is disconnected from a module, leave it disconnected unless instructed otherwise.

2. Disconnect the harness connector of each module that is listed above, one at a time, while monitoring the voltage of each CAN C2 circuit at the (special tool #CH7002, Break Out Box, J1962, 16-Way) a significant change in voltage will indicate a faulty module. Refer to the noted voltage readings from Step 1.

Was a significant change in voltage observed when disconnecting one of the listed modules?

Yes

1. Replace the module that caused a significant change in voltage. Refer to the appropriate Service Information.

2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Repair the CAN C2 circuit(s) between the ORC, DLC, and EPS Module for an open circuit, short to ground, or a short to another circuit.

2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > SCAN TOOL WILL NOT COMMUNICATE WITH CAN IHS

For a complete wiring diagram, refer to **SYSTEM WIRING DIAGRAMS** article .

DIAGNOSIS AND TESTING > SCAN TOOL WILL NOT COMMUNICATE WITH CAN IHS > THEORY OF OPERATION

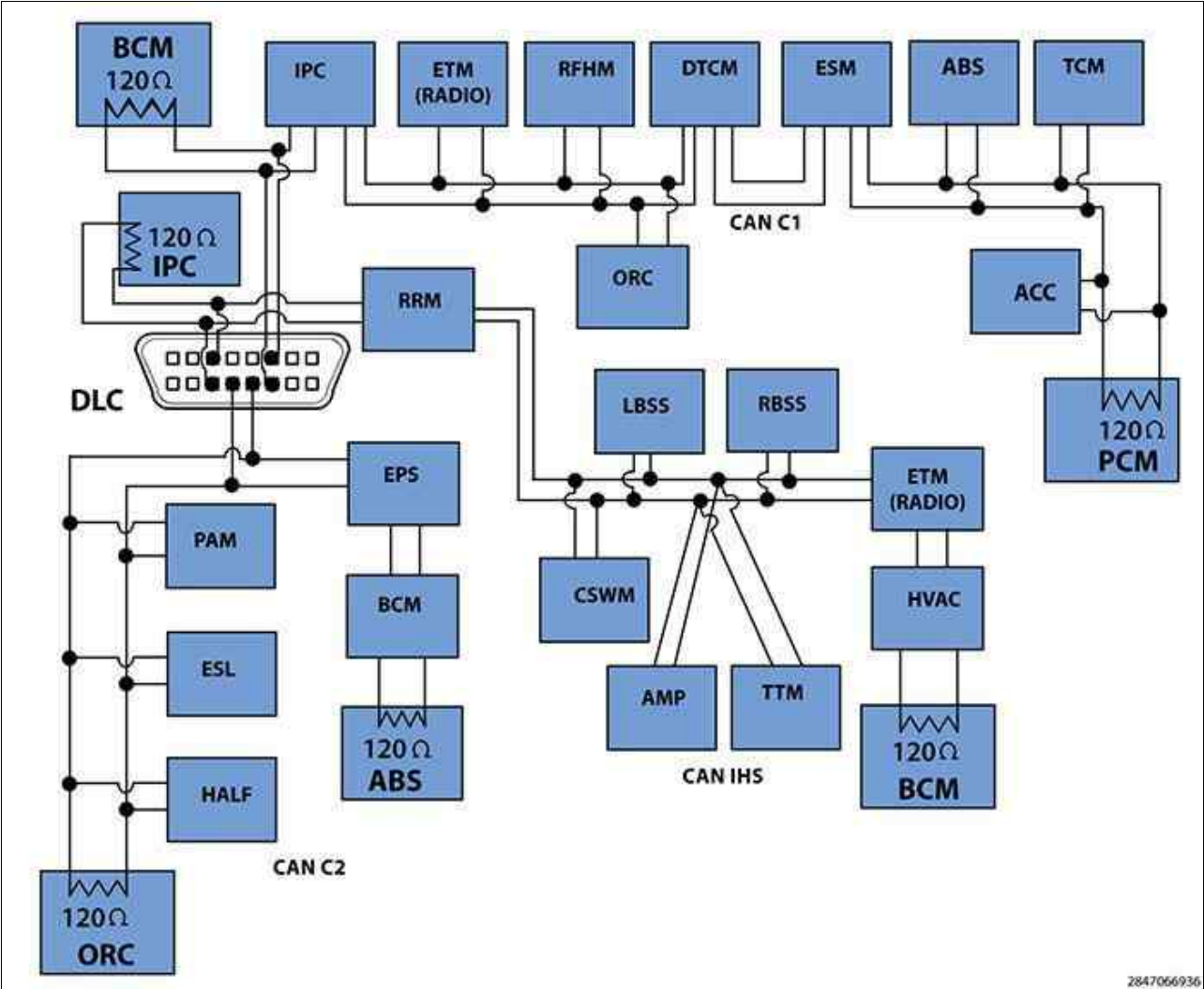
For an in-depth explanation of the CAN system operation, refer to the DESCRIPTION in COMMUNICATION, DESCRIPTION AND OPERATION .

DIAGNOSIS AND TESTING > SCAN TOOL WILL NOT COMMUNICATE WITH CAN IHS > POSSIBLE CAUSES

Possible Causes
CAN IHS CIRCUIT SHORTED TO GROUND
CAN IHS CIRCUIT SHORTED TO VOLTAGE
ANY MODULE ON THE CAN IHS BUS

Always perform the COMMUNICATION PRE-DIAGNOSTIC TROUBLESHOOTING PROCEDURE before proceeding. Refer to STANDARD PROCEDURE .

Fig 1: CAN Communication Circuit Schematic



Courtesy of CHRYSLER GROUP, LLC

NORMAL CAN CIRCUIT VOLTAGE TABLE

CIRCUIT	NORMAL VOLTAGE VALUES
CAN IHS (-)	1.5 - 2.5 volts
CAN IHS (+)	2.5 - 3.5 volts
Difference Between CAN IHS (+) and CAN IHS (-)	0.5 volt

DIAGNOSIS AND TESTING > SCAN TOOL WILL NOT COMMUNICATE WITH CAN IHS
> DIAGNOSTIC TEST

- 1. DIVIDE THE CONTROLLER AREA NETWORK (CAN) TO ISOLATE THE PROBLEM

 NOTE:

This procedure assumes that the fault is active. The scan tool typically will not communicate with this bus while the fault is active.

 NOTE:

This procedure assumes that the scan tool is operating correctly. If necessary, connect scan tool to another vehicle to be certain that the scan tool is operating correctly.

1. Install the (special tool #CH7002, Break Out Box, J1962, 16-Way) on the Diagnostic Link Connector (DLC).

 NOTE:

Do not connect the scan tool to the (special tool #CH7002, Break Out Box, J1962, 16-Way) during the following tests.

2. Disconnect the Entertainment Telematics Module (ETM) harness connector(s) that contain the CAN IHS circuits.
3. Turn the ignition on.
4. Measure the voltage between ground and the CAN IHS (+) circuit at the DLC Breakout Box. Compare results to NORMAL CAN CIRCUIT VOLTAGE TABLE.
5. Measure the voltage between ground and the CAN IHS (-) circuit at the DLC Breakout Box. Compare results to NORMAL CAN CIRCUIT VOLTAGE TABLE.

Are the CAN IHS circuit voltages within the specified value for each circuit and within 0.5 volt of each other?

Yes

1. Go To Step 2

No

1. Go To Step 7

2. DISCONNECT THE RADIO RECEIVER MODULE (RRM)

1. Connect the ETM harness connector.
2. Disconnect the RRM harness connector(s) while monitoring the voltage of each CAN IHS circuit at the (special tool #CH7002, Break Out Box, J1962, 16-Way).

Was a significant change in voltage observed when disconnecting the Electronic

Shift Module (ESM)?

Yes

1. Go To Step 3

No

1. Go To Step 5

3. ISOLATE THE REMAINING FAULTED CAN IHS CIRCUIT OR MODULE

1. Connect the RRM harness connector.



NOTE:

The following CAN IHS modules must be disconnected in the order shown as follows:

1. Right Blind Spot Sensor (RBSS)
2. Trailer Tow Module (TTM)
3. Amplifier (AMP)
4. Left Blind Spot Sensor (LBSS)
5. Comfort Steering Wheel Module (CSWM)



NOTE:

Once a harness connector is disconnected from a module, leave it disconnected.

2. Disconnect the harness connector of each module that is listed above, one at a time, while monitoring the voltage of each CAN IHS circuit at the (special tool #CH7002, Break Out Box, J1962, 16-Way). A significant change in voltage will indicate a faulty module. Refer to the noted voltage readings from Step 1.

Was a significant change in voltage observed when disconnecting one of the listed modules?

Yes

1. Replace the module that caused a significant change in voltage. Refer to the appropriate Service Information.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 4

4. CHECK CAN IHS CIRCUITS BETWEEN RRM AND ETM

1. Check the CAN IHS (+) circuits and CAN IHS (-) circuits between the RRM and the ETM for an open circuit, short to ground, and a short to another circuit.

Was a circuit problem found?

Yes

1. Repair the circuit(s) as necessary.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Replace the Radio Receiver Module (RRM) in accordance with the Service Information. Refer to MODULE, RADIO RECEIVER, REMOVAL AND INSTALLATION .
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

5. DISCONNECT THE INSTRUMENT PANEL CLUSTER (IPC)

1. Connect the RRM harness connector.
2. Disconnect the IPC harness connector(s) while monitoring the voltage of each CAN IHS circuit at the (special tool #CH7002, Break Out Box, J1962, 16-Way).

Was a significant change in voltage observed when disconnecting the IPC harness connector?

Yes

1. Replace the Instrument Panel Cluster (IPC) in accordance with the Service Information. Refer to MODULE, INSTRUMENT PANEL CLUSTER, REMOVAL AND INSTALLATION .
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 6

6. CHECK CAN IHS CIRCUITS BETWEEN IPC AND RRM

1. Check the CAN IHS (+) circuits and CAN IHS (-) circuits between the IPC and the RRM for an open circuit, short to ground, and a short to another circuit.

Was a circuit problem found?

Yes

1. Repair the circuit(s) as necessary.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Replace the Radio Receiver Module (RRM) in accordance with the Service Information. Refer to MODULE, RADIO RECEIVER, REMOVAL AND INSTALLATION .

2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

7. DISCONNECT THE BCM

1. Connect the ETM harness connector.

2. Disconnect the BCM harness connector(s) while monitoring the voltage of each CAN IHS circuit at the (special tool #CH7002, Break Out Box, J1962, 16-Way).

Was a significant change in voltage observed when disconnecting the BCM?

Yes

1. Replace the Body Control Module (BCM) in accordance with the Service Information. Refer to MODULE, BODY CONTROL, REMOVAL AND INSTALLATION .

2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 8

8. DISCONNECT THE HVAC MODULE

1. Disconnect the HVAC Module harness connector(s) while monitoring the voltage of each CAN IHS circuit at the (special tool #CH7002, Break Out Box, J1962, 16-Way).

Was a significant change in voltage observed when disconnecting the HVAC Module?

Yes

1. Go To Step 10

No

1. Go To Step 9

9. CHECK CAN IHS CIRCUITS BETWEEN ETM AND HVAC MODULE

1. Check the CAN IHS (+) circuits and CAN IHS (-) circuits between the ETM and the HVAC Module for an open circuit, short to ground, and a short to another circuit.

Was a circuit problem found?

Yes

1. Repair the circuit(s) as necessary.

2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Replace the Entertainment Telematics Module (ETM) in accordance with the Service Information. Refer to RADIO, REMOVAL AND INSTALLATION .

2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

10. CHECK CAN IHS CIRCUITS BETWEEN BCM AND HVAC MODULE

1. Check the CAN C1 (+) circuits and CAN C1 (-) circuits between the BCM and the HVAC Module for an open circuit, short to ground, and a short to another circuit.

Was a circuit problem found?

Yes

1. Repair the circuit(s) as necessary.

2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

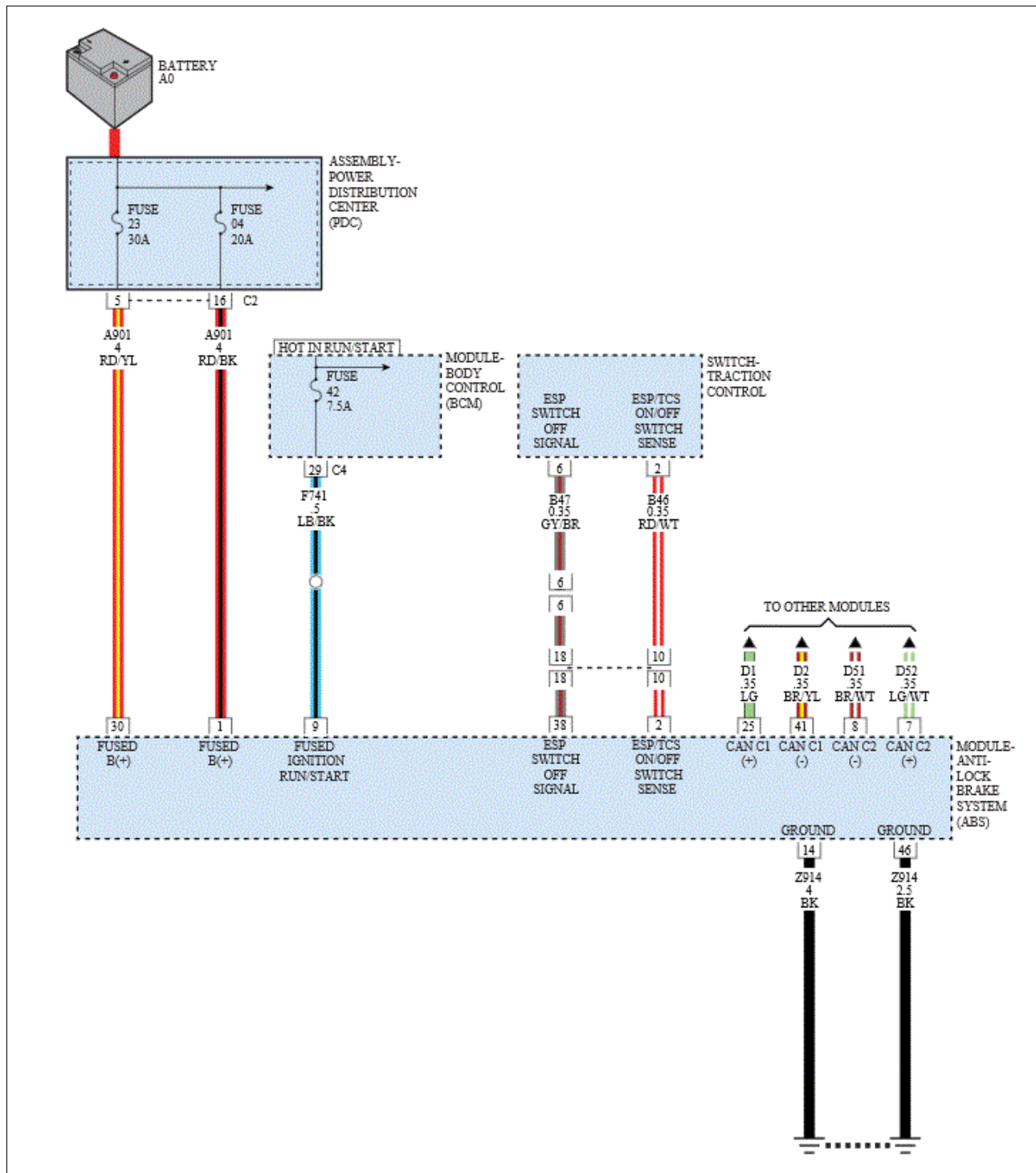
1. Replace the HVAC Module in accordance with the Service Information. Refer to MODULE, HVAC, REMOVAL AND INSTALLATION .

2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > NO RESPONSE FROM ABS (ANTI-LOCK BRAKE SYSTEM) MODULE

For a complete wiring diagram, **refer to SYSTEM WIRING DIAGRAMS article** .

Fig 1: Anti-Lock Brake System Module Circuit Diagram



Courtesy of CHRYSLER GROUP, LLC

DIAGNOSIS AND TESTING > NO RESPONSE FROM ABS (ANTI-LOCK BRAKE SYSTEM) MODULE > POSSIBLE CAUSES

Possible Causes

FUSED B(+) CIRCUITS OPEN OR SHORTED
FUSED IGNITION CIRCUIT OPEN OR SHORTED
GROUND CIRCUITS OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) C1 BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN C1 BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
CAN C2 BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN C2 BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
ANTI-LOCK BRAKE SYSTEM (ABS) MODULE

DIAGNOSIS AND TESTING > NO RESPONSE FROM ABS (ANTI-LOCK BRAKE SYSTEM) MODULE > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN C BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. The condition or conditions that originally set this DTC are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct terminal tension and repair as necessary. If no problems are found, test complete.
2. Perform the ABS VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 2

2. CHECK THE (A901) FUSED B(+) CIRCUITS FOR AN OPEN OR SHORT TO GROUND



NOTE:

The CAN bus will remain active with the scan tool connected and the ignition off.



NOTE:

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.
2. Disconnect the Anti-lock Brake System (ABS) Module harness connector.
3. With a 12-volt test light connected to ground, check the (A901) Fused B(+) circuits at the ABS Module harness connector.



NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the (A901) Fused B(+) circuits for an open or short to ground.
2. Perform the ABS VERIFICATION TEST. Refer to STANDARD PROCEDURE .

3. CHECK THE (F741) FUSED IGNITION RUN/START CIRCUIT FOR AN OPEN OR SHORT TO GROUND

1. Turn the ignition on.
2. With a 12-volt test light connected to ground, check the (F741) Fused Ignition RUN/START circuit at the ABS Module harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the (F741) Fused Ignition RUN/START circuit for an open or short to ground.
2. Perform the ABS VERIFICATION TEST. Refer to STANDARD PROCEDURE .

4. CHECK THE (Z914) GROUND CIRCUITS FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the (Z914) Ground circuits at the ABS Module harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 5

No

1. Repair the (Z914) Ground circuits for an open or high resistance.
2. Perform the ABS VERIFICATION TEST. Refer to STANDARD PROCEDURE .

5. CHECK THE CAN (D1) C1 BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage of the (D1) CAN C1 Bus (+) circuit at the ABS Module harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the (D1) CAN C1 Bus (+) circuit for an open or high resistance.
2. Perform the ABS VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 6

6. CHECK THE (D2) CAN C1 BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage of the (D2) CAN C1 Bus (-) circuit at the ABS Module harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the (D2) CAN C1 Bus (-) circuit for an open or high resistance.
2. Perform the ABS VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 7

7. CHECK THE (D52) CAN C2 BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage of the (D52) CAN C2 Bus (+) circuit at the ABS Module harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the (D52) CAN C2 Bus (+) circuit for an open or high resistance.
2. Perform the ABS VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 8

8. CHECK THE (D51) CAN C2 BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage of the (D51) CAN C2 Bus (-) circuit at the ABS Module harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the (D51) CAN C2 Bus (-) circuit for an open or high resistance.
2. Perform the ABS VERIFICATION TEST. Refer to STANDARD PROCEDURE .

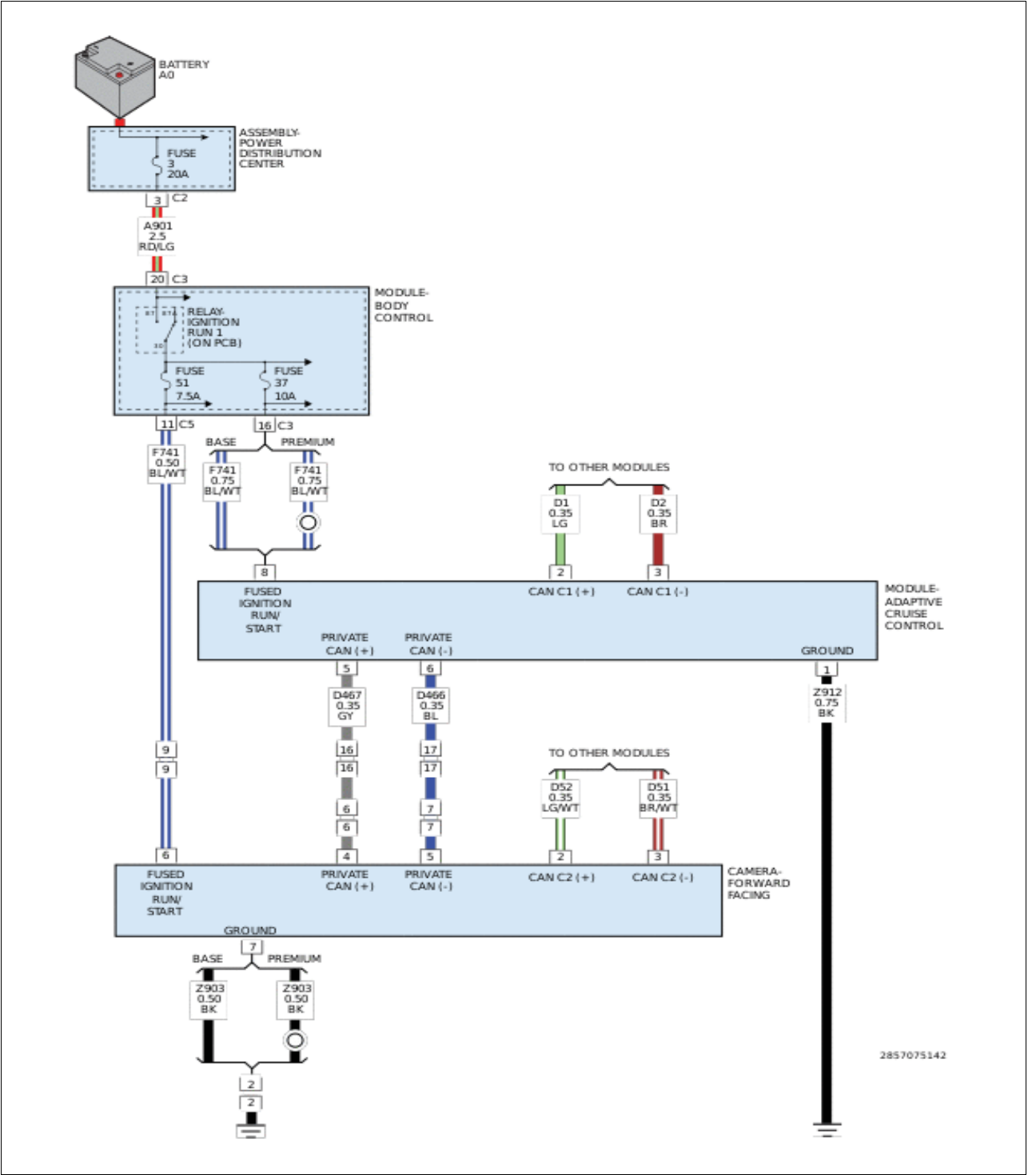
No

1. Replace the Anti-lock Brake System (ABS) Module in accordance with the Service Information. Refer to MODULE, ANTI-LOCK BRAKE SYSTEM, REMOVAL AND INSTALLATION .
2. Perform the ABS VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > NO RESPONSE FROM ACC (ADAPTIVE CRUISE CONTROL) MODULE

For a complete wiring diagram, **refer to** **SYSTEM WIRING DIAGRAMS** **article** .

Fig 1: Adaptive Cruise Control Module & Forward Facing Camera Module Circuit Diagram



Courtesy of CHRYSLER GROUP, LLC

DIAGNOSIS AND TESTING > NO RESPONSE FROM ACC (ADAPTIVE CRUISE CONTROL) MODULE > POSSIBLE CAUSES

Possible Causes

FUSED IGNITION CIRCUIT OPEN OR SHORTED
GROUND CIRCUIT OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) C1 BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN C1 BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
ADAPTIVE CRUISE CONTROL (ACC) MODULE/ADAPTIVE SPEED CONTROL SENSOR

DIAGNOSIS AND TESTING > NO RESPONSE FROM ACC (ADAPTIVE CRUISE CONTROL) MODULE > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN C BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. The condition or conditions that originally set this DTC are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct terminal tension and repair as necessary. If no problems are found, test complete.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 2

2. CHECK THE (F741) FUSED IGNITION CIRCUIT FOR AN OPEN OR SHORT TO GROUND

1. Turn the ignition on.
2. With a 12-volt test light connected to ground, check the (F741) Fused Ignition circuit at the ACC module harness connector.



NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the (F741) Fused Ignition circuit for an open or short to ground.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

3. CHECK THE (Z912) GROUND CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the (Z912) Ground circuit at the ACC module harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the (Z912) Ground circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

4. CHECK THE (D1) CAN C1 BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the (D1) CAN C1 Bus (+) circuit at the ACC module harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the (D1) CAN C1 Bus (+) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 5

5. CHECK THE (D2) CAN C1 BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the (D2) CAN C1 Bus (-) circuit at the ACC module harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the (D2) CAN C1 Bus (-) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Using the schematics as a guide, check the ACC module pins, terminals, and connectors for corrosion, damage, or terminal push out. Pay particular attention to all power and ground circuits. If no problems are found, replace and program the Adaptive Cruise Control (ACC) module in accordance with the Service

Information. Refer to MODULE, ADAPTIVE CRUISE CONTROL, REMOVAL AND INSTALLATION .

2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > NO RESPONSE FROM AMP (AMPLIFIER)

For a complete wiring diagram, refer to **SYSTEM WIRING DIAGRAMS** article .

DIAGNOSIS AND TESTING > NO RESPONSE FROM AMP (AMPLIFIER) > POSSIBLE CAUSES

Possible Causes
FUSED B(+) CIRCUIT OPEN OR SHORTED
GROUND CIRCUIT OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) IHS BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN IHS BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
AMPLIFIER (AMP)

DIAGNOSIS AND TESTING > NO RESPONSE FROM AMP (AMPLIFIER) > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN IHS BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. The condition or conditions that originally set this DTC are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct terminal tension and repair as necessary. If no problems are found, test complete.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 2

2. CHECK THE FUSED B(+) CIRCUIT FOR AN OPEN OR SHORT TO GROUND

 **NOTE:**

The CAN bus will remain active with the scan tool connected and the ignition off.

 **NOTE:**

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.
2. Disconnect the Amplifier (AMP) harness connector.
3. With a 12-volt test light connected to ground, check the Fused B(+) circuit at the AMP harness connector.

 **NOTE:**

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the Fused B(+) circuit for an open or short to ground.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

3. CHECK THE GROUND CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the Ground circuit at the AMP harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the Ground circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

4. CHECK THE CAN IHS BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN IHS Bus (+) circuit at the AMP harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the CAN IHS Bus (+) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 5

5. CHECK THE CAN IHS BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN IHS Bus (-) circuit at the AMP harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the CAN IHS Bus (-) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

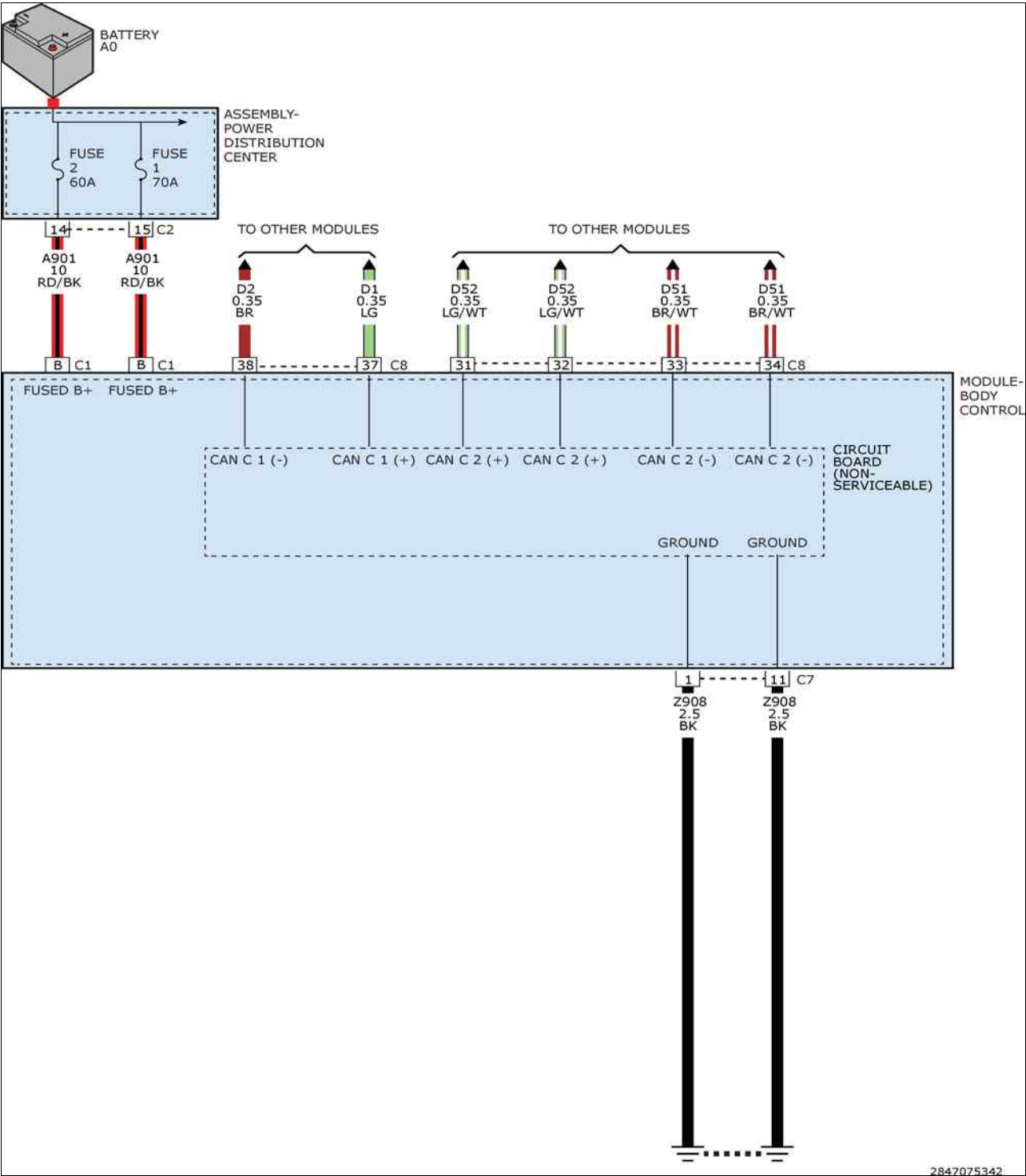
No

1. Replace the Amplifier (AMP) in accordance with the Service Information. Refer to AMPLIFIER, REMOVAL AND INSTALLATION .
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > NO RESPONSE FROM BCM (BODY CONTROL MODULE)

For a complete wiring diagram, **refer to SYSTEM WIRING DIAGRAMS article** .

Fig 1: Body Control Module Circuit Diagram



Courtesy of CHRYSLER GROUP, LLC

**DIAGNOSIS AND TESTING > NO RESPONSE FROM BCM (BODY CONTROL MODULE)
> POSSIBLE CAUSES**

Possible Causes

FUSED B(+) CIRCUIT OPEN OR SHORTED
GROUND CIRCUIT OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) C1 BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN C1 BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
CAN C2 BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
CAN C2 BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
BODY CONTROL MODULE (BCM)

DIAGNOSIS AND TESTING > NO RESPONSE FROM BCM (BODY CONTROL MODULE) > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN C BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. Perform the TESTING FOR INTERMITTENT CONDITIONS procedure. Refer to the appropriate TESTING & DIAGNOSTICS article in ENGINE PERFORMANCE

No

1. Go To Step 2

2. CHECK THE (A901) FUSED B(+) CIRCUITS FOR AN OPEN OR SHORT TO GROUND



NOTE:

The CAN bus will remain active with the scan tool connected and the ignition off.



NOTE:

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.
2. Disconnect the Body Control Module (BCM) C1 and C3 harness connectors.
3. With a 12-volt test light connected to ground, check the (A901) Fused B(+) circuits at

the BCM C1 and C3 harness connectors.



NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the (A901) Fused B(+) circuits for an open or short to ground.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

3. CHECK THE (Z908) GROUND CIRCUITS FOR AN OPEN OR HIGH RESISTANCE

1. Turn the ignition off.
2. Disconnect the Body Control Module (BCM) C7 harness connector.
3. With a 12-volt test light connected to 12 volts, check the (Z908) Ground circuits at the BCM C7 harness connector.

Does the test light illuminate brightly for both connections?

Yes

1. Go To Step 4

No

1. Repair the (Z908) Ground circuits for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

4. CHECK THE (D1) CAN C1 BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Disconnect the Body Control Module (BCM) C8 harness connector.
2. Measure the voltage on the (D1) CAN C1 Bus (+) circuit at the BCM C8 harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the (D1) CAN C1 Bus (+) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 5

5. CHECK THE (D2) CAN C1 BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage on the (D2) CAN C1 Bus (-) circuit at the BCM C8 harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the (D2) CAN C1 Bus (-) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 6

6. CHECK THE (D52) CAN C2 BUS (+) CIRCUITS FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage v the (D52) CAN C2 Bus (+) circuits at the BCM C8 harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the (D52) CAN C2 Bus (+) circuits for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 7

7. CHECK THE (D51) CAN C2 BUS (-) CIRCUITS FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage on the (D51) CAN C2 Bus (-) circuits at the BCM C8 harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the (D51) CAN C2 Bus (-) circuits for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

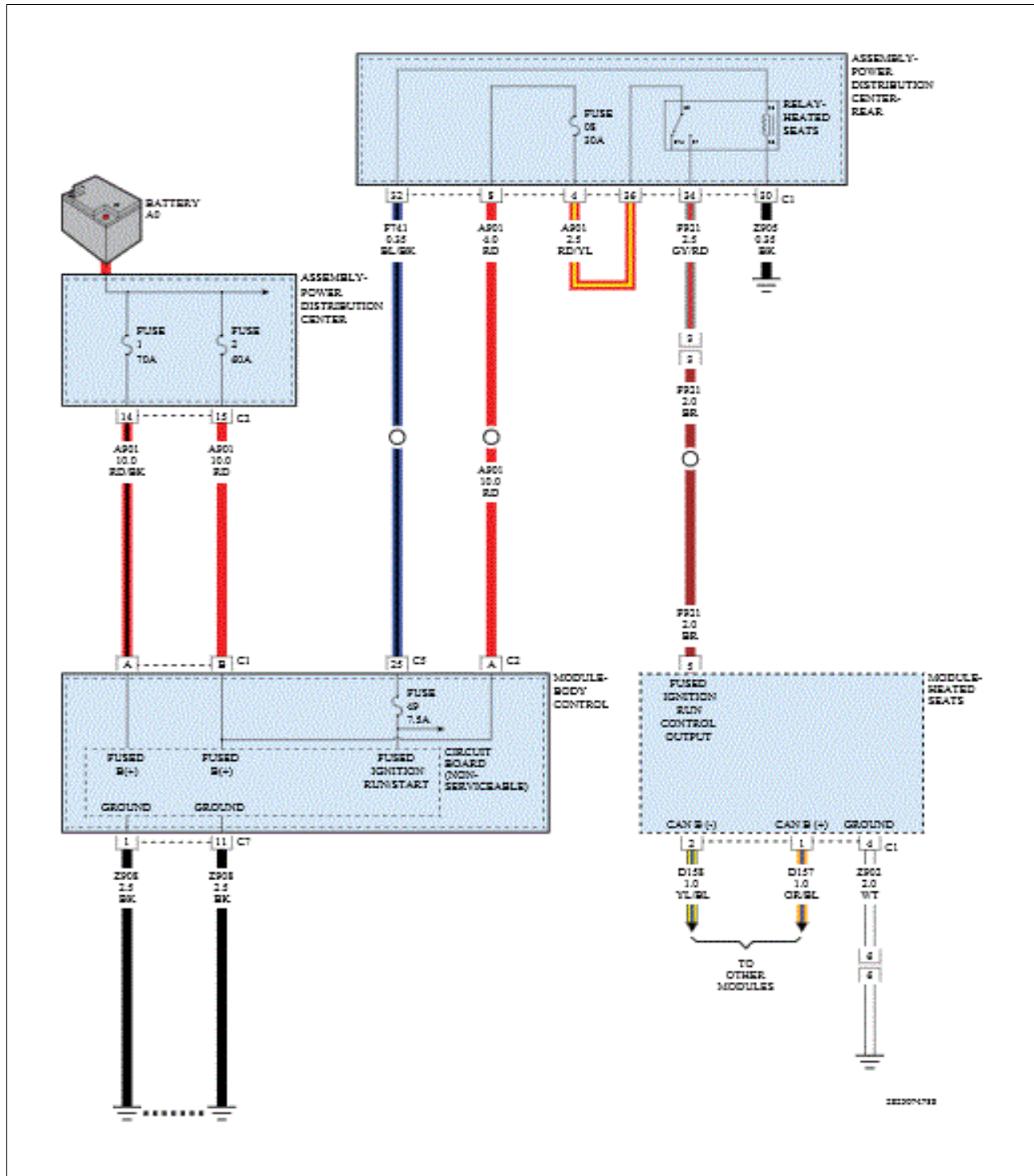
No

1. Replace the Body Control Module (BCM) in accordance with the Service Information. Refer to MODULE, BODY CONTROL, REMOVAL AND INSTALLATION .
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > NO RESPONSE FROM CSWM (COMFORT SEAT AND WHEEL MODULE)

For a complete wiring diagram, refer to **SYSTEM WIRING DIAGRAMS** article .

Fig 1: Comfort Seat & Wheel Module Circuit Diagram



Courtesy of CHRYSLER GROUP, LLC

DIAGNOSIS AND TESTING > NO RESPONSE FROM CSWM (COMFORT SEAT AND WHEEL MODULE) > POSSIBLE CAUSES

Possible Causes
FUSED IGNITION CIRCUIT OPEN OR SHORTED
GROUND CIRCUIT OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
COMFORT SEAT AND WHEEL MODULE (CSWM)

DIAGNOSIS AND TESTING > NO RESPONSE FROM CSWM (COMFORT SEAT AND WHEEL MODULE) > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. The condition or conditions that originally set this DTC are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct terminal tension and repair as necessary. If no problems are found, test complete.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 2

2. CHECK THE FUSED IGNITION CIRCUIT FOR AN OPEN OR SHORT TO GROUND

 **NOTE:**

The CAN bus will remain active with the scan tool connected and the ignition off.

 **NOTE:**

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.
2. Disconnect the Comfort Seat Wheel Module (CSWM) harness connector.
3. With a 12-volt test light connected to ground, check the Fused Ignition circuit at the CSWM harness connector.



NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the Fused Ignition circuit for an open or short to ground.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

3. CHECK THE (Z906) GROUND CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the (Z906) Ground circuit at the CSWM harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the (Z906) Ground circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

4. CHECK THE (D157) CAN B BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the (D157) CAN B Bus (+) circuit at the CSWM harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the (D157) CAN B Bus (+) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 5

5. CHECK THE (D156) CAN B BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the (D156) CAN B Bus (-) circuit at the CSWM harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the (D156) CAN B Bus (-) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

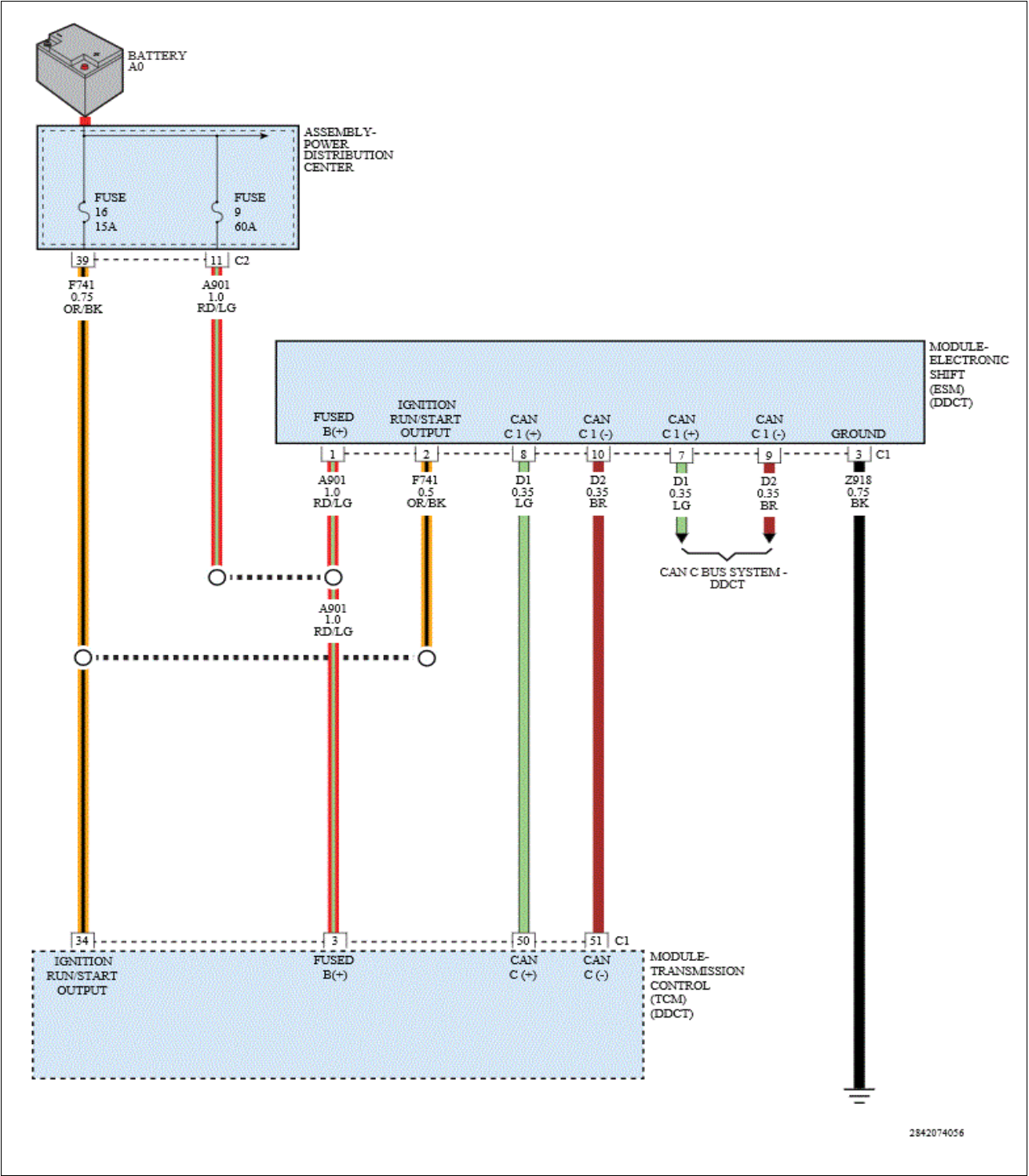
No

1. Using the schematics as a guide, check the CSWM pins, terminals, and connectors for corrosion, damage, or terminal push out. Pay particular attention to all power and ground circuits. If no problems are found, replace the Comfort Seat Wheel Module (CSWM) in accordance with the Service Information. Refer to MODULE, COMFORT SEAT AND WHEEL, REMOVAL AND INSTALLATION .
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > NO RESPONSE FROM DCSM (DUAL CLUTCH SHIFTER MODULE)

For a complete wiring diagram, refer to **SYSTEM WIRING DIAGRAMS** article .

Fig 1: Dual Clutch Shifter Module Circuit Diagram



Courtesy of CHRYSLER GROUP, LLC

DIAGNOSIS AND TESTING > NO RESPONSE FROM DCSM (DUAL CLUTCH SHIFTER MODULE) > POSSIBLE CAUSES

Possible Causes

FUSED (B+) CIRCUIT OPEN OR SHORTED
GROUND CIRCUITS OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) C1 BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN C1 BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
DUAL CLUTCH SHIFTER MODULE (DCSM)

DIAGNOSIS AND TESTING > NO RESPONSE FROM DCSM (DUAL CLUTCH SHIFTER MODULE) > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CONTROLLER AREA NETWORK (CAN) C BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. The condition or conditions that originally set this Diagnostic Trouble Code (DTC) are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct terminal tension and repair as necessary. If no problems are found, test complete.
2. Perform the DCSM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 2

2. CHECK THE (A901) FUSED B(+) CIRCUIT FOR AN OPEN OR SHORT TO GROUND

 **NOTE:**

The CAN bus will remain active with the scan tool connected and the ignition off.

 **NOTE:**

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.
2. Disconnect the Electronic Shift Module (DCSM) harness connector.
3. With a 12-volt test light connected to ground, check the (A901) Fused B(+) circuit at

the DCSM harness connector.



NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the (A901) Fused B(+) circuit for an open or short to ground.
2. Perform the DCSM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

3. CHECK THE (Z918) GROUND CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the (Z918) Ground circuit at the DCSM harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the (Z918) Ground circuit for an open or high resistance.
2. Perform the DCSM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

4. CHECK THE (D1) CAN C BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the (D1) CAN C Bus (+) circuit at the DCSM harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the (D1) CAN C Bus (+) circuit for an open or high resistance.
2. Perform the DCSM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 5

5. CHECK THE (D2) CAN C BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the (D2) CAN C Bus (-) circuit at the

DCSM harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the (D2) CAN C Bus (-) circuit for an open or high resistance.
2. Perform the DCSM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Replace the DCSM in accordance with the Service Information.
2. Perform the DCSM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > NO RESPONSE FROM DTCM (DRIVE TRAIN CONTROL MODULE)

For a complete wiring diagram, refer to **SYSTEM WIRING DIAGRAMS** article .

DIAGNOSIS AND TESTING > NO RESPONSE FROM DTCM (DRIVE TRAIN CONTROL MODULE) > POSSIBLE CAUSES

Possible Causes
FUSED B(+) CIRCUIT OPEN OR SHORTED
FUSED IGNITION CIRCUIT OPEN OR SHORTED
GROUND CIRCUIT OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) C1 BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN C1 BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
DRIVE TRAIN CONTROL MODULE (DTCM)

DIAGNOSIS AND TESTING > NO RESPONSE FROM DTCM (DRIVE TRAIN CONTROL MODULE) > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN C BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. The condition or conditions that originally set this DTC are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct terminal tension and repair as necessary. If no problems are found, test complete.
2. Perform the DTCM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 2

2. CHECK THE FUSED B(+) CIRCUIT FOR AN OPEN OR SHORT TO GROUND



NOTE:

The CAN bus will remain active with the scan tool connected and the ignition off.



NOTE:

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.
2. Disconnect the Drive Train Control Module (DTCM) harness connector.
3. With a 12-volt test light connected to ground, check the Fused B(+) circuit at the DTCM harness connector.



NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the Fused B(+) circuit for an open or short to ground.
2. Perform the DTCM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

3. CHECK THE FUSED IGNITION CIRCUIT FOR AN OPEN OR SHORT TO GROUND

1. Turn the ignition on.

2. With a 12-volt test light connected to ground, check the Fused Ignition circuit at the DTCM harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the Fused Ignition circuit for an open or short to ground.
2. Perform the DTCM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

4. CHECK THE GROUND CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the Ground circuit at the DTCM harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 5

No

1. Repair the Ground circuit for an open or high resistance.
2. Perform the DTCM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

5. CHECK THE CAN C1 BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN C1 Bus (+) circuit at the DTCM harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the CAN C1 Bus (+) circuit for an open or high resistance.
2. Perform the DTCM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 6

6. CHECK THE CAN C1 BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN C1 Bus (-) circuit at the DTCM harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the CAN C1 Bus (-) circuit for an open or high resistance.

2. Perform the DTCM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Replace the Drive Train Control Module (DTCM) in accordance with the Service Information. Refer to MODULE, DRIVETRAIN CONTROL, REMOVAL AND INSTALLATION .

2. Perform the DTCM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > NO RESPONSE FROM EPS (ELECTRIC POWER STEERING MODULE)

For a complete wiring diagram, **refer to SYSTEM WIRING DIAGRAMS article** .

The diagram illustrates the electrical system for the 2007 Chevrolet Equinox, showing the power distribution from the battery through the Assembly Power Distribution Center (PDC) to the Module Body Control (BCM) and Module Electric Power Steering (EPS).

Assembly Power Distribution Center (PDC):

- Contains FUSE F05 (70A) and FUSE F03 (20A).
- Output 24 (A901 10 RD) connects to the FUSED B+ terminal of the BCM.
- Output 9 (A901 10 RD) connects to the FUSED IGNITION SWITCH OUTPUT (RUN-START) terminal of the EPS.

Module Body Control (BCM):

- Contains a RELAY: IGNITION RUN 1 (ON PCB) and FUSE 42 (7.5A).
- Inputs: CAN B (+) (D158 35 WT) and CAN B (-) (D157 35 BL).
- Outputs: CAN C2 (+) (D51 35 BR/WT) and CAN C2 (-) (D52 35 LG/WT).
- Grounds: GROUND (Z908 1.5 BK) and GROUND (Z908 1.5 BK).

Module Electric Power Steering (EPS):

- Inputs: FUSED B+ (A901 10 RD) and FUSED IGNITION SWITCH OUTPUT (RUN-START) (A901 10 RD).
- Outputs: CAN C2 (+) (D51 35 BR/WT) and CAN C2 (-) (D52 35 LG/WT).
- Grounds: GROUND (Z916 10 BK) and GROUND (Z908 10 BK).

Other Modules:

- Inputs: CAN B (+) (D158 35 WT) and CAN B (-) (D157 35 BL).
- Outputs: CAN C2 (+) (D51 35 BR/WT) and CAN C2 (-) (D52 35 LG/WT).
- Grounds: GROUND (Z908 1.5 BK) and GROUND (Z908 1.5 BK).

DIAGNOSIS AND TESTING > NO RESPONSE FROM EPS (ELECTRIC POWER STEERING MODULE) > POSSIBLE CAUSES

Possible Causes	
1. Incorrect Input Data	Check for typos, missing values, or outliers in the input data.
2. Model Bias	Review the model's assumptions and training data for bias.
3. Overfitting	Use cross-validation to ensure the model generalizes to new data.
4. Feature Engineering	Experiment with different feature sets and transformations.
5. Hyperparameter Tuning	Adjust model hyperparameters to optimize performance.
6. Model Selection	Compare different models to see if one performs better.
7. Scalability Issues	Ensure the model can handle the volume and variety of data.
8. Integration Problems	Verify the model is correctly integrated with the data pipeline.
9. Documentation	Keep detailed records of model changes and performance.
10. Collaboration	Seek input from colleagues or experts in the field.

FUSED B(+) CIRCUIT OPEN OR SHORTED
FUSED IGNITION CIRCUIT OPEN OR SHORTED
GROUND CIRCUIT OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) C2 BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN C2 BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
ELECTRIC POWER STEERING (EPS) MODULE

DIAGNOSIS AND TESTING > NO RESPONSE FROM EPS (ELECTRIC POWER STEERING MODULE) > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN C BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. The condition or conditions that originally set this DTC are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct terminal tension and repair as necessary. If no problems are found, test complete.
2. Perform the EPS VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 2

2. CHECK THE (A901) FUSED B(+) CIRCUIT FOR AN OPEN OR SHORT TO GROUND

 **NOTE:**

The CAN bus will remain active with the scan tool connected and the ignition off.

 **NOTE:**

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.
2. Disconnect the Electric Power Steering (EPS) Module harness connector.

3. With a 12-volt test light connected to ground, check the (A901) Fused B(+) circuit at the EPS Module harness connector.



NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the (A901) Fused B(+) circuit for an open or short to ground.
2. Perform the EPS VERIFICATION TEST. Refer to STANDARD PROCEDURE .

3. CHECK THE (F741) FUSED IGNITION SWITCH OUTPUT CIRCUIT FOR AN OPEN OR SHORT TO GROUND

1. Turn the ignition on.
2. With a 12-volt test light connected to ground, check the (F741) Fused Ignition Switch Output circuit at the EPS Module harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the (F741) Fused Ignition Switch Output for an open or short to ground.
2. Perform the EPS VERIFICATION TEST. Refer to STANDARD PROCEDURE .

4. CHECK THE (Z908) GROUND CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the (Z908) Ground circuit at the EPS Module harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 5

No

1. Repair the (Z908) Ground circuit for an open or high resistance.
2. Perform the EPS VERIFICATION TEST. Refer to STANDARD PROCEDURE .

5. CHECK THE (D51) CAN C2 BUS (+) CIRCUITS FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage of the (D51) CAN C2 Bus (+) circuits at the EPS Module harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the (D51) CAN C2 Bus (+) circuits for an open or high resistance.
2. Perform the EPS VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 6

6. CHECK THE (D52) CAN C2 BUS (-) CIRCUITS FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage of the (D52) CAN C2 Bus (-) circuits at the EPS Module harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the (D52) CAN C2 Bus (-) circuits for an open or high resistance.
2. Perform the EPS VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Replace the Electric Power Steering (EPS) Module in accordance with the Service Information. Refer to GEAR, REMOVAL AND INSTALLATION .
2. Perform the EPS VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > NO RESPONSE FROM ESL (ELECTRONIC STEERING LOCK)

For a complete wiring diagram, **refer to** **SYSTEM WIRING DIAGRAMS** **article** .

DIAGNOSIS AND TESTING > NO RESPONSE FROM ESL (ELECTRONIC STEERING LOCK) > POSSIBLE CAUSES

Possible Causes
ESL MODULE (KL30) BATTERY FEED CIRCUIT OPEN OR SHORTED
ESL MODULE (KL15) IGNITION FEED CIRCUIT OPEN OR SHORTED
ESL MODULE GROUND CIRCUIT OPEN

CONTROLLER AREA NETWORK (CAN) C2 BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
CAN C2 BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
ELECTRONIC STEERING LOCK (ESL) MODULE

DIAGNOSIS AND TESTING > NO RESPONSE FROM ESL (ELECTRONIC STEERING LOCK) > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN C BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. Perform the TESTING FOR INTERMITTENT CONDITIONS procedure. Refer to the appropriate TESTING & DIAGNOSTICS article in ENGINE PERFORMANCE

No

1. Go To Step 2

2. CHECK THE (KL30) FUSED B(+) CIRCUIT FOR AN OPEN OR SHORT TO GROUND

 NOTE:

The CAN bus will remain active with the scan tool connected and the ignition off.

 NOTE:

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.
2. Disconnect the Electronic Steering Lock (ESL) Module harness connector.
3. With a 12-volt test light connected to ground, check the (KL30) Fused B(+) circuit at the ESL Module harness connector.



NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the (KL30) Fused B(+) circuit for an open or short to ground.
2. Perform the ESL VERIFICATION TEST. Refer to STANDARD PROCEDURES .

3. CHECK THE (KL15) IGNITION FEED CIRCUIT FOR AN OPEN OR SHORT TO GROUND

1. Turn the ignition on.
2. With a 12-volt test light connected to ground, check the (KL15) Ignition Feed circuit at the ESL Module harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the (KL15) Ignition Feed circuit for an open or short to ground.
2. Perform the ESL VERIFICATION TEST. Refer to STANDARD PROCEDURES .

4. CHECK THE ESL MODULE GROUND CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the ESL Module Ground circuit at the ESL Module harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 5

No

1. Repair the ESL Module Ground circuit for an open or high resistance.
2. Perform the ESL VERIFICATION TEST. Refer to STANDARD PROCEDURES .

5. CHECK THE CAN C2 BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN C2 Bus (+) circuit at the ESL

Module harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the CAN C2 Bus (+) circuit for an open or high resistance.
2. Perform the ESL VERIFICATION TEST. Refer to STANDARD PROCEDURES .

No

1. Go To Step 6

6. CHECK THE CAN C2 BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN C2 Bus (-) circuit at the ESL Module harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the CAN C2 Bus (-) circuit for an open or high resistance.
2. Perform the ESL VERIFICATION TEST. Refer to STANDARD PROCEDURES .

No

1. Replace the ESL Module in accordance with the Service Information.
2. Perform the ESL VERIFICATION TEST. Refer to STANDARD PROCEDURES .

DIAGNOSIS AND TESTING > NO RESPONSE FROM ESM (ELECTRONIC SHIFT MODULE)

For a complete wiring diagram, refer to **SYSTEM WIRING DIAGRAMS** article .

DIAGNOSIS AND TESTING > NO RESPONSE FROM ESM (ELECTRONIC SHIFT MODULE) > POSSIBLE CAUSES

Possible Causes	
-----------------	--

FUSED (B+) CIRCUIT OPEN OR SHORTED
GROUND CIRCUITS OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) C1 BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN C1 BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
ELECTRONIC SHIFT MODULE (ESM)

DIAGNOSIS AND TESTING > NO RESPONSE FROM ESM (ELECTRONIC SHIFT MODULE) > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN C BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. The condition or conditions that originally set this DTC are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct terminal tension and repair as necessary. If no problems are found, test complete.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 2

2. CHECK THE FUSED B(+) CIRCUIT FOR AN OPEN OR SHORT TO GROUND

 **NOTE:**

The CAN bus will remain active with the scan tool connected and the ignition off.

 **NOTE:**

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.
2. Disconnect the Electronic Shift Module (ESM) harness connector.
3. With a 12-volt test light connected to ground, check the Fused B(+) circuit at the

ESM harness connector.



NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the Fused B(+) circuit for an open or short to ground.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

3. CHECK THE GROUND CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the Ground circuit at the ESM harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the Ground circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

4. CHECK THE CAN C1 BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN C1 Bus (+) circuit at the ESM harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the CAN C1 Bus (+) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 5

5. CHECK THE CAN C1 BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN C1 Bus (-) circuit at the ESM

harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the CAN C1 Bus (-) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

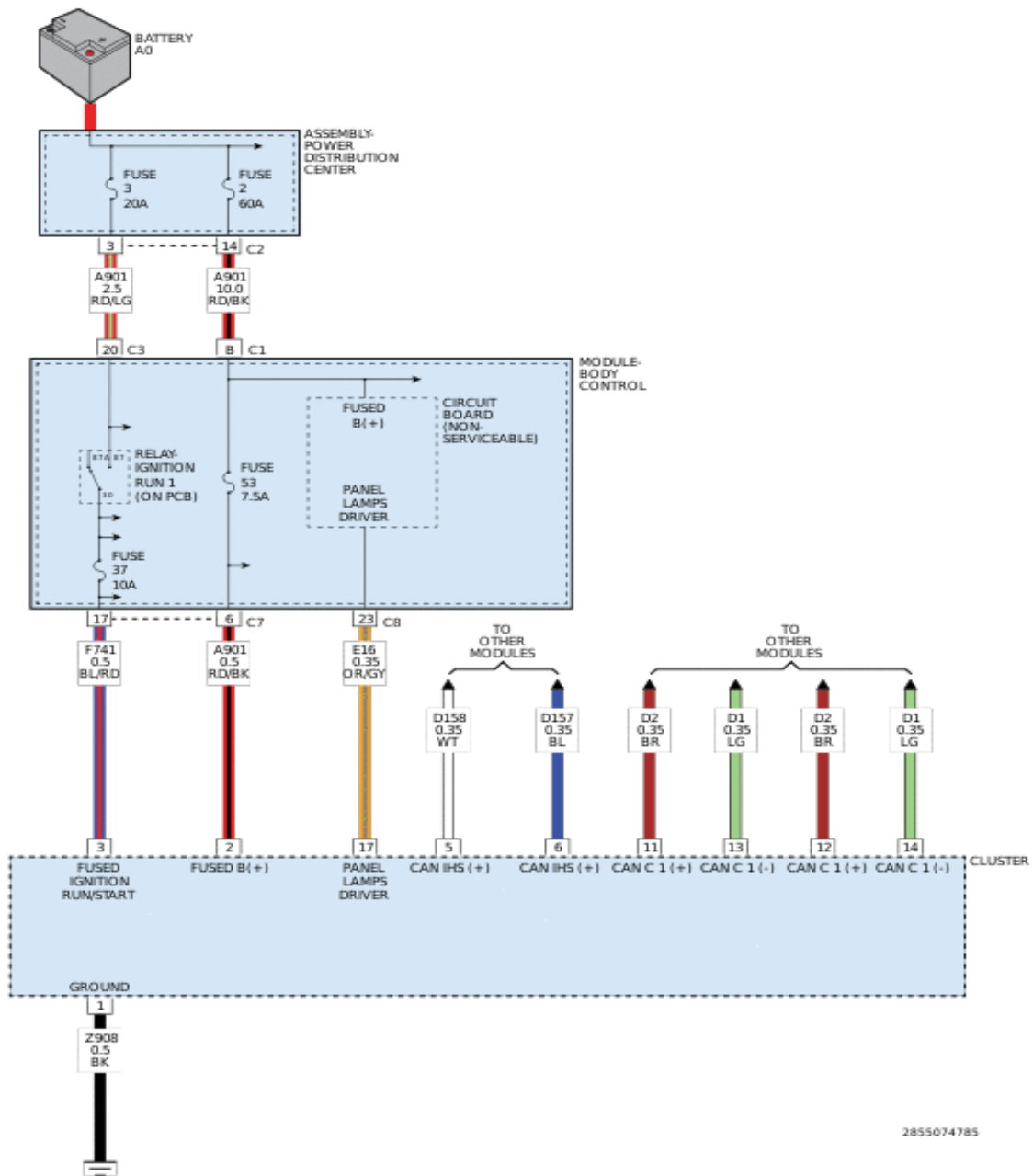
No

1. Replace the Electronic Shift Module (ESM) in accordance with the Service Information.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > NO RESPONSE FROM IPC (INSTRUMENT PANEL CLUSTER)

For a complete wiring diagram, **refer to SYSTEM WIRING DIAGRAMS article** .

Fig 1: Instrument Panel Cluster Circuit Diagram



Courtesy of CHRYSLER GROUP, LLC

DIAGNOSIS AND TESTING > NO RESPONSE FROM IPC (INSTRUMENT PANEL CLUSTER) > POSSIBLE CAUSES

Possible Causes

FUSED B(+) CIRCUIT OPEN OR SHORTED
FUSED IGNITION CIRCUIT OPEN OR SHORTED
GROUND CIRCUIT OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) C1 BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN C1 BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
INSTRUMENT PANEL CLUSTER (IPC)

DIAGNOSIS AND TESTING > NO RESPONSE FROM IPC (INSTRUMENT PANEL CLUSTER) > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN C BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. The condition or conditions that originally set this DTC are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct terminal tension and repair as necessary. If no problems are found, test complete.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 2

2. CHECK THE (A901) FUSED B(+) CIRCUIT FOR AN OPEN OR SHORT TO GROUND

 **NOTE:**

The CAN bus will remain active with the scan tool connected and the ignition off.

 **NOTE:**

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.
2. Disconnect the Instrument Panel Cluster (IPC) harness connector.

3. With a 12-volt test light connected to ground, check the (A901) Fused B(+) circuit at the IPC harness connector.



NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the (A901) Fused B(+) circuit for an open or short to ground.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

3. CHECK THE (F741) FUSED IGNITION CIRCUIT FOR AN OPEN OR SHORT TO GROUND

1. Turn the ignition on.
2. With a 12-volt test light connected to ground, check the (F741) Fused Ignition circuit at the IPC harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the (F741) Fused Ignition circuit for an open or short to ground.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

4. CHECK THE (Z908) GROUND CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the (Z908) Ground circuit at the IPC harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 5

No

1. Repair the (Z908) Ground circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

5. CHECK THE (D2) CAN C1 BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the (D2) CAN C1 Bus (+) circuit at the IPC harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the (D2) CAN C1 Bus (+) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 6

6. CHECK THE (D1) CAN C1 BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the (D1) CAN C1 Bus (-) circuit at the IPC harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the (D1) CAN C1 Bus (-) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

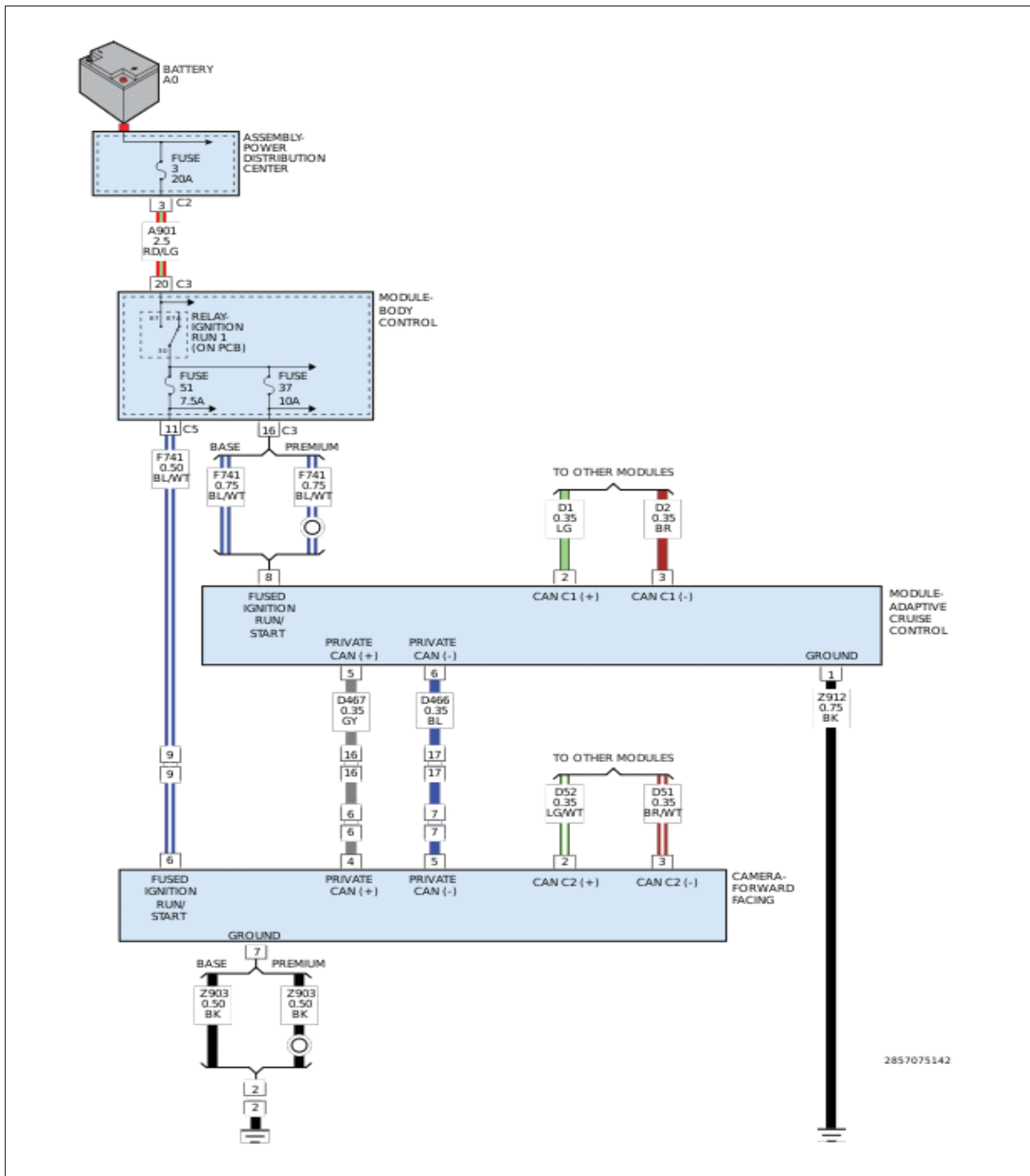
No

1. Replace the Instrument Panel Cluster (IPC) in accordance with the Service Information. Refer to MODULE, INSTRUMENT PANEL CLUSTER, REMOVAL AND INSTALLATION .
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > NO RESPONSE FROM FFCM (FORWARD FACING CAMERA MODULE)

For a complete wiring diagram, refer to **SYSTEM WIRING DIAGRAMS** article .

Fig 1: Adaptive Cruise Control Module & Forward Facing Camera Module Circuit Diagram



Courtesy of CHRYSLER GROUP, LLC

DIAGNOSIS AND TESTING > NO RESPONSE FROM FFCM (FORWARD FACING CAMERA MODULE) > POSSIBLE CAUSES

Possible Causes

FUSED IGNITION CIRCUIT OPEN OR SHORTED
GROUND CIRCUIT OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
FORWARD FACING CAMERA MODULE (FFCM)

DIAGNOSIS AND TESTING > NO RESPONSE FROM FFCM (FORWARD FACING CAMERA MODULE) > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. The condition or conditions that originally set this DTC are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct terminal tension and repair as necessary. If no problems are found, test complete.
2. Perform the FORWARD FACING CAMERA VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 2

2. CHECK THE (F741) FUSED IGNITION CIRCUIT FOR AN OPEN OR SHORT TO GROUND

NOTE:

The CAN bus will remain active with the scan tool connected and the ignition off.

NOTE:

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.
2. Disconnect the Forward Facing Camera Module (FFCM) harness connector.

3. With a 12-volt test light connected to ground, check the (F741) Fused Ignition circuit at the FFCM harness connector.



NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the (F741) Fused Ignition circuit for an open or short to ground.
2. Perform the FORWARD FACING CAMERA VERIFICATION TEST. Refer to STANDARD PROCEDURE .

3. CHECK THE (Z903) GROUND CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the (Z903) Ground circuit at the FFCM harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the (Z903) Ground circuit for an open or high resistance.
2. Perform the FORWARD FACING CAMERA VERIFICATION TEST. Refer to STANDARD PROCEDURE .

4. CHECK THE (D52) CAN C2 BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the (D52) CAN C2 Bus (+) circuit at the FFCM harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the (D52) CAN C2 Bus (+) circuit for an open or high resistance.
2. Perform the FORWARD FACING CAMERA VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 5

5. CHECK THE (D51) CAN C2 BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the (D51) CAN C2 Bus (-) circuit at the FFCM harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the (D51) CAN C2 Bus (-) circuit for an open or high resistance.
2. Perform the FORWARD FACING CAMERA VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Using the schematics as a guide, check the FFCM pins, terminals, and connectors for corrosion, damage, or terminal push out. Pay particular attention to all power and ground circuits and repair as necessary. If no problems are found, replace the FFCM in accordance with the Service Information. Refer to MODULE, FORWARD FACING CAMERA, REMOVAL AND INSTALLATION .
2. Perform the FORWARD FACING CAMERA VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > NO RESPONSE FROM HVAC

For a complete wiring diagram, **refer to** **SYSTEM WIRING DIAGRAMS** **article** .

DIAGNOSIS AND TESTING > NO RESPONSE FROM HVAC > POSSIBLE CAUSES

Possible Causes
FUSED B(+) CIRCUIT OPEN OR SHORTED
FUSED IGNITION CIRCUIT OPEN OR SHORTED
GROUND CIRCUITS OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) IHS BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN IHS BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
HVAC MODULE

DIAGNOSIS AND TESTING > NO RESPONSE FROM HVAC > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN IHS BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. The condition or conditions that originally set this DTC are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct terminal tension and repair as necessary. If no problems are found, test complete.
2. Perform the HVAC VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 2

2. CHECK THE FUSED B(+) CIRCUIT FOR AN OPEN OR SHORT TO GROUND



NOTE:

The CAN bus will remain active with the scan tool connected and the ignition off.



NOTE:

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.
2. Disconnect the HVAC Module harness connector.
3. With a 12-volt test light connected to ground, check the Fused B(+) circuit at the HVAC Module harness connector.



NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the Fused B(+) circuit for an open or short to ground.
2. Perform the HVAC VERIFICATION TEST. Refer to STANDARD PROCEDURE .

3. CHECK THE FUSED IGNITION CIRCUIT FOR AN OPEN OR SHORT TO GROUND

1. Turn the ignition on.
2. With a 12-volt test light connected to ground, check the Fused Ignition circuit at the HVAC Module harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the Fused Ignition circuit for an open or short to ground.
2. Perform the HVAC VERIFICATION TEST. Refer to STANDARD PROCEDURE .

4. CHECK THE GROUND CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the Ground circuit at the HVAC Module harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 5

No

1. Repair the Ground circuit for an open or high resistance.
2. Perform the HVAC VERIFICATION TEST. Refer to STANDARD PROCEDURE .

5. CHECK THE CAN IHS BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN IHS Bus (+) circuit at the HVAC Module harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the CAN IHS Bus (+) circuit for an open or high resistance.
2. Perform the HVAC VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 6

6. CHECK THE CAN IHS BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN IHS Bus (-) circuit at the HVAC Module harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the CAN IHS Bus (-) circuit for an open or high resistance.
2. Perform the HVAC VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Replace the HVAC Module in accordance with the Service Information. Refer to MODULE, HVAC, REMOVAL AND INSTALLATION .
2. Perform the HVAC VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > NO RESPONSE FROM LBSS (LEFT BLIND SPOT SENSOR)

For a complete wiring diagram, **refer to** **SYSTEM WIRING DIAGRAMS** **article** .

DIAGNOSIS AND TESTING > NO RESPONSE FROM LBSS (LEFT BLIND SPOT SENSOR) > POSSIBLE CAUSES

Possible Causes
FUSED B(+) CIRCUIT OPEN OR SHORTED
GROUND CIRCUITS OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) IHS BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN IHS BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
LEFT BLIND SPOT SENSOR (LBSS)

DIAGNOSIS AND TESTING > NO RESPONSE FROM LBSS (LEFT BLIND SPOT SENSOR) > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN IHS BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. The condition or conditions that originally set this DTC are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct terminal tension and repair as necessary. If no problems are found, test complete.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 2

2. CHECK THE FUSED B(+) CIRCUIT FOR AN OPEN OR SHORT TO GROUND



NOTE:

The CAN bus will remain active with the scan tool connected and the ignition off.



NOTE:

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.
2. Disconnect the Left Blind Spot Sensor (LBSS) harness connector.
3. With a 12-volt test light connected to ground, check the Fused B(+) circuit at the LBSS harness connector.



NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the Fused B(+) circuit for an open or short to ground.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

3. CHECK THE GROUND CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the Ground circuit at the LBSS

harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the Ground circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

4. CHECK THE CAN IHS BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN IHS Bus (+) circuit at the LBSS harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the CAN IHS Bus (+) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 5

5. CHECK THE CAN IHS BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN IHS Bus (-) circuit at the LBSS harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the CAN IHS Bus (-) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Replace the Left Blind Spot Sensor (LBSS) in accordance with the Service Information. Refer to SENSOR, BLIND SPOT, REMOVAL AND INSTALLATION .
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > NO RESPONSE FROM ORC (OCCUPANT RESTRAINT CONTROLLER)

For a complete wiring diagram, **refer to SYSTEM WIRING DIAGRAMS article** .

DIAGNOSIS AND TESTING > NO RESPONSE FROM ORC (OCCUPANT RESTRAINT CONTROLLER) > POSSIBLE CAUSES

Possible Causes
FUSED (B+) CIRCUIT OPEN OR SHORTED
FUSED IGNITION CIRCUIT OPEN OR SHORTED
GROUND CIRCUIT OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) C1 BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN C1 BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
CAN C2 BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
OCCUPANT RESTRAINT CONTROLLER (ORC) MODULE

DIAGNOSIS AND TESTING > NO RESPONSE FROM ORC (OCCUPANT RESTRAINT CONTROLLER) > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN C BUS



NOTE:

Check the Body Control Module (BCM) for any ignition related DTCs before proceeding. If set, refer to DTC INDEX .

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. The condition or conditions that originally set this DTC are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct terminal tension and repair as necessary. If no problems are found, test complete.
2. Perform the RESTRAINTS SYSTEM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 2

2. CHECK THE FUSED B(+) CIRCUIT FOR AN OPEN OR SHORT TO GROUND

 WARNING:

Turn the ignition off disconnect the 12-volt battery and wait two minutes before proceeding. Failure to follow these instructions may result in possible serious or fatal injury.

1. Disconnect the Occupant Restraint Controller (ORC) Module harness connector.

 WARNING:

Turn the ignition on, then reconnect the 12-volt battery and wait two minutes before proceeding. Failure to follow these instructions may result in possible serious or fatal injury.

2. Turn the ignition off.

 NOTE:

The CAN bus will remain active with the scan tool connected and the ignition off.

 NOTE:

Leave the scan tool connected and on the Vehicle View screen.

3. With a 12-volt test light connected to ground, check the Fused B(+) circuit at the ORC Module harness connector.

 NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the Fused B(+) circuit for an open or short to ground.
2. Perform the RESTRAINTS SYSTEM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

3. CHECK THE FUSED IGNITION CIRCUIT FOR AN OPEN OR SHORT TO GROUND

1. Turn the ignition on.
2. With a 12-volt test light connected to ground, check the Fused Ignition circuit at the ORC Module harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the Fused Ignition circuit for an open or short to ground.
2. Perform the RESTRAINTS SYSTEM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

4. CHECK THE GROUND CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the Ground circuit at the ORC Module harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 5

No

1. Repair the Ground circuit for an open or high resistance.
2. Perform the RESTRAINTS SYSTEM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

5. CHECK THE CAN C1 BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN C1 Bus (+) circuit at the ORC Module harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the CAN C1 Bus (+) circuit for an open or high resistance.
2. Perform the RESTRAINTS SYSTEM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 6

6. CHECK THE CAN C1 BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN C1 Bus (-) circuit at the ORC Module harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the CAN C1 Bus (-) circuit for an open or high resistance.
2. Perform the RESTRAINTS SYSTEM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 7

7. CHECK THE CAN C2 BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN C2 Bus (+) circuit at the ORC Module harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the CAN C2 Bus (+) circuit for an open or high resistance.
2. Perform the RESTRAINTS SYSTEM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 8

8. CHECK THE CAN C2 BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN C2 Bus (-) circuit at the ORC Module harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the CAN C2 Bus (-) circuit for an open or high resistance.
2. Perform the RESTRAINTS SYSTEM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Replace the Occupant Restraint Controller in accordance with the Service Information. Refer to MODULE, OCCUPANT RESTRAINT CONTROLLER, REMOVAL AND INSTALLATION .

2. Perform the RESTRAINTS SYSTEM VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > NO RESPONSE FROM PARK ASSIST MODULE (PAM)

For a complete wiring diagram, refer to **SYSTEM WIRING DIAGRAMS** article .

DIAGNOSIS AND TESTING > NO RESPONSE FROM PARK ASSIST MODULE (PAM) > POSSIBLE CAUSES

Possible Causes
FUSED B(+) CIRCUIT OPEN OR SHORTED
FUSED IGNITION CIRCUIT OPEN OR SHORTED
GROUND CIRCUIT OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) C1 BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN C BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
PARK ASSIST MODULE (PAM)

DIAGNOSIS AND TESTING > NO RESPONSE FROM PARK ASSIST MODULE (PAM) > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. The condition or conditions that originally set this DTC are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct terminal tension and repair as necessary. If no problems are found, test complete.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 2

2. CHECK THE FUSED B(+) CIRCUIT FOR AN OPEN OR SHORT TO GROUND

 **NOTE:**

The CAN bus will remain active with the scan tool connected and the ignition off.

 **NOTE:**

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.
2. Disconnect the Park Assist Module (PAM) harness connector.
3. With a 12-volt test light connected to ground, check the Fused B(+) circuit at the PAM harness connector.

 **NOTE:**

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the Fused B(+) circuit for an open or short to ground.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

3. CHECK THE FUSED IGNITION CIRCUIT FOR AN OPEN OR SHORT TO GROUND

1. Turn the ignition on.
2. With a 12-volt test light connected to ground, check the Fused Ignition circuit at the PAM harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the Fused Ignition circuit for an open or short to ground.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

4. CHECK THE GROUND CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the Ground circuit at the PAM harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 5

No

1. Repair the Ground circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

5. CHECK THE CAN C1 BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN C1 Bus (+) circuit at the PAM harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the CAN C1 Bus (+) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 6

6. CHECK THE CAN C1 BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN C1 Bus (-) circuit at the PAM harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the CAN C1 Bus (-) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

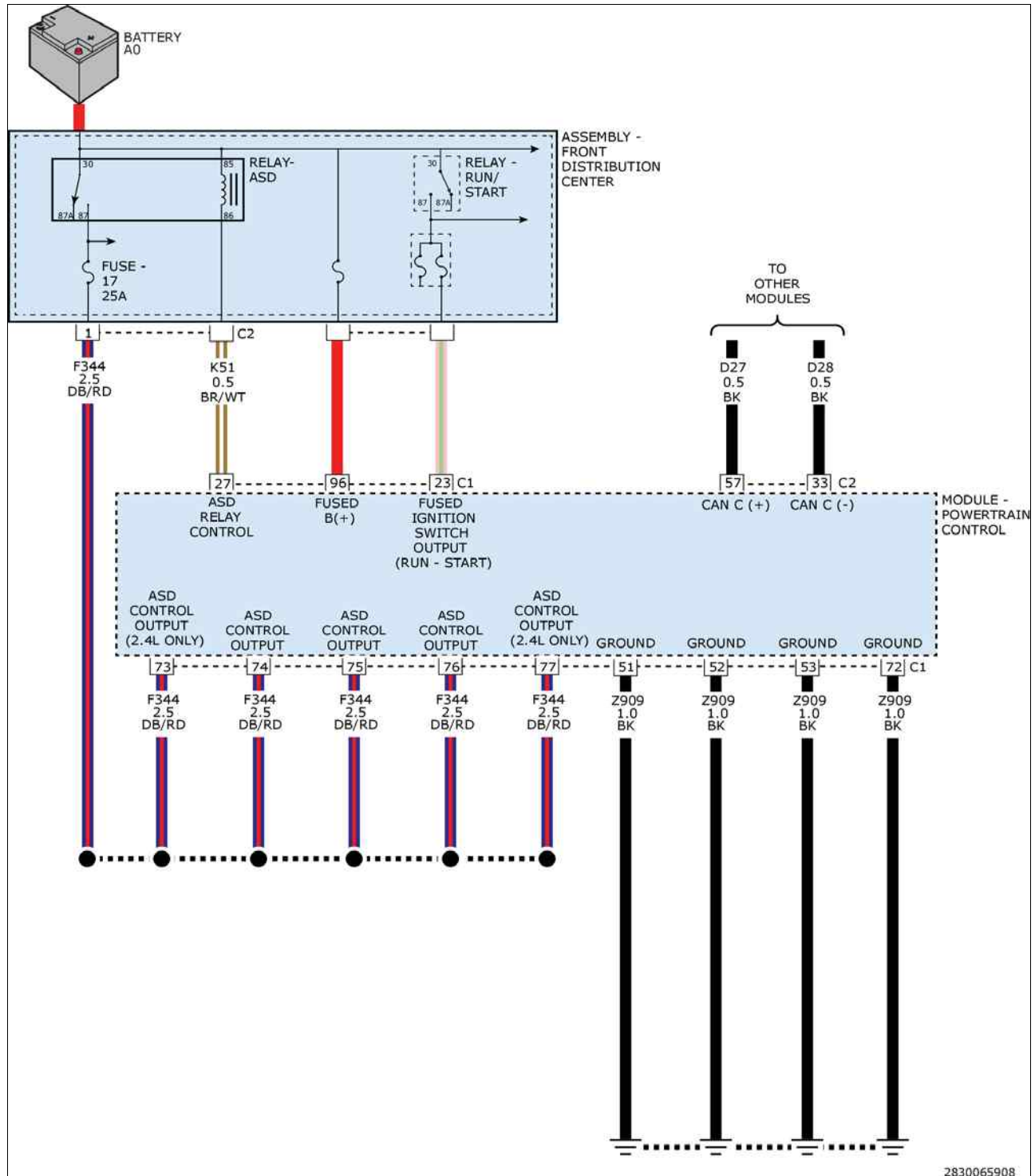
No

1. Replace the Park Assist Module (PAM) in accordance with the Service Information. Refer to MODULE, PARK ASSIST, REMOVAL AND INSTALLATION .
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

MODULE)

For a complete wiring diagram, refer to **SYSTEM WIRING DIAGRAMS** article .

Fig 1: Powertrain Control Module Circuit Diagram



Courtesy of CHRYSLER GROUP, LLC

DIAGNOSIS AND TESTING > NO RESPONSE FROM PCM (POWERTRAIN CONTROL

MODULE) > POSSIBLE CAUSES

Possible Causes
FUSED B(+) CIRCUIT OPEN OR SHORTED
GROUND CIRCUIT OPEN
FUSED IGNITION SWITCH OUTPUT (RUN-START) CIRCUIT OPEN OR SHORTED
FUSED ASD/MAIN RELAY OUTPUT CIRCUIT OPEN OR SHORTED
CAN C BUS (+) CIRCUIT OPEN
CAN C BUS (-) CIRCUIT OPEN
POWERTRAIN CONTROL MODULE (PCM)

DIAGNOSIS AND TESTING > NO RESPONSE FROM PCM (POWERTRAIN CONTROL MODULE) > DIAGNOSTIC TEST

1. TEST FOR AN INTERMITTENT CONDITION



NOTE:

Check for any Service Bulletin(s) related to the condition. If a Service Bulletin applies, perform the procedure outlined in the Service Bulletin before continuing.

1. Turn the ignition on.



NOTE:

Make sure the battery voltage is between 10.0 and 16.0 volts.

2. With the scan tool, read the module status.



NOTE:

Check the BCM for any active CAN hardware DTCs and perform those DTCs before proceeding. Refer to DTC INDEX .

Does the scan tool indicate that the module is active on the bus?

Yes

1. The no response condition is not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring for chafed, pierced, pinched,

and partially broken wires and the wiring harness connectors for broken, bent, pushed out, and corroded terminals.

2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 2

2. CHECK THE (A209) FUSED B(+) CIRCUIT FOR AN OPEN OR SHORT

1. Turn the ignition off.
2. Disconnect the PCM C1 harness connector.



CAUTION:

Do not probe the PCM harness connectors. Probing the PCM harness connectors will damage the PCM terminals resulting in poor terminal to pin connection. Install the GPEC Diagnostic Adaptor to perform the diagnosis.

3. Connect the (special tool #10436, Adapter, GPEC Diagnostic).
4. Using a 12-volt test light connected to ground, probe the (A209) Fused B(+) circuit at the GPEC Adaptor.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the (A209) Fused B(+) circuit for an open or short.
2. Perform the POWERTRAIN VERIFICATION TEST. Refer to the appropriate TESTING & DIAGNOSTICS article in ENGINE PERFORMANCE .

3. CHECK THE (Z909) GROUND CIRCUITS FOR AN OPEN/HIGH RESISTANCE

1. Using a 12-volt test light connected to 12 volts, probe the (Z909) Ground circuits at the GPEC Adaptor.

Does the test light illuminate brightly at each ground circuit?

Yes

1. Go To Step 4

No

1. Repair the (Z909) Ground circuit for an open or high resistance.
2. Perform the POWERTRAIN VERIFICATION TEST. Refer to the appropriate

4. CHECK THE (F942) FUSED IGNITION SWITCH OUTPUT (RUN-START) CIRCUIT FOR AN OPEN OR SHORT

1. Turn the ignition on.
2. Using a 12-volt test light connected to ground, probe the (F942) Fused Ignition Switch Output (Run-Start) circuit at the GPEC Adaptor.

Does the test light illuminate brightly?

Yes

1. Go To Step 5

No

1. Repair the (F942) Fused Ignition Switch Output (Run-Start) circuit for an open or short.
2. Perform the POWERTRAIN VERIFICATION TEST. Refer to the appropriate TESTING & DIAGNOSTICS article in ENGINE PERFORMANCE .

5. CHECK THE (F342) FUSED ASD RELAY OUTPUT CIRCUITS FOR AN OPEN OR SHORT

1. Turn the ignition off
2. Disconnect the PCM C2 harness connector.

CAUTION:

Do not probe the PCM harness connectors. Probing the PCM harness connectors will damage the PCM terminals resulting in poor terminal to pin connection. Install the GPEC Diagnostic Adaptor to perform the diagnosis.

3. Connect the (special tool #10436, Adapter, GPEC Diagnostic).
4. Remove the ASD Relay from the Power Distribution Center (PDC).
5. Connect a jumper between terminal 30 and terminal 87 at the ASD Relay connector in the PDC.
6. Using a 12-volt test light connected to ground, probe the (F342) Fused ASD Relay Output circuits at the GPEC Adaptor.

Does the test light illuminate brightly at each ASD Control Output circuit?

Yes

1. Go To Step 6

No

1. Repair the (F342) Fused ASD Relay Output circuit for an open or short.

2. Perform the POWERTRAIN VERIFICATION TEST. Refer to the appropriate TESTING & DIAGNOSTICS article in ENGINE PERFORMANCE .

6. CHECK THE (D27) CAN C BUS (+) CIRCUIT FOR AN OPEN/HIGH RESISTANCE

1. Turn the ignition off.
2. Disconnect the STAR CAN C Body Connector C6 harness connector.
3. Measure the resistance of the (D27) CAN C Bus (+) circuit between the STAR CAN C Body Connector C6 harness connector and the GPEC Adaptor.

Is the resistance below 3.0 Ohms?

Yes

1. Go To Step 7

No

1. Repair the (D27) CAN C Bus (+) circuit for an open or high resistance.
2. Perform the POWERTRAIN VERIFICATION TEST. Refer to the appropriate TESTING & DIAGNOSTICS article in ENGINE PERFORMANCE .

7. CHECK THE (D28) CAN C BUS (-) CIRCUIT FOR AN OPEN/HIGH RESISTANCE

1. Measure the resistance of the (D28) CAN C Bus (-) circuit between the STAR CAN C Body Connector C6 harness connector and the GPEC Adaptor.

Is the resistance below 3.0 Ohms?

Yes

1. Replace the Powertrain Control Module in accordance with the Service Information. Refer to MODULE, POWERTRAIN CONTROL, REMOVAL AND INSTALLATION .
2. Perform the POWERTRAIN VERIFICATION TEST. Refer to the appropriate TESTING & DIAGNOSTICS article in ENGINE PERFORMANCE .

No

1. Repair the (D28) CAN C Bus (-) circuit for an open or high resistance.
2. Perform the POWERTRAIN VERIFICATION TEST. Refer to the appropriate TESTING & DIAGNOSTICS article in ENGINE PERFORMANCE .

DIAGNOSIS AND TESTING > NO RESPONSE FROM RADIO-ETM

For a complete wiring diagram, refer to **SYSTEM WIRING DIAGRAMS** article .

DIAGNOSIS AND TESTING > NO RESPONSE FROM RADIO-ETM > POSSIBLE

CAUSES

Possible Causes
FUSED B(+) CIRCUIT OPEN OR SHORTED
GROUND CIRCUIT OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) C1 BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN C1 BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
RADIO (RRM)/ENTERTAINMENT TELEMATICS MODULE (ETM)

DIAGNOSIS AND TESTING > NO RESPONSE FROM RADIO-ETM > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN C BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. The condition or conditions that originally set this DTC are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct terminal tension and repair as necessary. If no problems are found, test complete.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 2

2. CHECK THE FUSED B(+) CIRCUIT FOR AN OPEN OR SHORT TO GROUND



NOTE:

The CAN bus will remain active with the scan tool connected and the ignition off.



NOTE:

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.
2. Disconnect the Radio (RRM) or Entertainment Telematics Module (ETM) harness connector.
3. With a 12-volt test light connected to ground, check the Fused B(+) circuit at the RRM/ETM harness connector.



NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the Fused B(+) circuit for an open or short to ground.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

3. CHECK THE GROUND CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the Ground circuit at the RRM/ETM harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the Ground circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

4. CHECK THE CAN C1 BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN C1 Bus (+) circuit at the RRM/ETM harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the CAN C1 Bus (+) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 5

5. CHECK THE CAN C1 BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN C1 Bus (-) circuit at the RRM/ETM harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the CAN C1 Bus (-) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Replace the Radio (RRM) or Entertainment Telematics Module (ETM) in accordance with the Service Information. Refer to MODULE, RADIO RECEIVER, REMOVAL AND INSTALLATION .
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > NO RESPONSE FROM RBSS (RIGHT BLIND SPOT SENSOR)

For a complete wiring diagram, **refer to** **SYSTEM WIRING DIAGRAMS** **article** .

DIAGNOSIS AND TESTING > NO RESPONSE FROM RBSS (RIGHT BLIND SPOT SENSOR) > POSSIBLE CAUSES

Possible Causes
FUSED B(+) CIRCUIT OPEN OR SHORTED
GROUND CIRCUITS OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) IHS BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN IHS BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
RIGHT BLIND SPOT SENSOR (RBSS)

DIAGNOSIS AND TESTING > NO RESPONSE FROM RBSS (RIGHT BLIND SPOT SENSOR) > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN IHS BUS

1. Turn the ignition on.

2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. The condition or conditions that originally set this DTC are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct terminal tension and repair as necessary. If no problems are found, test complete.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 2

2. CHECK THE FUSED B(+) CIRCUIT FOR AN OPEN OR SHORT TO GROUND



NOTE:

The CAN bus will remain active with the scan tool connected and the ignition off.



NOTE:

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.
2. Disconnect the Right Blind Spot Sensor (RBSS) harness connector.
3. With a 12-volt test light connected to ground, check the Fused B(+) circuit at the RBSS harness connector.



NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the Fused B(+) circuit for an open or short to ground.

2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

3. CHECK THE GROUND CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the Ground circuit at the RBSS harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the Ground circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

4. CHECK THE CAN IHS BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN IHS Bus (+) circuit at the RBSS harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the CAN IHS Bus (+) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 5

5. CHECK THE CAN IHS BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN IHS Bus (-) circuit at the RBSS harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the CAN IHS Bus (-) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Replace the Right Blind Spot Sensor (RBSS) in accordance with the Service Information. Refer to SENSOR, BLIND SPOT, REMOVAL AND INSTALLATION .
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > NO RESPONSE FROM RFH (RADIO FREQUENCY HUB) MODULE > POSSIBLE CAUSES

Possible Causes
FUSED B(+) CIRCUIT OPEN OR SHORTED
FUSED IGNITION CIRCUIT OPEN OR SHORTED
GROUND CIRCUIT OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) C1 BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN C1 BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
RADIO FREQUENCY (RF) HUB MODULE

DIAGNOSIS AND TESTING > NO RESPONSE FROM RFH (RADIO FREQUENCY HUB) MODULE > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN C BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. The condition or conditions that originally set this DTC are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct terminal tension and repair as necessary. If no problems are found, test complete.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 2

2. CHECK THE (A901) FUSED B(+) CIRCUIT FOR AN OPEN OR SHORT TO GROUND

NOTE:

The CAN bus will remain active with the scan tool connected and the ignition off.

 NOTE:

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.
2. Disconnect the Radio Frequency (RF) Hub Module C1 harness connector.
3. With a 12-volt test light connected to ground, check the (A901) Fused B(+) circuit at the RF Hub Module C1 harness connector.

 NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the (A901) Fused B(+) circuit for an open or short to ground.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

3. CHECK THE (F941) FUSED IGNITION CIRCUIT FOR AN OPEN OR SHORT TO GROUND

1. Turn the ignition on.
2. With a 12-volt test light connected to ground, check the (F941) Fused Ignition circuit at the RF Hub Module C1 harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the (F941) Fused Ignition circuit for an open or short to ground.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

4. CHECK THE (Z906) GROUND CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the (Z906) Ground circuit at the RF Hub Module C1 harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 5

No

1. Repair the (Z906) Ground circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

5. CHECK THE (D1) CAN C1 BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the (D1) CAN C1 Bus (+) circuit at the RF Hub Module C1 harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the (D1) CAN C1 Bus (+) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 6

6. CHECK THE (D2) CAN C1 BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the (D2) CAN C1 Bus (-) circuit at the RF Hub Module C1 harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the (D2) CAN C1 Bus (-) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

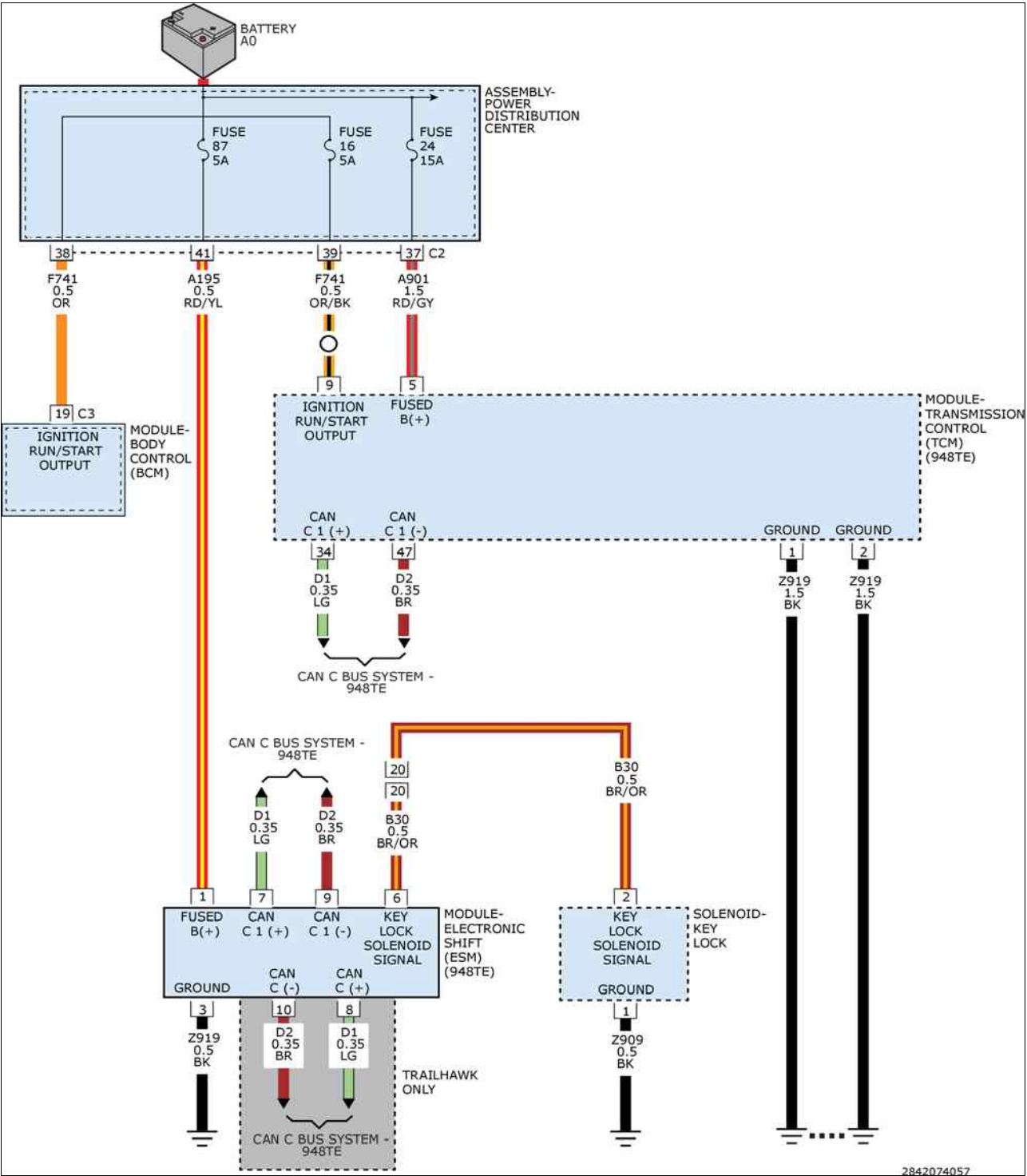
No

1. Replace the Radio Frequency (RF) Hub Module in accordance with the Service Information. Refer to MODULE, RADIO FREQUENCY (RF HUB), REMOVAL AND INSTALLATION .
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > NO RESPONSE FROM 9-SPEED TCM (TRANSMISSION CONTROL MODULE)

For a complete wiring diagram, refer to **SYSTEM WIRING DIAGRAMS** article .

Fig 1: Electronic Shift Module & Transmission Control Module Circuit Diagram



Courtesy of CHRYSLER GROUP, LLC

DIAGNOSIS AND TESTING > NO RESPONSE FROM 9-SPEED TCM (TRANSMISSION CONTROL MODULE) > POSSIBLE CAUSES

Possible Causes

FUSED B(+) CIRCUIT OPEN OR SHORTED
FUSED IGNITION CIRCUIT OPEN OR SHORTED
GROUND CIRCUIT OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) C1 BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN C1 BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
TRANSMISSION CONTROL MODULE (TCM)

DIAGNOSIS AND TESTING > NO RESPONSE FROM 9-SPEED TCM (TRANSMISSION CONTROL MODULE) > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN C BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. The condition or conditions that originally set this DTC are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct terminal tension and repair as necessary. If no problems are found, test complete.
2. Perform the TRANSMISSION VERIFICATION TEST. Refer to the appropriate TRANSMISSION ELECTRICAL DIAGNOSTICS article .

No

1. Go To Step 2

2. CHECK THE FUSED B(+) CIRCUIT FOR AN OPEN OR SHORT TO GROUND



NOTE:

The CAN bus will remain active with the scan tool connected and the ignition off.



NOTE:

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.

2. Disconnect the Transmission Control Module (TCM) harness connector.
3. With a 12-volt test light connected to ground, check the Fused B(+) circuit at the TCM harness connector.



NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the Fused B(+) circuit for an open or short to ground.
2. Perform the TRANSMISSION VERIFICATION TEST. Refer to the appropriate TRANSMISSION ELECTRICAL DIAGNOSTICS article .

3. CHECK THE FUSED IGNITION CIRCUIT FOR AN OPEN OR SHORT TO GROUND

1. Turn the ignition on.
2. With a 12-volt test light connected to ground, check the Fused Ignition circuit at the TCM harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the Fused Ignition circuit for an open or short to ground.
2. Perform the TRANSMISSION VERIFICATION TEST. Refer to the appropriate TRANSMISSION ELECTRICAL DIAGNOSTICS article .

4. CHECK THE GROUND CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the Ground circuit at the TCM harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 5

No

1. Repair the Ground circuit for an open or high resistance.
2. Perform the TRANSMISSION VERIFICATION TEST. Refer to the appropriate TRANSMISSION ELECTRICAL DIAGNOSTICS article .

5. CHECK THE CAN C1 BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN C1 Bus (+) circuit at the TCM harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the CAN C1 Bus (+) circuit for an open or high resistance.
2. Perform the TRANSMISSION VERIFICATION TEST. Refer to the appropriate TRANSMISSION ELECTRICAL DIAGNOSTICS article .

No

1. Go To Step 6

6. CHECK THE CAN C1 BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN C1 Bus (-) circuit at the TCM harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the CAN C1 Bus (-) circuit for an open or high resistance.
2. Perform the TRANSMISSION VERIFICATION TEST. Refer to the appropriate TRANSMISSION ELECTRICAL DIAGNOSTICS article .

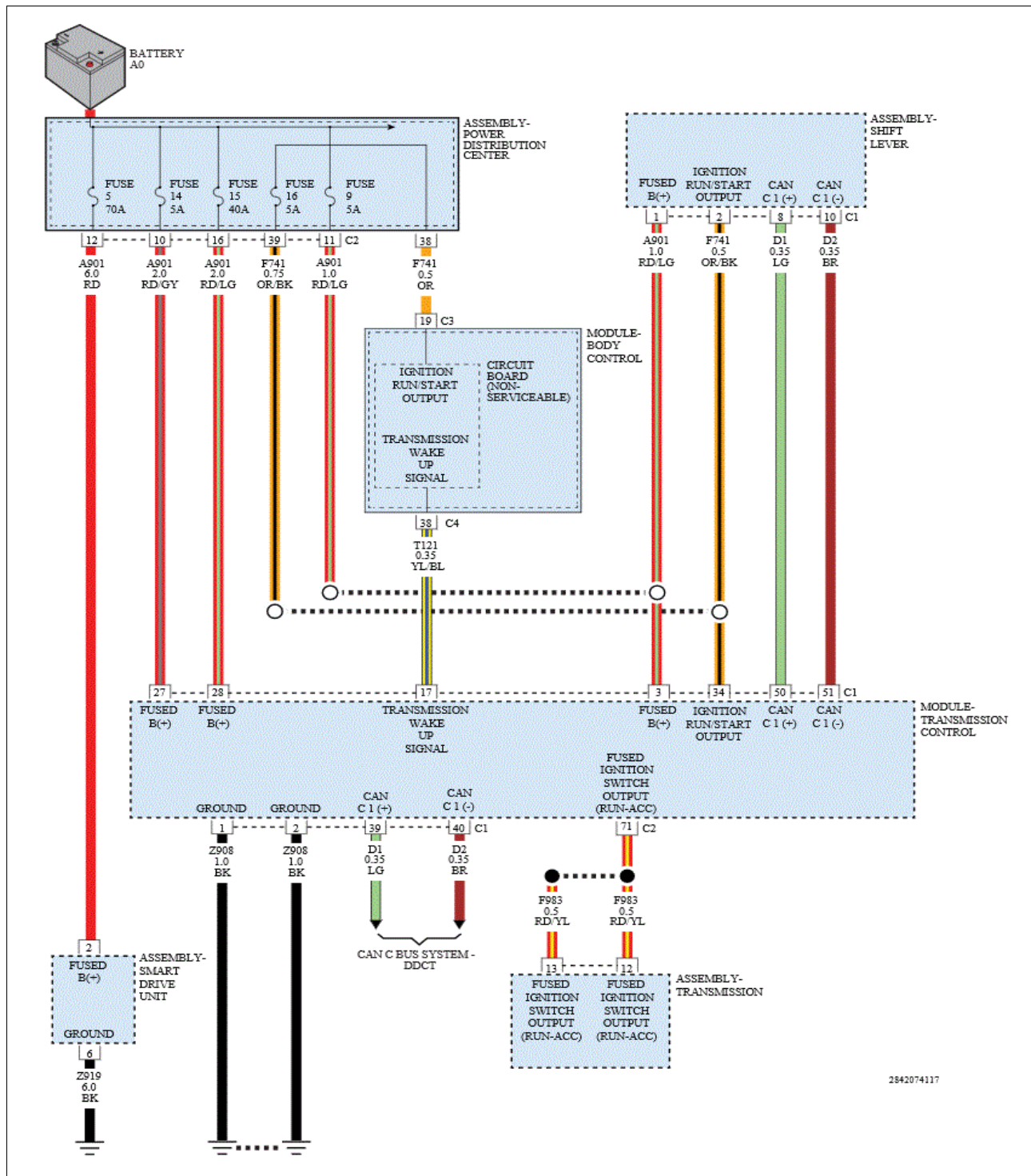
No

1. Replace and program the Transmission Control Module (TCM) in accordance with the Service Information. Refer to MODULE, TRANSMISSION CONTROL, REMOVAL AND INSTALLATION .
2. Perform the TRANSMISSION VERIFICATION TEST. Refer to the appropriate TRANSMISSION ELECTRICAL DIAGNOSTICS article .

DIAGNOSIS AND TESTING > NO RESPONSE FROM DDCT TCM (TRANSMISSION CONTROL MODULE)

For a complete wiring diagram, refer to **SYSTEM WIRING DIAGRAMS** article .

Fig 1: Transmission Control Module Circuit Diagram



Courtesy of CHRYSLER GROUP, LLC

DIAGNOSIS AND TESTING > NO RESPONSE FROM DDCT TCM (TRANSMISSION CONTROL MODULE) > POSSIBLE CAUSES

Possible Causes

FUSED B(+) CIRCUIT OPEN OR SHORTED
IGNITION RUN/START OUTPUT
GROUND CIRCUIT OPEN OR HIGH RESISTANCE
CAN C1 BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN C1 BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
TRANSMISSION CONTROL MODULE (TCM)

DIAGNOSIS AND TESTING > NO RESPONSE FROM DDCT TCM (TRANSMISSION CONTROL MODULE) > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CONTROLLER AREA NETWORK (CAN) C BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. The condition or conditions that originally set this Diagnostic Trouble Code (DTC) are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct terminal tension and repair as necessary. If no problems are found, test complete.
2. Perform the TRANSMISSION VERIFICATION TEST. Refer to the appropriate TRANSMISSION ELECTRICAL DIAGNOSTICS article .

No

1. Go To Step 2

2. CHECK THE (A901) FUSED B(+) CIRCUITS FOR AN OPEN OR SHORT TO GROUND

 **NOTE:**

The CAN bus will remain active with the scan tool connected and the ignition off.

 **NOTE:**

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.

2. Disconnect the Transmission Control Module (TCM) harness connector.
3. With a 12-volt test light connected to ground, check the (A901) Fused B(+) circuits at the TCM harness connector.



NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the (A901) Fused B(+) circuit(s) for an open or short to ground.
2. Perform the TRANSMISSION VERIFICATION TEST. Refer to the appropriate TRANSMISSION ELECTRICAL DIAGNOSTICS article .

3. CHECK THE (F741) IGNITION RUN/START OUTPUT CIRCUIT FOR AN OPEN OR SHORT TO GROUND

1. Turn the ignition on.
2. With a 12-volt test light connected to ground, check the (F741) Ignition Run/Start Output circuit at the TCM harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the Ignition Run/Start Output circuit for an open or short to ground.
2. Perform the TRANSMISSION VERIFICATION TEST. Refer to the appropriate TRANSMISSION ELECTRICAL DIAGNOSTICS article .

4. CHECK THE (Z908) GROUND CIRCUITS FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the (Z908) Ground circuits at the TCM harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 5

No

1. Repair the (Z908) Ground circuit(s) for an open or high resistance.
2. Perform the TRANSMISSION VERIFICATION TEST. Refer to the appropriate TRANSMISSION ELECTRICAL DIAGNOSTICS article .

5. CHECK THE (D1) CAN C BUS (+) CIRCUITS FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the (D1) CAN C Bus (+) circuits at the TCM harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the (D1) CAN C Bus (+) circuit(s) for an open or high resistance.
2. Perform the TRANSMISSION VERIFICATION TEST. Refer to the appropriate TRANSMISSION ELECTRICAL DIAGNOSTICS article .

No

1. Go To Step 6

6. CHECK THE (D2) CAN C BUS (-) CIRCUITS FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the (D2) CAN C Bus (-) circuits at the TCM harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the (D2) CAN C Bus (-) circuit(s) for an open or high resistance.
2. Perform the TRANSMISSION VERIFICATION TEST. Refer to the appropriate TRANSMISSION ELECTRICAL DIAGNOSTICS article .

No

1. Replace the TCM in accordance with the Service Information. (Refer to MODULE, TRANSMISSION CONTROL).
2. Perform the TRANSMISSION VERIFICATION TEST. Refer to the appropriate TRANSMISSION ELECTRICAL DIAGNOSTICS article .

DIAGNOSIS AND TESTING > NO RESPONSE FROM TPM (TIRE PRESSURE MONITORING) MODULE

For a complete wiring diagram, refer to **SYSTEM WIRING DIAGRAMS** article .

DIAGNOSIS AND TESTING > NO RESPONSE FROM TPM (TIRE PRESSURE

MONITORING) MODULE > POSSIBLE CAUSES

Possible Causes
FUSED B(+) CIRCUIT OPEN OR SHORTED
GROUND CIRCUIT OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
TIRE PRESSURE MONITORING (TPM) MODULE

DIAGNOSIS AND TESTING > NO RESPONSE FROM TPM (TIRE PRESSURE MONITORING) MODULE > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. The condition or conditions that originally set this DTC are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct terminal tension and repair as necessary. If no problems are found, test complete.
2. Perform the TPM VERIFICATION TEST. (Refer to the appropriate ELECTRICAL DIAGNOSTICS article).

No

1. Go To Step 2

2. CHECK THE FUSED B(+) CIRCUIT FOR AN OPEN OR SHORT TO GROUND

 **NOTE:**

The CAN bus will remain active with the scan tool connected and the ignition off.

 **NOTE:**

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.
2. Disconnect the Tire Pressure Monitoring (TPM) module harness connector.
3. With a 12-volt test light connected to ground, check the Fused B(+) circuit at the TPM module harness connector.



NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the Fused B(+) circuit for an open or short to ground.
2. Perform the TPM VERIFICATION TEST. (Refer to the appropriate ELECTRICAL DIAGNOSTICS article).

3. CHECK THE GROUND CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the Ground circuit at the TPM module harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the Ground circuit for an open or high resistance.
2. Perform the TPM VERIFICATION TEST. (Refer to the appropriate ELECTRICAL DIAGNOSTICS article).

4. CHECK THE CAN BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN Bus (+) circuit at the TPM module harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the CAN Bus (+) circuit for an open or high resistance.
2. Perform the TPM VERIFICATION TEST. (Refer to the appropriate ELECTRICAL

DIAGNOSTICS article).

No

1. Go To Step 5

5. CHECK THE CAN BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage between ground and the CAN Bus (-) circuit at the TPM module harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the CAN Bus (-) circuit for an open or high resistance.
2. Perform the TPM VERIFICATION TEST. (Refer to the appropriate ELECTRICAL DIAGNOSTICS article).

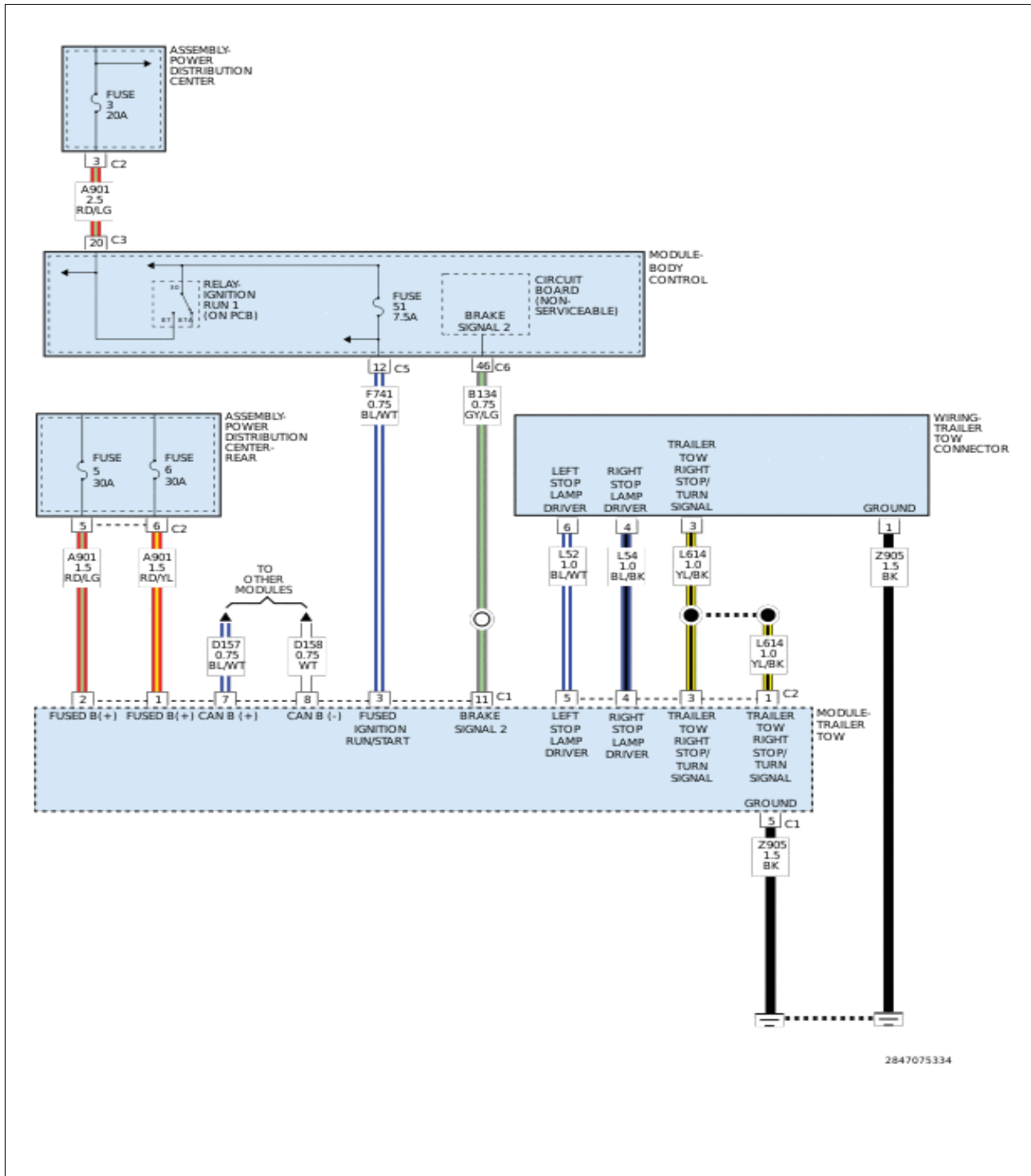
No

1. Replace the Tire Pressure Monitoring (TPM) module in accordance with the Service Information. Refer to MODULE, TIRE PRESSURE MONITORING (TPM), REMOVAL AND INSTALLATION .
2. Perform the TPM VERIFICATION TEST. (Refer to the appropriate ELECTRICAL DIAGNOSTICS article).

DIAGNOSIS AND TESTING > NO RESPONSE FROM TTM (TRAILER TOW MODULE)

For a complete wiring diagram, **refer to SYSTEM WIRING DIAGRAMS article** .

Fig 1: Trailer Tow Module Circuit Diagram



Courtesy of CHRYSLER GROUP, LLC

DIAGNOSIS AND TESTING > NO RESPONSE FROM TTM (TRAILER TOW MODULE) > POSSIBLE CAUSES

Possible Causes

FUSED B(+) CIRCUIT OPEN OR SHORTED
FUSED IGNITION RUN/START CIRCUIT OPEN OR SHORTED
GROUND CIRCUIT OPEN OR HIGH RESISTANCE
CONTROLLER AREA NETWORK (CAN) IHS BUS (+) CIRCUIT OPEN OR HIGH RESISTANCE
CAN IHS BUS (-) CIRCUIT OPEN OR HIGH RESISTANCE
TRAILER TOW MODULE (TTM)

DIAGNOSIS AND TESTING > NO RESPONSE FROM TTM (TRAILER TOW MODULE) > DIAGNOSTIC TEST

1. CHECK THE MODULE STATUS ON THE CAN IHS BUS

1. Turn the ignition on.
2. With the scan tool, read the CAN topology on the Vehicle View screen.

Does the Vehicle View screen indicate that the Module is active on the bus?

Yes

1. Perform the TESTING FOR INTERMITTENT CONDITIONS procedure. Refer to the appropriate TESTING & DIAGNOSTICS article in ENGINE PERFORMANCE.

No

1. Go To Step 2

2. CHECK THE (A901) FUSED B(+) CIRCUITS FOR AN OPEN OR SHORT TO GROUND

 **NOTE:**

The CAN bus will remain active with the scan tool connected and the ignition off.

 **NOTE:**

Leave the scan tool connected and on the Vehicle View screen.

1. Turn the ignition off.
2. Disconnect the Trailer Tow Module (TTM) C1 harness connector.
3. With a 12-volt test light connected to ground, check the (A901) Fused B(+) circuits at the TTM C1 harness connector.



NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the (A901) Fused B(+) circuits for an open or short to ground.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

3. CHECK THE (F741) FUSED IGNITION RUN/START CIRCUIT FOR AN OPEN OR SHORT TO GROUND

1. Turn the ignition on.
2. With a 12-volt test light connected to ground, check the (F741) Fused Ignition Run/Start circuit at the TTM C1 harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the (F741) Fused Ignition Run/Start circuit for an open or short to ground.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

4. CHECK THE (Z905) GROUND CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. With a 12-volt test light connected to 12 volts, check the (Z905) Ground circuit at the TTM C1 harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 5

No

1. Repair the (Z905) Ground circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

5. CHECK THE (C157) CAN IHS BUS (+) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage on the (C157) CAN IHS Bus (+) circuit at the TTM C1 harness connector.

Is the voltage below 2.5 volts?

Yes

1. Repair the (C157) CAN IHS Bus (+) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 6

6. CHECK THE (C158) CAN IHS BUS (-) CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the voltage on the (C158) CAN IHS Bus (-) circuit at the TTM C1 harness connector.

Is the voltage below 1.3 volts?

Yes

1. Repair the (C158) CAN IHS Bus (-) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Replace the Trailer Tow Module (TTM) in accordance with the Service Information.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .