

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

2009 BRAKES**ABS - Electrical Diagnostics - Journey****DIAGNOSTIC CODE INDEX****DIAGNOSTIC CODE INDEX**

DTC	Description
<u>C100A</u>	LEFT FRONT WHEEL SPEED SENSOR CIRCUIT
<u>C1011</u>	LEFT FRONT WHEEL SPEED SENSOR SIGNAL ERRATIC PERFORMANCE
<u>C1014</u>	LEFT FRONT WHEEL SPEED COMPARATIVE PERFORMANCE
<u>C1015</u>	RIGHT FRONT WHEEL SPEED SENSOR CIRCUIT
<u>C101C</u>	RIGHT FRONT WHEEL SPEED SENSOR SIGNAL ERRATIC PERFORMANCE
<u>C101F</u>	RIGHT FRONT WHEEL SPEED COMPARATIVE PERFORMANCE
<u>C1020</u>	LEFT REAR WHEEL SPEED SENSOR CIRCUIT
<u>C1027</u>	LEFT REAR WHEEL SPEED SENSOR SIGNAL ERRATIC PERFORMANCE
<u>C102A</u>	LEFT REAR WHEEL SPEED COMPARATIVE PERFORMANCE
<u>C102B</u>	RIGHT REAR WHEEL SPEED SENSOR CIRCUIT
<u>C102C</u>	RIGHT REAR WHEEL SPEED SENSOR CIRCUIT PERFORMANCE
<u>C1032</u>	RIGHT REAR WHEEL SPEED SENSOR SIGNAL ERRATIC PERFORMANCE
<u>C1035</u>	RIGHT REAR WHEEL SPEED COMPARATIVE PERFORMANCE
<u>C1041</u>	LEFT FRONT TONE WHEEL PERFORMANCE
<u>C1042</u>	RIGHT FRONT TONE WHEEL PERFORMANCE
<u>C1043</u>	LEFT REAR TONE WHEEL PERFORMANCE
<u>C1044</u>	RIGHT REAR TONE WHEEL PERFORMANCE
<u>C1046</u>	LEFT FRONT WHEEL PRESSURE PHASE MONITORING
<u>C1047</u>	RIGHT FRONT WHEEL PRESSURE PHASE MONITORING
<u>C1048</u>	LEFT REAR WHEEL PRESSURE PHASE MONITORING
<u>C1049</u>	RIGHT REAR WHEEL PRESSURE PHASE MONITORING
<u>C1073</u>	ABS PUMP MOTOR CONTROL CIRCUIT
<u>C1078</u>	TIRE REVOLUTIONS RANGE PERFORMANCE
<u>C107C</u>	BRAKE PEDAL SWITCH 1/2 STUCK
<u>C107D</u>	BRAKE PEDAL SWITCH 1/2 CORRELATION
<u>C1090</u>	ABS BRAKE LAMP CONTROL CIRCUIT LOW
<u>C1091</u>	ABS BRAKE LAMP CONTROL CIRCUIT HIGH
<u>C1210</u>	G SENSOR INPUT CIRCUIT PERFORMANCE
<u>C1219</u>	STEERING ANGLE SENSOR ERRATIC PERFORMANCE
<u>C121A</u>	STEERING ANGLE SENSOR NOT INITIALIZED
<u>C121C</u>	TORQUE REQUEST SIGNAL DENIED
<u>C121D</u>	BRAKE PRESSURE SENSOR CIRCUIT
<u>C121E</u>	BRAKE PRESSURE SENSOR COMPARATIVE PERFORMANCE

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<u>C1231</u>	DRIVE TEST: STEERING ANGLE SENSOR
<u>C1232</u>	DRIVE TEST: PRESSURE SENSOR
<u>C1234</u>	DRIVE TEST: SENSOR CLUSTER INSTALLATION
<u>C1238</u>	DRIVE TEST: UNSUCCESSFUL
<u>C1239</u>	EMISSIONS ROLLS TEST ACTIVE
<u>C123A</u>	ESP SYSTEM SENSORS CALIBRATION
<u>C123B</u>	ESP SYSTEM CONTROL TOO LONG
<u>C123C</u>	DYNAMICS SENSOR MOUNTING/INSTALLATION PERFORMANCE
<u>C123F</u>	STEERING ANGLE SENSOR COMPARATIVE PERFORMANCE
<u>C1240</u>	STEERING ANGLE SENSOR OVERTRAVEL PERFORMANCE
<u>C1243</u>	G SENSOR NOT INITIALIZED
<u>C2100</u>	BATTERY VOLTAGE LOW
<u>C2101</u>	BATTERY VOLTAGE HIGH
<u>C2111</u>	ANTI-LOCK BRAKE MODULE INTERNAL
<u>C2114</u>	DYNAMICS SENSOR SUPPLY VOLTAGE LOW
<u>C2115</u>	DYNAMICS SENSOR SUPPLY VOLTAGE HIGH
<u>C2116</u>	ABS PUMP MOTOR SUPPLY LOW VOLTAGE
<u>C2202</u>	ORIGINAL VIN MISMATCH/MISSING
<u>C2205</u>	STEERING ANGLE SENSOR INTERNAL
<u>C2206</u>	VEHICLE CONFIGURATION MISMATCH
<u>U0100</u>	LOST COMMUNICATION WITH ECM/PCM
<u>U0101</u>	LOST COMMUNICATION WITH TCM
<u>U0125</u>	LOST COMMUNICATION WITH DYNAMICS SENSOR
<u>U0126</u>	LOST COMMUNICATION WITH STEERING ANGLE SENSOR
<u>U0141</u>	LOST COMMUNICATION WITH FRONT CONTROL MODULE (TIPM)
<u>U0401</u>	IMPLAUSIBLE DATA RECEIVED FROM ECM/PCM
<u>U0402</u>	IMPLAUSIBLE DATA RECEIVED FROM TCM
<u>U0429</u>	IMPLAUSIBLE DATA RECEIVED FROM SCM
<u>U1003</u>	ESP CAN C BUS PERFORMANCE
<u>U1004</u>	CAN C BUS TRANSMIT PERFORMANCE
<u>U1104</u>	CAN C BUS CRC PERFORMANCE
<u>U140E</u>	IMPLAUSIBLE VEHICLE CONFIGURATION DATA RECEIVED
<u>U1501</u>	IMPLAUSIBLE MESSAGE DATA LENGTH RECEIVED FROM PCM
<u>U1502</u>	IMPLAUSIBLE MESSAGE DATA LENGTH RECEIVED FROM TCM
<u>U1503</u>	IMPLAUSIBLE MESSAGE DATA LENGTH RECEIVED FROM TIPM

DIAGNOSIS AND TESTING**C100A-LEFT FRONT WHEEL SPEED SENSOR CIRCUIT**

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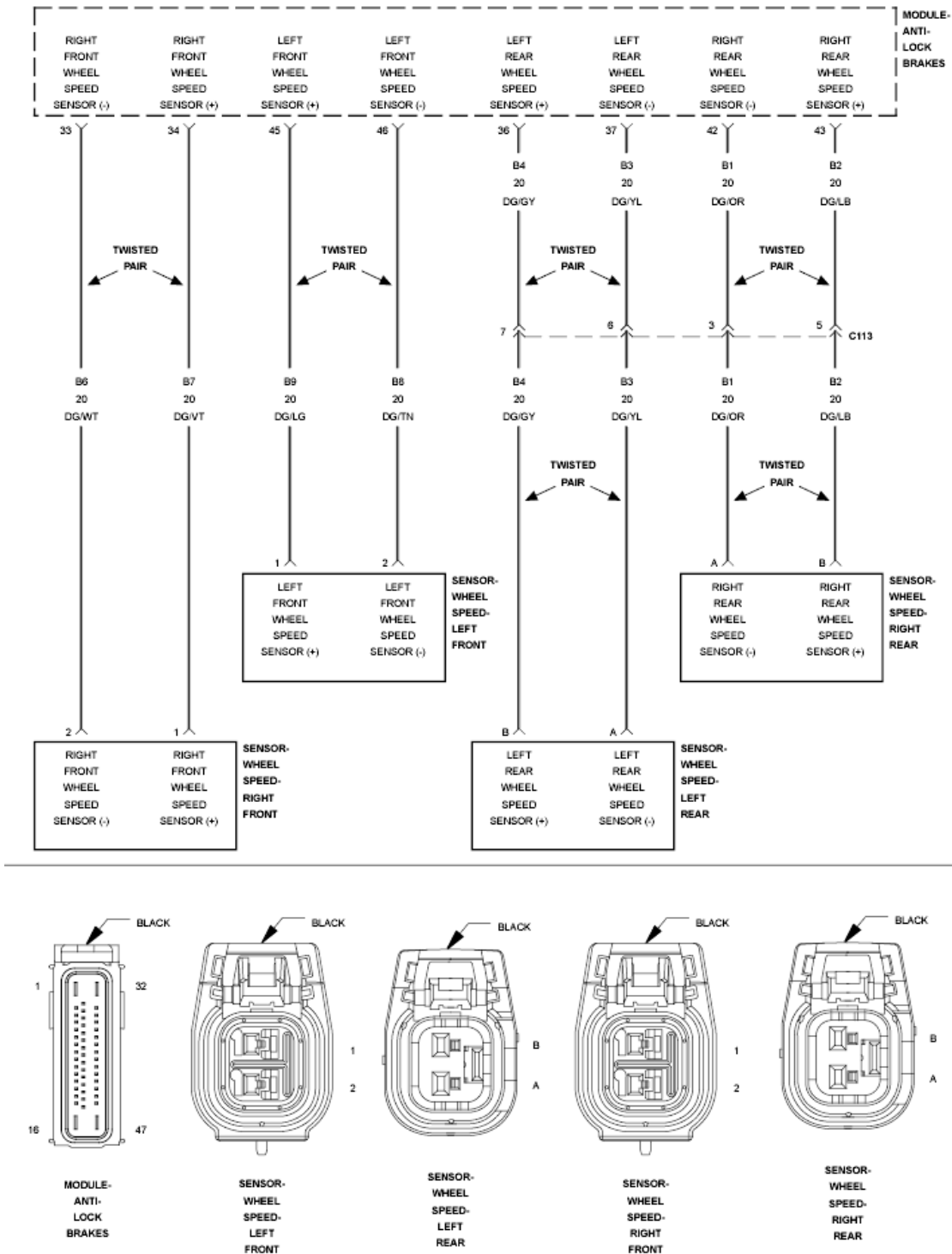


Fig. 1: Left Front Wheel Speed Sensor Signal Circuit Schematic
 Courtesy of CHRYSLER LLC

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

When the Left Front Wheel Speed Sensor circuit fails the diagnostic test.

Possible Causes
CONNECTOR/TERMINAL DAMAGE (B9) LEFT FRONT WSS SUPPLY CIRCUIT SHORTED TO VOLTAGE, GROUND OR OPEN (B8) LEFT FRONT WSS SIGNAL CIRCUIT SHORTED TO VOLTAGE, GROUND, OR OPEN (B8) LEFT FRONT WSS SIGNAL CIRCUIT AND (B9) LEFT FRONT WSS SUPPLY CIRCUIT SHORTED TOGETHER LEFT FRONT WSS ANTI-LOCK BRAKE MODULE

Diagnostic Test

1. CHECK FOR DTC C100A LEFT FRONT WHEEL SPEED SENSOR CIRCUIT

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, record and erase DTCs.
3. Cycle the ignition switch from off to on.
4. With the scan tool, read DTCs.

Does the scan tool display: C100A LEFT FRONT WHEEL SPEED SENSOR CIRCUIT?

Yes

- Go to step 2

No

- The condition that caused the symptom is currently not present. Inspect the related wiring for a possible intermittent condition. Look for any chafed, pierced, pinched, or partially broken wires.
- Perform the ABS INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

2. CHECK CONNECTOR/TERMINAL FOR DAMAGE

NOTE: Check all terminals for broken, bent, pushed out, or corroded terminals.

1. Turn the ignition off.

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2. Inspect the Anti-Lock Brake Module harness connector, Left Front WSS, and Left Front WSS harness connector.

Is the Left Front WSS or any of the connectors/terminals damaged?

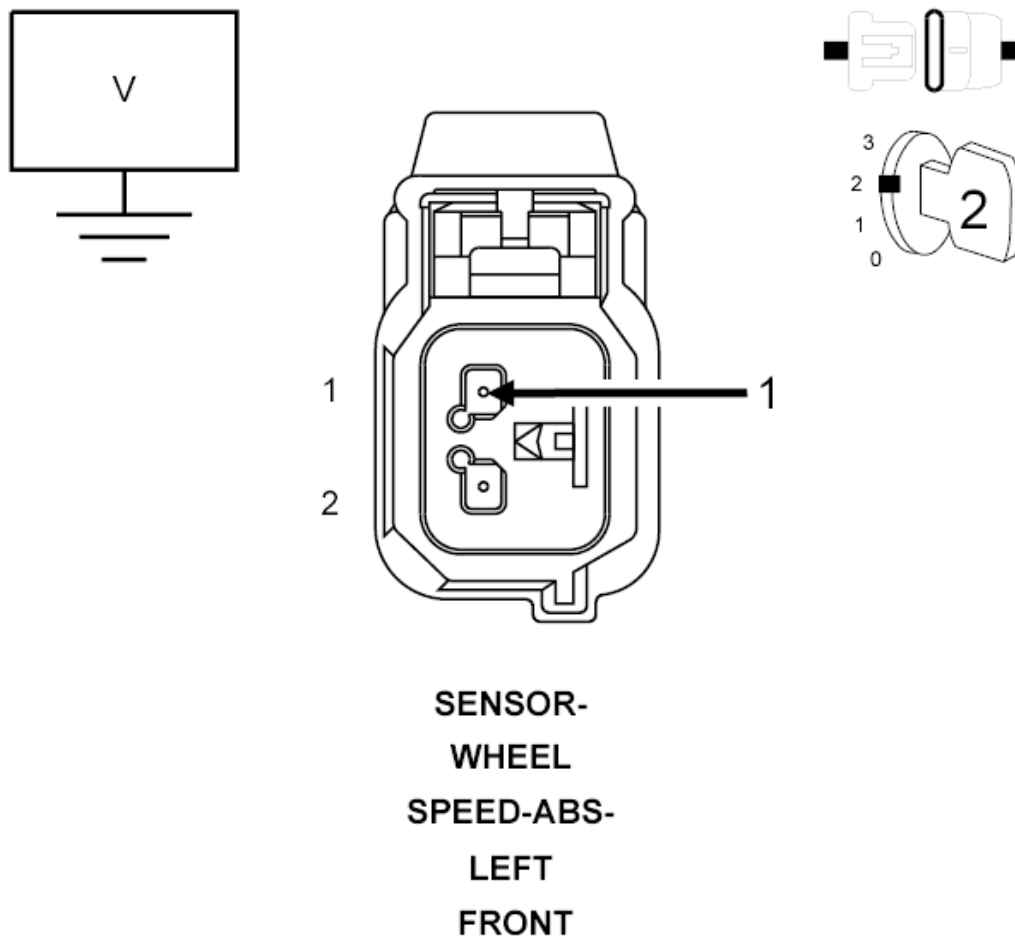
Yes

- Repair as necessary.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 3

3. **CHECK (B9) LEFT FRONT WSS SUPPLY CIRCUIT VOLTAGE**



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Fig. 2: Checking Left Front Wheel Speed Sensor Supply Circuit Voltage
 Courtesy of CHRYSLER LLC

1. Disconnect the Left Front WSS harness connector.
2. Turn the ignition on.
3. Measure the voltage between the (B9) Left Front WSS Supply circuit and ground.

Is the voltage above 10 volts?

Yes

- Go to step 6

No

- Go to step 4

4. **CHECK (B9) LEFT FRONT WSS SUPPLY CIRCUIT SHORT TO GROUND**

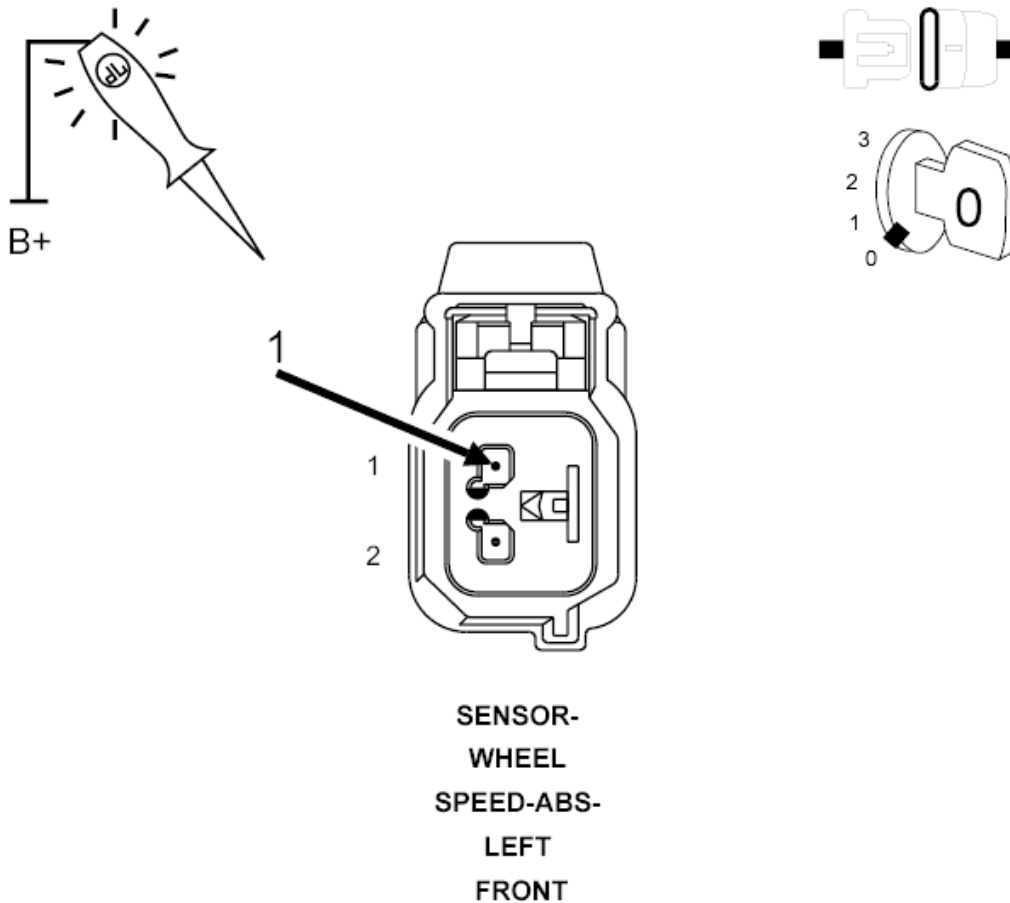


Fig. 3: Checking Left Front Wheel Speed Sensor Supply Circuit Short To Ground
 Courtesy of CHRYSLER LLC

1. Disconnect the Anti-Lock Brake Module harness connector.
2. Using a 12-volt test light connected to 12-volts, probe the (B9) Left Front WSS Supply circuit.

Does the test light illuminate brightly?

Yes

- Repair the (B9) Left Front WSS Supply circuit for a short to ground.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 5

5. CHECK (B9) LEFT FRONT WSS SUPPLY CIRCUIT OPEN

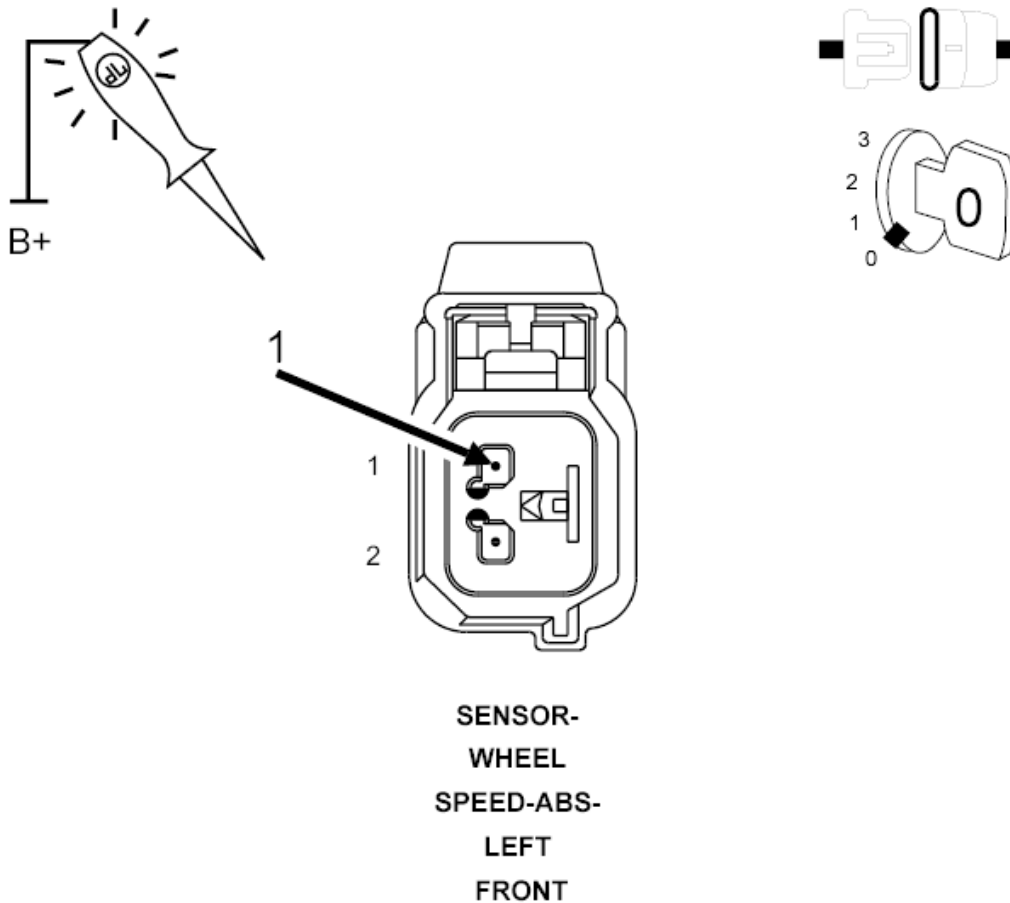


Fig. 4: Checking Left Front Wheel Speed Sensor Supply Circuit Short To Ground
 Courtesy of CHRYSLER LLC

1. Connect a jumper wire between ground and the (B9) Left Front WSS Supply circuit in the Anti-Lock Brakes Module harness connector.
2. Using a 12-volt test light connected to 12-volts, probe the (B9) Left Front WSS Supply circuit.

Does the test light illuminate brightly

Yes

- Go to step 6

No

- Repair the (B9) Left Front WSS Supply circuit for an open.

- Perform the ABS VERIFICATION TEST. See DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.

6. CHECK (B8) LEFT FRONT WSS SIGNAL CIRCUIT SHORT TO VOLTAGE

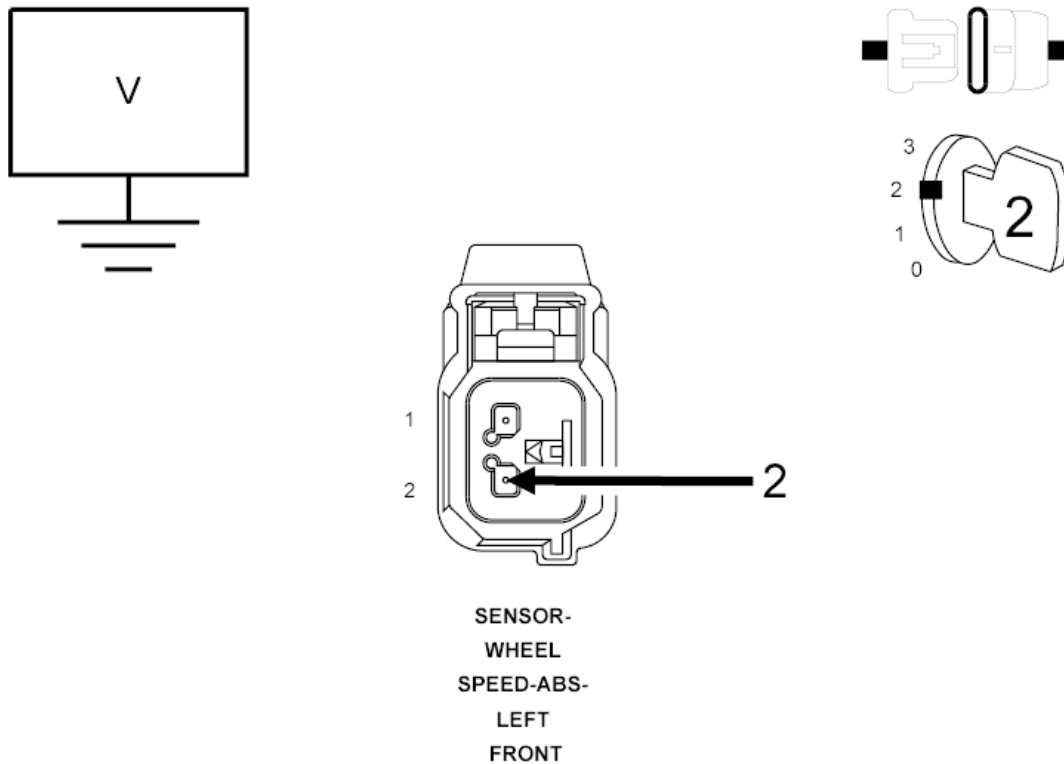


Fig. 5: Checking Left Front Wheel Speed Sensor Signal Circuit Short To Voltage
Courtesy of CHRYSLER LLC

1. Turn the ignition on.
2. Measure the voltage between the (B8) Left Front WSS Signal circuit and ground.

Is the voltage above 1 volt?

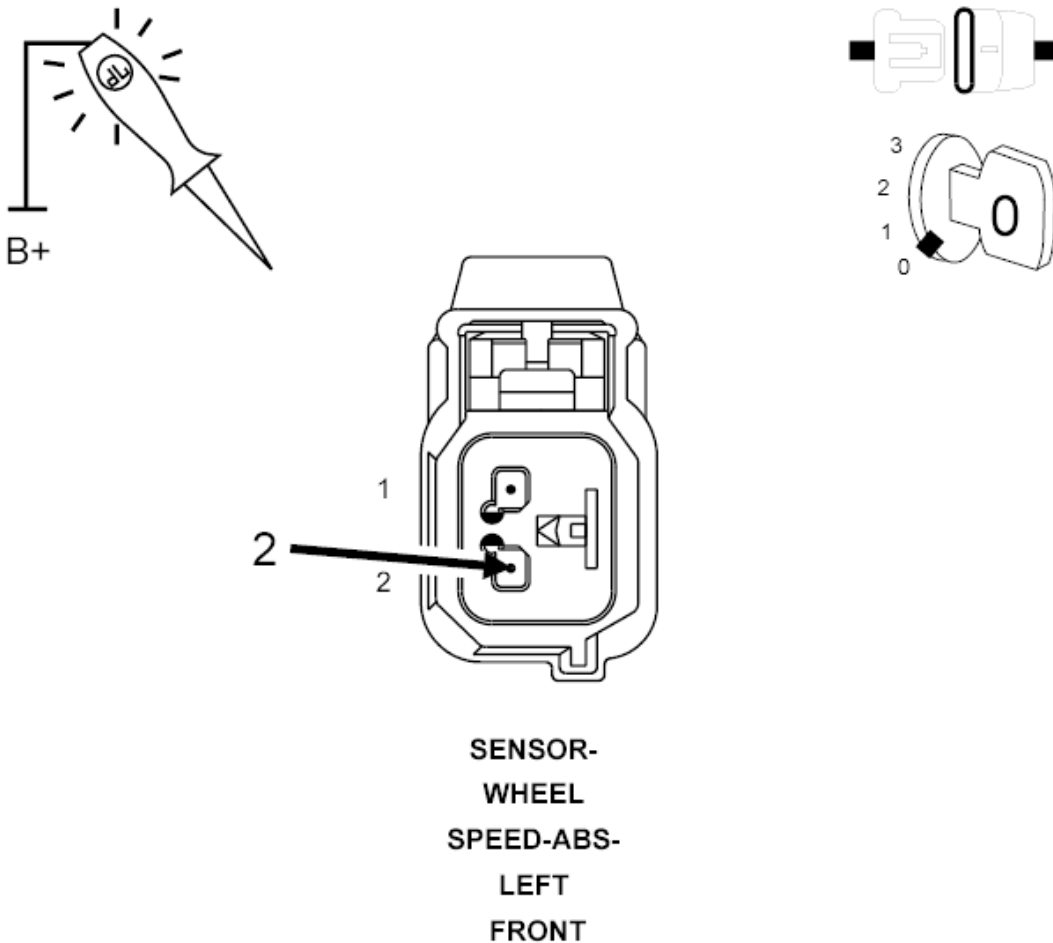
Yes

- Repair the (B8) Left Front WSS Signal circuit for a short to voltage.
- Perform the ABS VERIFICATION TEST. See DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.

No

- Go to step 7

7. CHECK (B8) LEFT FRONT WSS SIGNAL CIRCUIT SHORT TO GROUND



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Fig. 6: Checking Left Front Wheel Speed Sensor Signal Circuit Short To Ground
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. If not done previously, disconnect the Anti-Lock Brake Module harness connector.
3. Using a 12-volt test light connected to 12-volts, probe the (B8) Left Front WSS Signal circuit.

Does the test light illuminate brightly?

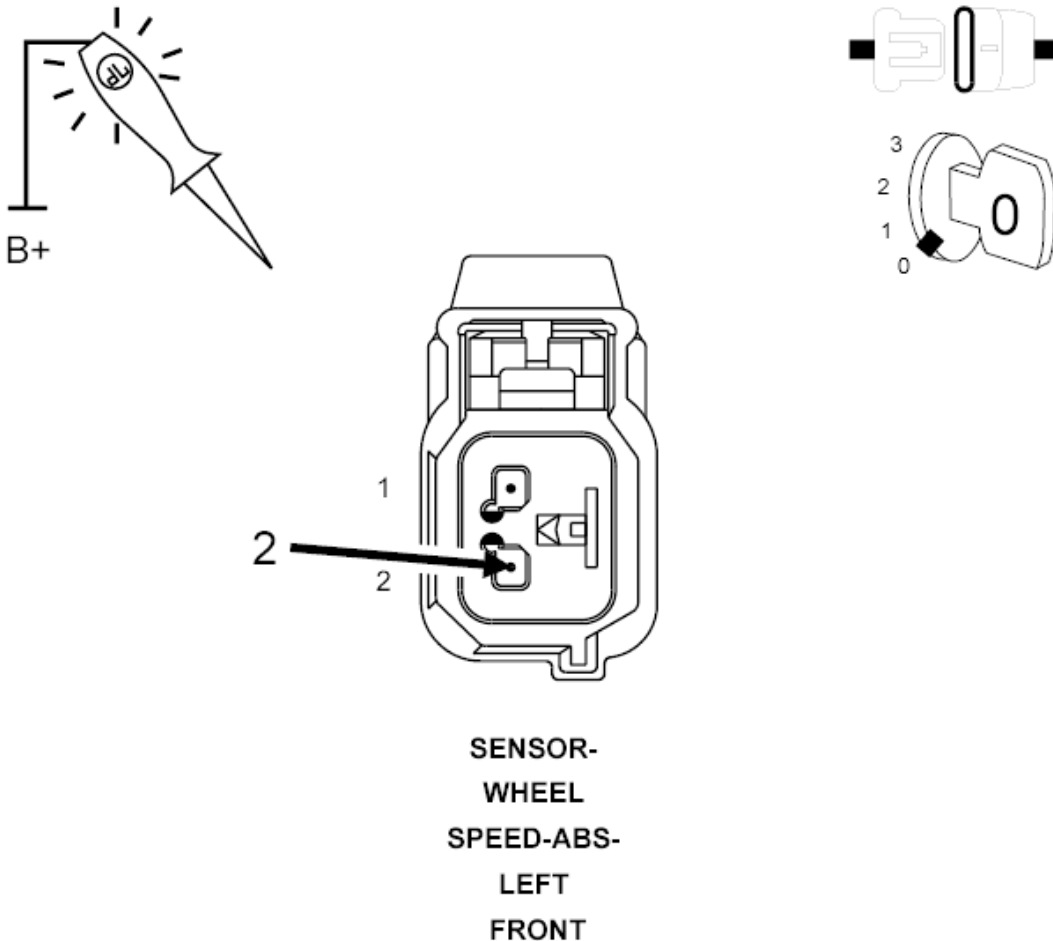
Yes

- Repair the (B8) Left Front WSS Signal circuit for a short to ground.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 8

8. CHECK (B8) LEFT FRONT WSS SIGNAL CIRCUIT OPEN



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Fig. 7: Checking Left Front Wheel Speed Sensor Signal Circuit Short To Ground
Courtesy of CHRYSLER LLC

1. Connect a jumper wire between ground and the (B8) Left Front WSS Signal circuit in the Anti-Lock Brakes Module harness connector.
2. Using a 12-volt test light connected to 12-volts, probe the (B8) Left Front WSS Signal circuit.

Does the test light illuminate brightly?

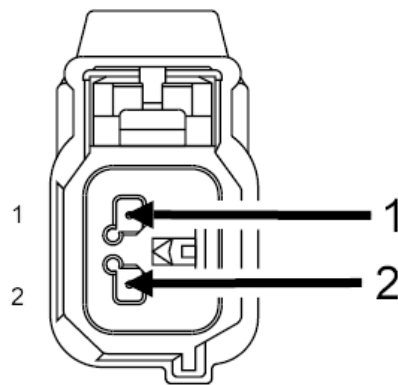
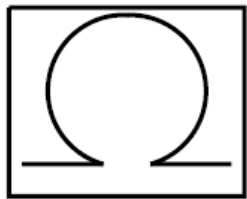
Yes

- Go to step 9

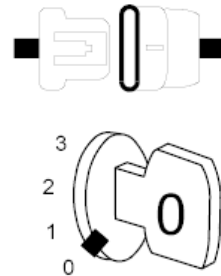
No

- Repair the (B8) Left Front WSS Signal circuit for an open.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

9. CHECK (B8) LEFT FRONT WSS SIGNAL CIRCUIT AND (B9) LEFT FRONT WSS SUPPLY CIRCUIT SHORT TOGETHER



SENSOR-
WHEEL
SPEED-ABS-
LEFT
FRONT



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Fig. 8: Checking Left Front Wheel Speed Sensor Signal Circuit & Left Front Wheel Speed Sensor Supply Circuit Short Together

Courtesy of CHRYSLER LLC

1. Remove all jumper wires.
2. Measure the resistance between the (B8) Left Front WSS Signal circuit and the (B9) Left Front WSS Supply circuit.

Is the resistance above 5.0 Ohms?

Yes

- Go to step 10

No

- Repair the (B8) Left Front WSS Signal circuit and the (B9) Left Front WSS Supply circuit for a short together.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

10. LEFT FRONT WHEEL SPEED SENSOR

1. Replace the Left Front Wheel Speed Sensor in accordance with the Service Information.
2. Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

CAUTION: Make sure brake capability is available before road testing.

3. Road test the vehicle over 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be meet.

4. With the scan tool, read ABS DTCs.

Did DTC C100A LEFT FRONT WHEEL SPEED SENSOR CIRCUIT reset?

Yes

- Replace the Anti-Lock Brakes Module in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Test Complete.

C1011-LEFT FRONT WHEEL SPEED SENSOR SIGNAL ERRATIC PERFORMANCE

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

- **When Monitored:**

With the ignition on.

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• Set Condition:

When the Left Front Wheel Speed Sensor (WSS) Signal is intermittently missing while vehicle speed is above 40 km/h (25 mph) or erratic wheel speed signal during acceleration or sensed wheel speed is different from other wheels.

Possible Causes

LEFT FRONT WSS LOOSE - B8, B9 CIRCUITS/CONNECTOR/TERMINAL DAMAGE
LEFT FRONT TONE WHEEL DAMAGE
LEFT FRONT WHEEL/ BEARING DAMAGE
IMPROPER LEFT FRONT TIRE PRESSURE/MISMATCHED TIRES
LEFT FRONT WSS
ANTI-LOCK BRAKE MODULE

Diagnostic Test

1. CHECK FOR DTC C1011-LEFT FRONT WHEEL SPEED SENSOR SIGNAL ERRATIC PERFORMANCE

NOTE: This DTC must be active for the results of this test to be valid.

NOTE: If DTC C100A Left Front Wheel Speed Sensor Circuit is present it must be repaired before continuing.

1. Turn the ignition on.
2. With the scan tool, read and record DTCs.
3. With the scan tool, read and record Environmental data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase DTCs.
5. Start the engine.

CAUTION: Ensure brake capability is available before road testing.

6. Road test the vehicle over 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be met.

7. With the scan tool, read DTCs.

Does the scan tool display: C1011-LEFT FRONT WHEEL SPEED SENSOR SIGNAL ERRATIC PERFORMANCE active?

Yes

- Go to step 3

No

- Go to step 2

2. CHECK WHEEL SPEED SENSOR SIGNALS

1. Turn the ignition on.
2. With the scan tool, monitor and graph ALL the WSS speeds and compare graph while an assistant drives the vehicle.

NOTE: If graph shows periodic dropouts pay close attention to the tone wheel.

3. Slowly accelerate as straight as possible from a stop to 40 km/h (25 mph).

Is the Left Front WSS speed showing 0 km/h (0 mph) or not matching other wheels or showing erratic behavior?

Yes

- Go to step 3

No

- Refer to the ABS INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

3. CHECK FOR IMPROPER LEFT FRONT TIRE PRESSURE/MISMATCHED TIRES

1. Turn the ignition off.
2. Check and adjust the Left Front Tire pressure.
3. Check and adjust all other tire pressures.
4. Inspect for mismatched tires on vehicle.

Is the Left Front Tire improperly inflated or mismatched tires on vehicle?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**

No

- Go to step 4

4. CHECK LEFT FRONT WSS LOOSENESS, INSPECT B8, B9 CIRCUITS/TERMINALS FOR DAMAGE

NOTE: Check all terminals for broken, bent, pushed out, or corroded terminals

1. Inspect the Anti-Lock Brake Module harness connector, Left Front WSS, and Left Front WSS harness connector
2. Inspect the Left Front WSS for looseness, excessive corrosion and not properly fastened.
3. Inspect the (B8) Left Front WSS Signal and (B9) Left Front WSS Supply circuits between the Left Front WSS and Anti-Lock Brake Module for damage.

Is the Left Front WSS loose or any of the wiring/connectors/terminals damaged?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 5

5. CHECK LEFT FRONT WHEEL SPEED SENSOR FOR DAMAGE

1. Remove the Left Front Wheel Speed Sensor
2. Inspect the Left Front Wheel Speed Sensor face for damage.

Is the Left Front Wheel Speed Sensor damaged?

Yes

- Replace sensor and hub assembly.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 6

6. CHECK LEFT FRONT TONE WHEEL/BEARING FOR DAMAGE

1. Inspect the Left Front Tone Wheel/Bearing for damage, missing teeth, cracks, corrosion or looseness.

NOTE: The Tone Wheel teeth should be perfectly square, not bent, or nicked.

Is the Left Front Tone Wheel/Bearing damaged?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 7

7. CHECK LEFT FRONT WHEEL BEARING FOR DAMAGE

1. Inspect the Left Front wheel bearing for excessive runout or clearance. Refer to **Front Suspension/Front/HUB AND BEARING - Diagnosis and Testing**

Is the Left Front Wheel Bearing Damaged?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 8

8. LEFT FRONT WHEEL SPEED SENSOR

1. Replace the Left Front Wheel Speed Sensor in accordance with the Service Information.
2. Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.
3. Road test the vehicle over 40 km/h (25 mph).

NOTE: **Vehicle must be driven above 40 km/h (25 mph) for set conditions to be met.**

4. With the scan tool, read ABS DTCs.

Did DTC C1011-LEFT FRONT WHEEL SPEED SENSOR SIGNAL ERRATIC PERFORMANCE reset?

Yes

- Replace the Anti-Lock Brakes Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock**

Brake (ABS) - Standard Procedure.**No**

- Test Complete.

C1014-LEFT FRONT WHEEL SPEED COMPARATIVE PERFORMANCE

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

When the Left Front Wheel Speed Sensor (WSS) Signal reading is different from the readings received from the other WSS's at a vehicle speed above 40 km/h (25 mph). The Anti-Lock Brake Module compares WSS readings from side-to-side on an axle and front-to-rear.

Possible Causes
LEFT FRONT WSS LOOSE - B8, B9 CIRCUITS/CONNECTOR/TERMINAL DAMAGE
IMPROPER LEFT FRONT TIRE PRESSURE/MISMATCHED TIRES
LEFT FRONT TONE WHEEL/BEARING DAMAGE
LEFT FRONT WSS
ANTI-LOCK BRAKE MODULE

Diagnostic Test**1. CHECK FOR DTC C1014-LEFT FRONT WHEEL SPEED COMPARATIVE PERFORMANCE**

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, record and erase DTCs.

CAUTION: Ensure brake capability is available before road testing.

3. Road test the vehicle over 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be met.

4. With the scan tool, read DTCs.

Does the scan tool display: C1014-LEFT FRONT WHEEL SPEED COMPARATIVE PERFORMANCE active?

Yes

- Go to step 3

No

- Go to step 2

2. CHECK WHEEL SPEED SENSOR SIGNALS

1. Turn the ignition on.
2. With the scan tool, monitor and graph ALL the WSS speeds and compare graph while an assistant drives the vehicle.

NOTE: If graph shows periodic dropouts pay close attention to the tone wheel.

3. Slowly accelerate as straight as possible from a stop to 40 km/h (25 mph).

Is the Left Front WSS speed showing 0 km/h (0 mph) or not matching other wheels or showing erratic behavior?

Yes

- Go to step 3

No

- The condition that caused the symptom is currently not present. Inspect the related wiring for a possible intermittent condition. Look for any chafed, pierced, pinched, or partially broken wires.
- Perform the ABS INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

3. CHECK FOR IMPROPER LEFT FRONT TIRE PRESSURE/MISMATCHED TIRES

1. Turn the ignition off.
2. Check and adjust the Left Front Tire pressure.
3. Check and adjust all other tire pressures.
4. Inspect for mismatched tires on vehicle.

Is the Left Front Tire improperly inflated or mismatched tires on vehicle?

Yes

- Repair as necessary
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 4

4. CHECK LEFT FRONT WSS LOOSENESS, INSPECT B8, B9 CIRCUITS/TERMINALS FOR DAMAGE

NOTE: Check all terminals for broken, bent, pushed out, or corroded terminals

1. Inspect the Anti-Lock Brake Module harness connector, Left Front WSS, and Left Front WSS harness connector.
2. Inspect the Left Front WSS for looseness, excessive corrosion and not properly fastened.
3. Inspect the (B8) Left Front WSS Signal and (B9) Left Front WSS Supply circuits between the Left Front WSS and Anti-Lock Brake Module for damage.

Is the Left Front WSS loose or any of the wiring/connectors/terminals damaged?

Yes

- Repair as necessary.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 5

5. CHECK LEFT FRONT WHEEL SPEED SENSOR FOR DAMAGE

1. Remove the Left Front Wheel Speed Sensor
2. Inspect the Left Front Wheel Speed Sensor face for damage.

Is the Left Front Wheel Speed Sensor damaged?

Yes

- Replace sensor and hub assembly.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 6

6. CHECK LEFT FRONT TONE WHEEL/BEARING FOR DAMAGE

1. Inspect the Left Front Tone Wheel/Bearing for damage, missing teeth, cracks, corrosion or looseness.

NOTE: The Tone Wheel teeth should be perfectly square, not bent, or nicked.

Is the Left Front Tone Wheel/Bearing damaged?

Yes

- Repair as necessary.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 7

7. LEFT FRONT WHEEL SPEED SENSOR

1. Replace the Left Front Wheel Speed Sensor in accordance with the Service Information.
2. Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**
3. Road test the vehicle over 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be met.

4. With the scan tool, read ABS DTCs.

Did DTC C1014-LEFT FRONT WHEEL SPEED COMPARATIVE PERFORMANCE reset?

Yes

- Replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Test Complete.

C1015-RIGHT FRONT WHEEL SPEED SENSOR CIRCUIT

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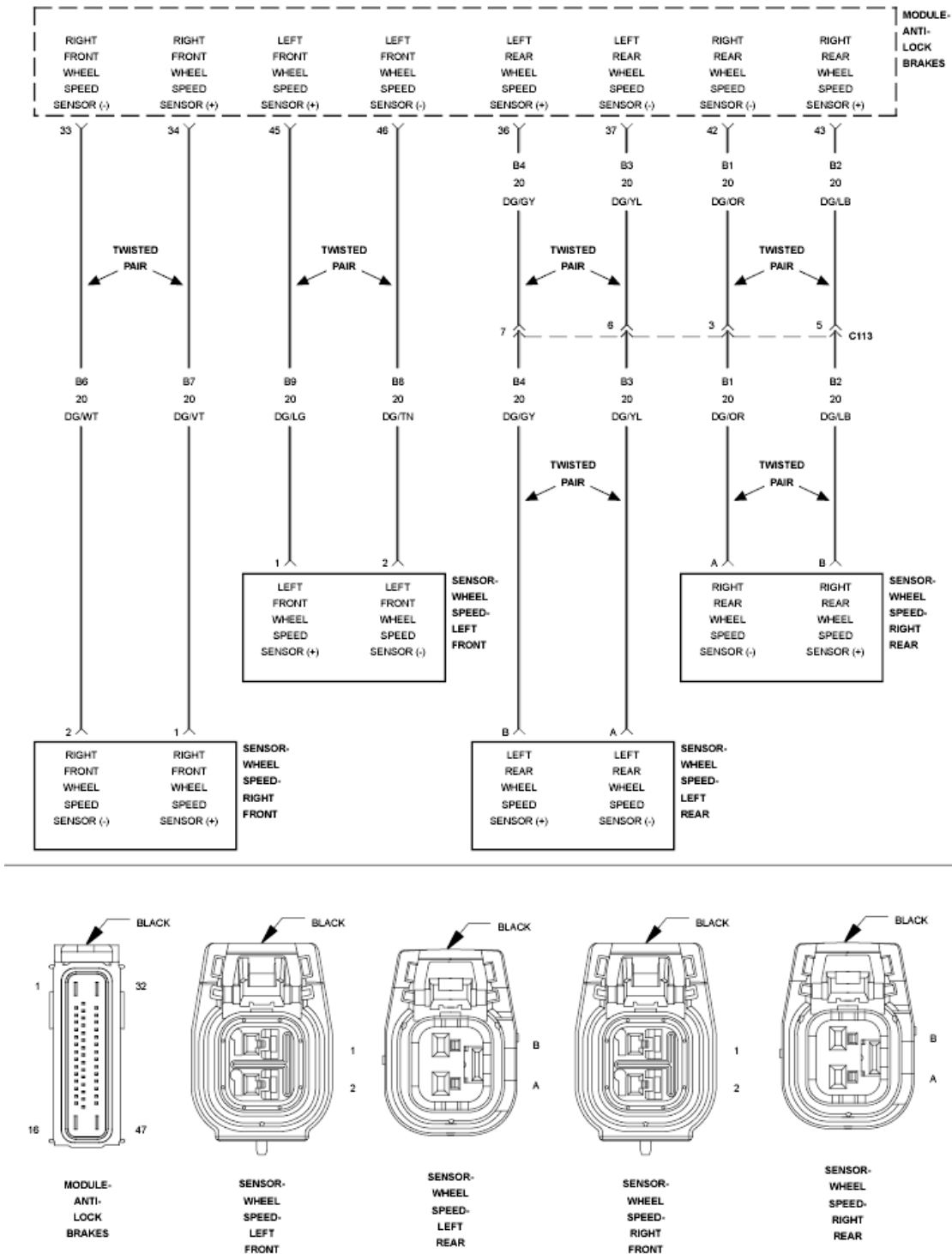


Fig. 9: Left Front Wheel Speed Sensor Signal Circuit Schematic
Courtesy of CHRYSLER LLC

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

- **When Monitored:**

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With the ignition on.

- **Set Condition:**

If the Right Front Wheel Speed Sensor circuit fails the diagnostic test.

Possible Causes
WIRING HARNESS, TERMINAL, CONNECTOR DAMAGE
(B7) RIGHT FRONT WSS 12 VOLT SUPPLY CIRCUIT SHORTED TO VOLTAGE, GROUND, OR OPEN
(B6) RIGHT FRONT WSS SIGNAL CIRCUIT SHORTED TO VOLTAGE, GROUND, OR OPEN
(B6) RIGHT FRONT WSS SIGNAL CIRCUIT SHORTED TO THE (B7) RIGHT FRONT WSS 12 VOLT SUPPLY CIRCUIT
RIGHT FRONT WSS
ANTI-LOCK BRAKES MODULE

Diagnostic Test

1. CHECK FOR DTC C1015-RIGHT FRONT WHEEL SPEED SENSOR CIRCUIT

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, record and erase DTCs.
3. Cycle the ignition switch from off to on.
4. With the scan tool, read DTCs.

Does the scan tool display: C1015-RIGHT FRONT WHEEL SPEED SENSOR CIRCUIT?

Yes

- Go to step 2

No

- The condition that caused the symptom is currently not present. Inspect the related wiring for a possible intermittent condition. Look for any chafed, pierced, pinched, or partially broken wires.
- Perform the ABS INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

2. CHECK CONNECTOR/TERMINAL FOR DAMAGE

NOTE: Check all terminals for broken, bent, pushed out, or corroded terminals.

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

1. Turn the ignition off.
2. Inspect the Anti-Lock Brake Module harness connector, Right Front WSS, and Right Front WSS harness connector.

Is the Right Front WSS or any of the connectors/terminals damaged?

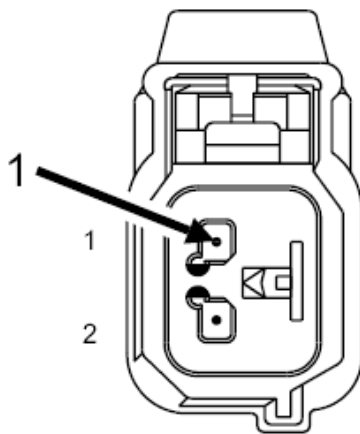
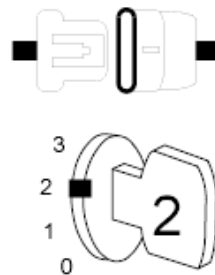
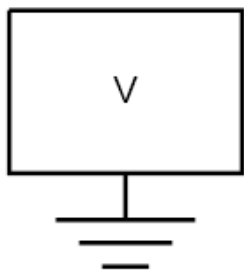
Yes

- Repair as necessary.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 3

3. CHECK (B7) RIGHT FRONT WSS 12 VOLT SUPPLY CIRCUIT VOLTAGE



SENSOR-
WHEEL
SPEED-ABS-
RIGHT
FRONT

Fig. 10: Checking Right Front Wheel Speed Sensor 12 Volt Supply Circuit Voltage
Courtesy of CHRYSLER LLC

1. Disconnect the Right Front WSS harness connector.
2. Turn the ignition on.
3. Measure the voltage of the (B7) Right Front WSS 12 Volt Supply circuit.

Is the voltage above 10.0 volts?

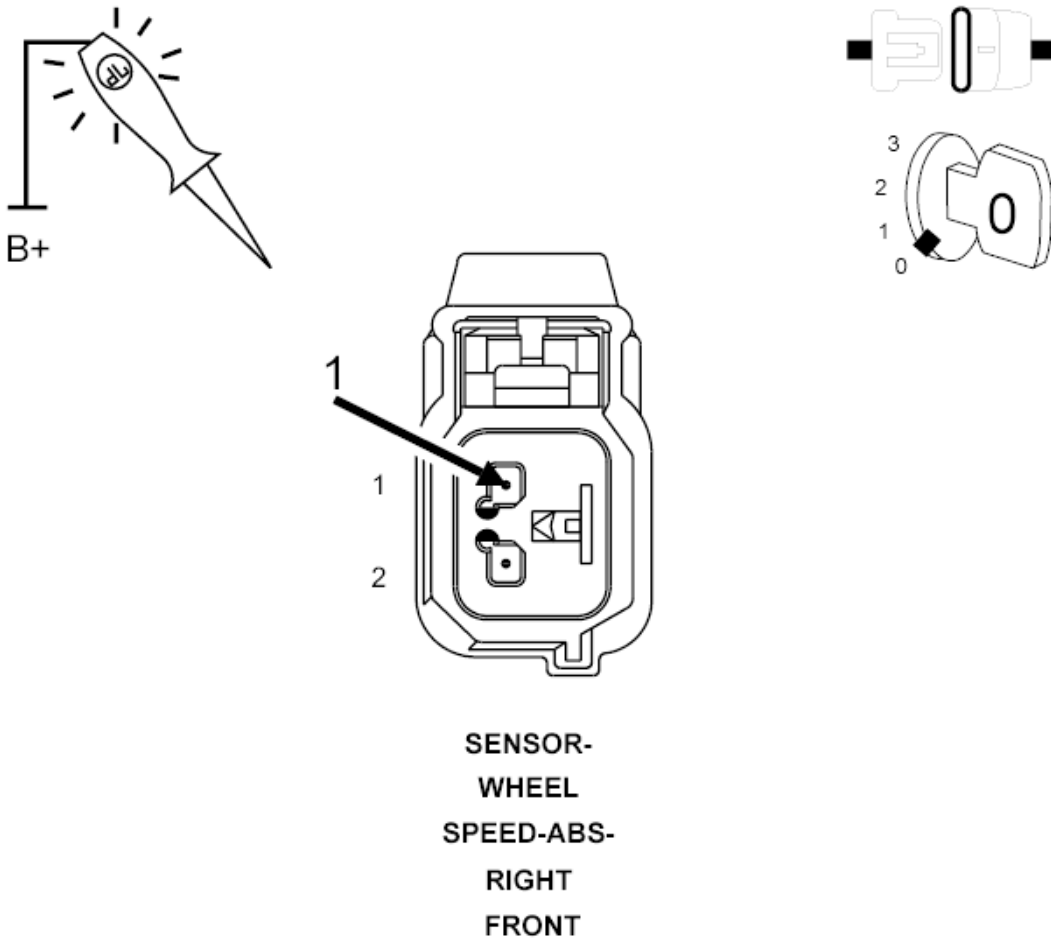
Yes

- Go to step 6

No

- Go to step 4

4. **CHECK (B7) RIGHT FRONT WSS 12 VOLT SUPPLY CIRCUIT FOR A SHORT TO GROUND**



71741

Fig. 11: Checking Right Front Wheel Speed Sensor 12 Volt Supply Circuit For A Short To Ground
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Right Front WSS harness connector.
3. Disconnect the Anti-Lock Brake Module harness connector.
4. Using a 12-volt test light connected to 12-volts, probe the (B7) Right Front WSS Supply circuit.

Does the test light illuminate brightly?

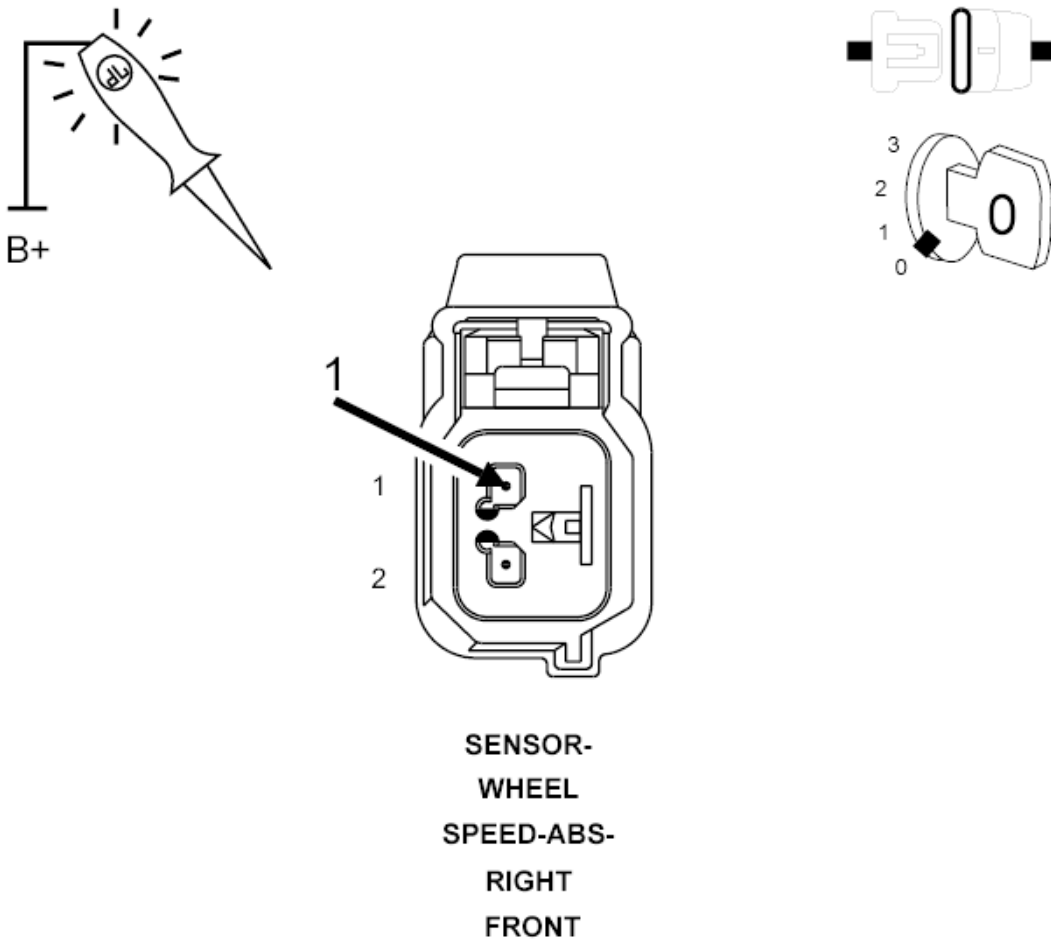
Yes

- Repair the (B7) Right Front WSS Supply circuit for a short to ground.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE**.

Antilock Brake (ABS) - Standard Procedure.

No

- Go to step 5

5. CHECK (B7) RIGHT FRONT WSS 12 VOLT SUPPLY CIRCUIT FOR AN OPEN

71741

Fig. 12: Checking Right Front Wheel Speed Sensor 12 Volt Supply Circuit For A Short To Ground
Courtesy of CHRYSLER LLC

1. Connect a jumper wire between ground and the (B7) Right Front WSS Supply circuit in the Anti-Lock Brakes Module harness connector.
2. Using a 12-volt test light connected to 12-volts, probe the (B7) Right Front WSS Supply circuit.

Does the test light illuminate brightly?

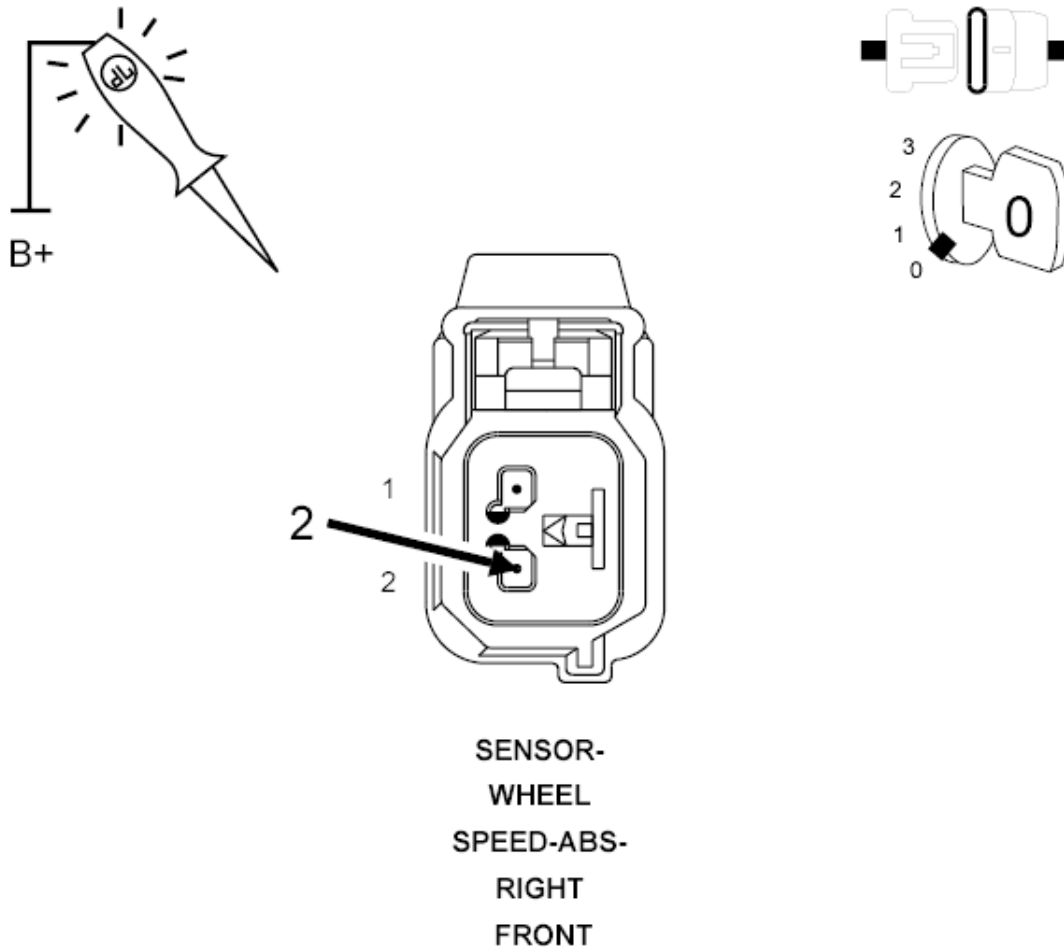
Yes

- Replace the Anti-Lock Brakes Module in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Repair the (B7) Right Front WSS Supply circuit for an open.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

6. CHECK (B6) RIGHT FRONT WSS SIGNAL CIRCUIT SHORT TO GROUND



71743

Fig. 13: Checking Right Front Wheel Speed Sensor Signal Circuit Short To Ground

Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. If not done previously, disconnect the Anti-Lock Brake Module harness connector.
3. Using a 12-volt test light connected to 12-volts, probe the (B6) Right Front WSS Signal circuit.

Does the test light illuminate brightly?

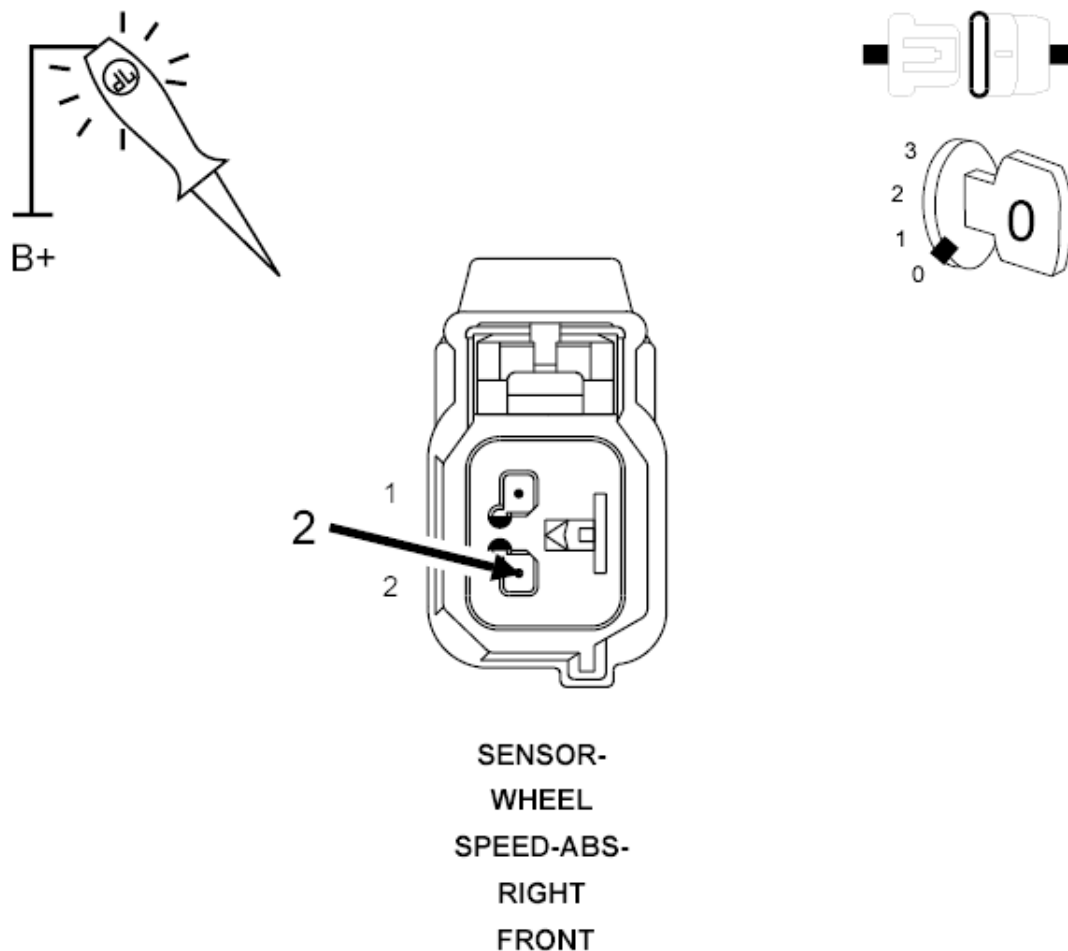
Yes

- Repair the (B6) Right Front WSS Signal circuit for a short to ground.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 7

7. CHECK (B6) RIGHT FRONT WSS SIGNAL CIRCUIT OPEN



71743

Fig. 14: Checking Right Front Wheel Speed Sensor Signal Circuit Short To Ground
Courtesy of CHRYSLER LLC

1. Connect a jumper wire between ground and the (B6) Right Front WSS Signal circuit in the Anti-Lock Brakes Module harness connector.
2. Using a 12-volt test light connected to 12-volts, probe the (B6) Right Front WSS Signal circuit.

Does the test light illuminate brightly?

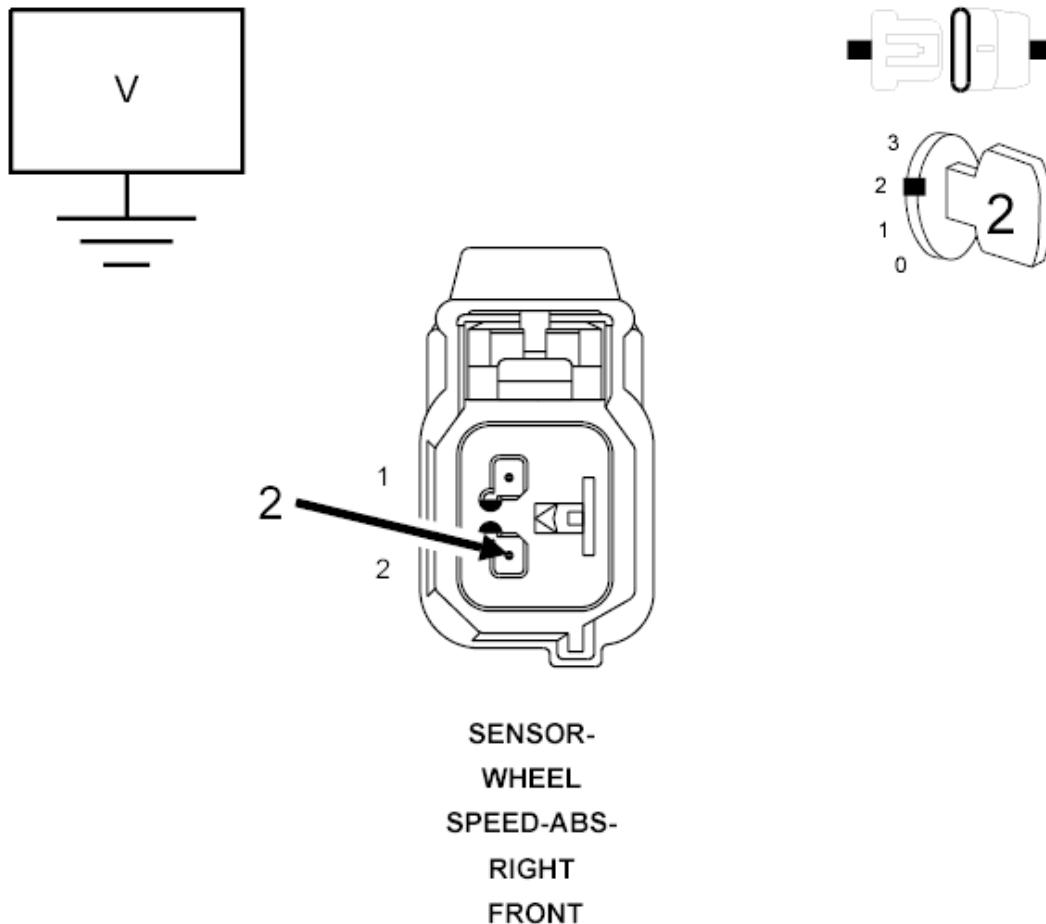
Yes

- Go to step 8

No

- Repair the (B6) Right Front WSS Signal circuit for an open.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

8. CHECK (B6) RIGHT FRONT WSS SIGNAL CIRCUIT FOR AN SHORT TO VOLTAGE



71745

Fig. 15: Checking Right Front Wheel Speed Sensor Signal Circuit For An Short To Voltage
Courtesy of CHRYSLER LLC

1. Turn the ignition on.
2. Remove all jumper wires.
3. Measure the voltage between the (B6) Right Front WSS Signal circuit and ground.

Is the voltage above 1 volt?

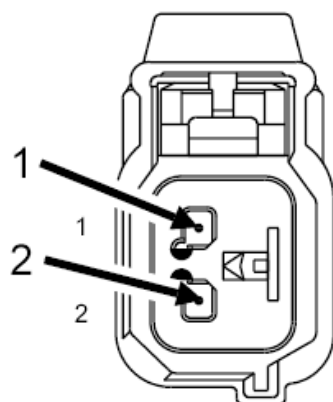
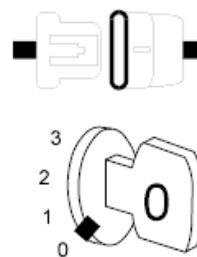
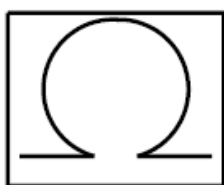
Yes

- Repair the (B6) Right Front WSS Signal circuit for a short to voltage.
- Perform the ABS VERIFICATION TEST. See DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.

No

- Go to step 9

9. **CHECK (B6) RIGHT FRONT WSS SIGNAL CIRCUIT AND (B7) RIGHT FRONT WSS 12 VOLT SUPPLY CIRCUIT SHORTED TOGETHER**



SENSOR-
WHEEL
SPEED-ABS-
RIGHT
FRONT

Fig. 16: Checking Right Front Wheel Speed Sensor Signal Circuit & Right Front Wheel Speed Sensor 12 Volt Supply Circuit Shorted Together
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Measure the resistance between the (B6) Right Front WSS Signal circuit and the (B7) Right Front WSS Supply circuit.

Is the resistance above 5.0 Ohms?

Yes

- Go to step 10

No

- Repair the (B6) Right Front WSS Signal circuit and the (B7) Right Front WSS Supply circuit for a short together.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

10. RIGHT FRONT WHEEL SPEED SENSOR

1. Replace the Right Front Wheel Speed Sensor in accordance with the Service Information.
2. Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**

CAUTION: Make sure brake capability is available before road testing.

3. Road test the vehicle over 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be meet.

4. With the scan tool, read ABS DTCs.

Did DTC C1015-RIGHT FRONT WHEEL SPEED SENSOR CIRCUIT reset?

Yes

- Replace the Anti-Lock Brakes Module in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Test Complete.

C101C-RIGHT FRONT WHEEL SPEED SENSOR SIGNAL ERRATIC PERFORMANCE

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

- **When Monitored:**

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

With the ignition on.

- **Set Condition:**

When the Right Front Wheel Speed Sensor (WSS) Signal is intermittently missing while vehicle speed is above 40 km/h (25 mph) or erratic wheel speed signal during acceleration or sensed wheel speed is different from other wheels.

Possible Causes
RIGHT FRONT WSS LOOSE - B6, B7 CIRCUITS/CONNECTOR/TERMINAL DAMAGE
RIGHT FRONT TONE WHEEL DAMAGE
RIGHT FRONT WHEEL/BEARING DAMAGE
IMPROPER RIGHT FRONT TIRE PRESSURE/MISMATCHED TIRES
RIGHT FRONT WSS
ANTI-LOCK BRAKE MODULE

Diagnostic Test

1. CHECK FOR DTC C101C-RIGHT FRONT WHEEL SPEED SENSOR SIGNAL ERRATIC PERFORMANCE

NOTE: This DTC must be active for the results of this test to be valid.

NOTE: If DTC C1015-Right Front Wheel Speed Sensor Circuit is present it must be repaired before continuing.

1. Turn the ignition on.
2. With the scan tool, record and erase DTCs.

CAUTION: Ensure brake capability is available before road testing.

3. Road test the vehicle over 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be met.

4. With the scan tool, read DTCs.

Does the scan tool display: C101C-RIGHT FRONT WHEEL SPEED SENSOR SIGNAL ERRATIC PERFORMANCE active?

Yes

- Go to step 3

No

- Go to step 2

2. CHECK WHEEL SPEED SENSOR SIGNALS

1. Turn the ignition on.
2. With the scan tool, monitor and graph ALL the WSS speeds and compare graph while an assistant drives the vehicle.

NOTE: If graph shows periodic dropouts pay close attention to the tone wheel.

3. Slowly accelerate as straight as possible from a stop to 40 km/h (25 mph).

Is the Right Front WSS speed showing 0 km/h (0 mph) or not matching other wheels or showing erratic behavior?

Yes

- Go to step 3

No

- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

3. CHECK FOR IMPROPER RIGHT FRONT TIRE PRESSURE/MISMATCHED TIRES

1. Turn the ignition off.
2. Check and adjust the Right Front Tire pressure.
3. Check and adjust all other tire pressures.
4. Inspect for mismatched tires on vehicle.

Is the Right Front Tire improperly inflated or mismatched tires on vehicle?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 4

4. CHECK RIGHT FRONT WSS LOOSENESS. INSPECT B6, B7 CIRCUITS/TERMINALS FOR

DAMAGE

NOTE: Check all terminals for broken, bent, pushed out, or corroded terminals

1. Inspect the Anti-Lock Brake Module harness connector, Right Front WSS, and Right Front WSS harness connector
2. Inspect the Right Front WSS for looseness, excessive corrosion and not properly fastened.
3. Inspect the (B6) Right Front WSS Signal and (B7) Right Front WSS Supply circuits between the Right Front WSS and Anti-Lock Brake Module for damage.

Is the Right Front WSS loose or any of the wiring/connectors/terminals damaged?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 5

5. CHECK RIGHT FRONT WHEEL SPEED SENSOR FOR DAMAGE

1. Remove the Right Front Wheel Speed Sensor
2. Inspect the Right Front Wheel Speed Sensor face for damage.

Is the Right Front Wheel Speed Sensor damaged?

Yes

- Replace sensor and hub assembly.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 6

6. CHECK RIGHT FRONT TONE WHEEL/BEARING FOR DAMAGE

1. Inspect the Right Front Tone Wheel/Bearing for damage, missing teeth, cracks, corrosion or looseness.

NOTE: The Tone Wheel teeth should be perfectly square, not bent, or nicked.

Is the Right Front Tone Wheel/Bearing damaged?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 7

7. CHECK RIGHT FRONT WHEEL BEARING FOR DAMAGE

1. Inspect the Right Front wheel bearing for excessive runout or clearance.

NOTE: Refer to the appropriate service information, if necessary, for procedures or specifications. Refer to **Front Suspension/Front/HUB AND BEARING - Diagnosis and Testing** .

Is the Right Front Wheel Bearing Damaged?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 8

8. RIGHT FRONT WHEEL SPEED SENSOR

1. Replace the Right Front Wheel Speed Sensor in accordance with the Service Information.
2. Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.
3. Road test the vehicle over 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be met.

4. With the scan tool, read ABS DTCs.

Did DTC C101C-RIGHT FRONT WHEEL SPEED SENSOR SIGNAL ERRATIC PERFORMANCE reset?

Yes

- Replace the Anti-Lock Brakes Module in accordance with the Service Information.

- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Test Complete.

C101F-RIGHT FRONT WHEEL SPEED COMPARATIVE PERFORMANCE

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

When the Right Front Wheel Speed Sensor (WSS) reading is different from the readings received from the other sensors at a vehicle speed above 40 km/h (25 mph). The Anti-Lock Brake Module compares WSS readings from side-to-side on an axle and front-to-rear.

Possible Causes
RIGHT FRONT WSS LOOSE B6, B7 CIRCUITS/CONNECTOR/TERMINAL DAMAGE
IMPROPER RIGHT FRONT TIRE PRESSURE/MISMATCHED TIRES
RIGHT FRONT TONE WHEEL/BEARING DAMAGE
RIGHT FRONT WSS
ANTI-LOCK BRAKE MODULE

Diagnostic Test

1. CHECK FOR DTC C101F-RIGHT FRONT WHEEL SPEED COMPARATIVE PERFORMANCE

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, record and erase DTCs.

CAUTION: Ensure brake capability is available before road testing.

3. Road test the vehicle over 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be met.

4. With the scan tool, read DTCs.

Does the scan tool display: C101F-RIGHT FRONT WHEEL SPEED COMPARATIVE PERFORMANCE active?

Yes

- Go to step 3

No

- Go to step 2

2. CHECK WHEEL SPEED SENSOR SIGNALS

1. Turn the ignition on.
2. With the scan tool, monitor and graph ALL the WSS speeds and compare graph while an assistant drives the vehicle.

NOTE: If graph shows periodic dropouts pay close attention to the tone wheel.

3. Slowly accelerate as straight as possible from a stop to 40 km/h (25 mph).

Is the Right Front WSS speed showing 0 km/h (0 mph) or not matching other wheels or showing erratic behavior?

Yes

- Go to step 3

No

- The condition that caused the symptom is currently not present. Inspect the related wiring for a possible intermittent condition. Look for any chafed, pierced, pinched, or partially broken wires.
- Refer to the ABS INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

3. CHECK FOR IMPROPER RIGHT FRONT TIRE PRESSURE/MISMATCHED TIRES

1. Turn the ignition off.
2. Check and adjust the Right Front Tire pressure.
3. Check and adjust all other tire pressures.
4. Inspect for mismatched tires on vehicle.

Is the Right Front Tire improperly inflated or mismatched tires on vehicle?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 4

4. CHECK RIGHT FRONT WSS LOOSENESS, INSPECT B6, B7 CIRCUITS/TERMINALS FOR DAMAGE

NOTE: Check all terminals for broken, bent, pushed out, or corroded terminals

1. Inspect the Anti-Lock Brake Module harness connector, Right Front WSS, and Right Front WSS harness connector.
2. Inspect the Right Front WSS for looseness, excessive corrosion and not properly fastened.
3. Inspect the (B6) Right Front WSS Signal and (B7) Right Front WSS Supply circuits between the Right Front WSS and Anti-Lock Brake Module for damage.

Is the Right Front WSS loose or any of the wiring/connectors/terminals damaged?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 5

5. CHECK RIGHT FRONT WHEEL SPEED SENSOR FOR DAMAGE

1. Remove the Right Front Wheel Speed Sensor
2. Inspect the Right Front Wheel Speed Sensor face for damage.

Is the Right Front Wheel Speed Sensor damaged?

Yes

- Replace sensor and hub assembly.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 6

6. CHECK RIGHT FRONT TONE WHEEL/BEARING FOR DAMAGE

1. Inspect the Right Front Tone Wheel/Bearing for damage, missing teeth, cracks, corrosion or looseness.

NOTE: The Tone Wheel teeth should be perfectly square, not bent, or nicked.

Is the Right Front Tone Wheel/Bearing damaged?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 7

7. RIGHT FRONT WHEEL SPEED SENSOR

1. Replace the Right Front Wheel Speed Sensor in accordance with the Service Information.
2. Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**
3. Road test the vehicle over 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be met.

4. With the scan tool, read ABS DTCs.

Did DTC C101F-RIGHT FRONT WHEEL SPEED COMPARATIVE PERFORMANCE reset?

Yes

- Replace the Anti-Lock Brakes Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Test Complete.

C1020-LEFT REAR WHEEL SPEED SENSOR CIRCUIT

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

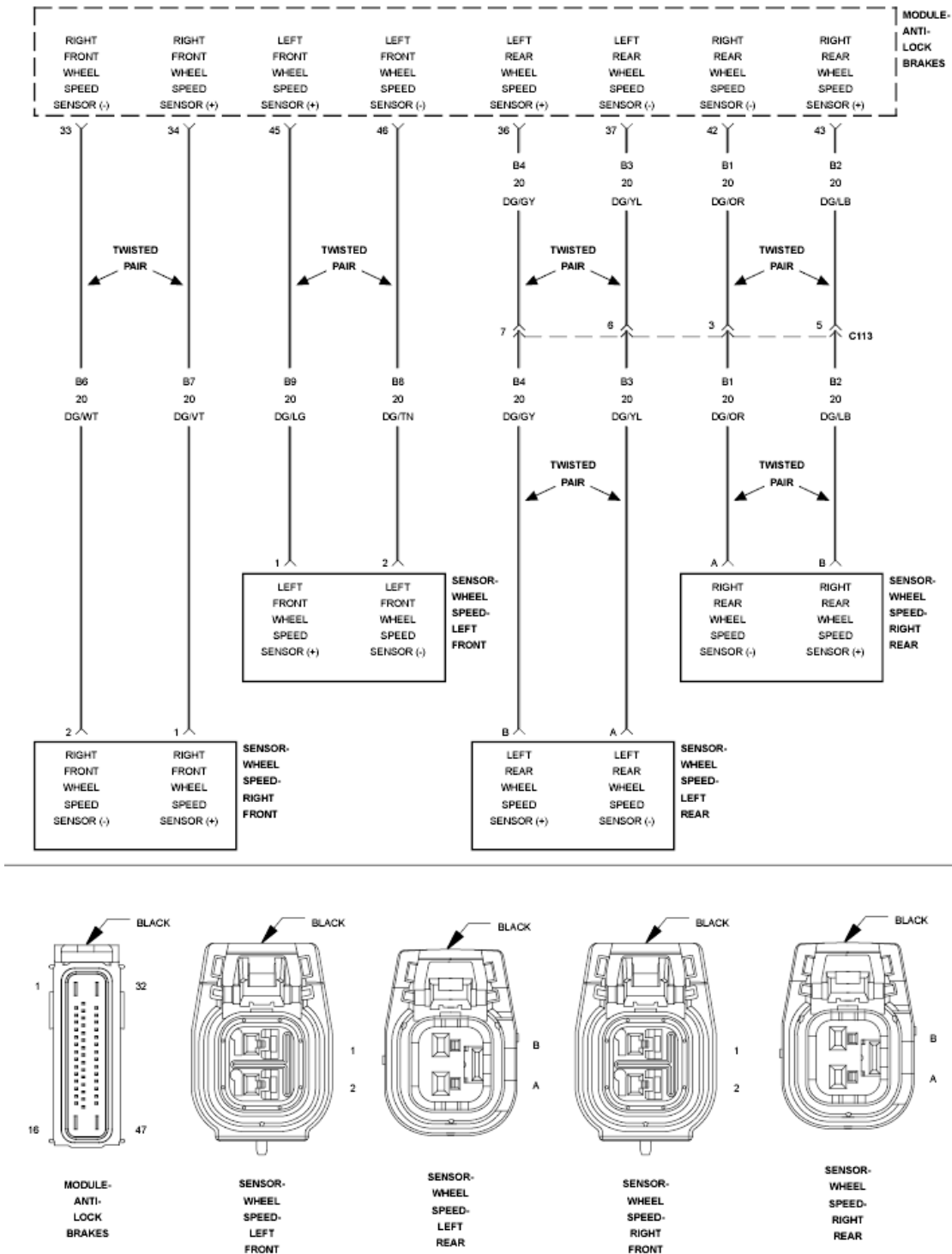


Fig. 17: Left Front Wheel Speed Sensor Signal Circuit Schematic
 Courtesy of CHRYSLER LLC

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

- **When Monitored:**

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

With the ignition on.

- **Set Condition:**

If the Left Rear Wheel Speed Sensor circuit fails the diagnostic test.

Possible Causes
WIRING HARNESS, TERMINAL, CONNECTOR DAMAGE
(B4) LEFT REAR WSS 12 VOLT SUPPLY CIRCUIT SHORTED TO VOLTAGE, GROUND, OR OPEN
(B3) LEFT REAR WSS SIGNAL CIRCUIT SHORTED TO VOLTAGE, GROUND, OR OPEN
(B3) LEFT REAR WSS SIGNAL CIRCUIT SHORTED TO THE (B4) LEFT REAR WSS 12 VOLT SUPPLY CIRCUIT
LEFT REAR WSS
ANTI-LOCK BRAKES MODULE

Diagnostic Test

1. CHECK FOR DTC C1020 LEFT REAR WHEEL SPEED SENSOR CIRCUIT

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, record and erase DTCs.
3. Cycle the ignition switch from off to on.
4. With the scan tool, read DTCs.

Does the scan tool display: C1020-LEFT REAR WHEEL SPEED SENSOR CIRCUIT?

Yes

- Go to step 2

No

- The condition that caused the symptom is currently not present. Inspect the related wiring for a possible intermittent condition. Look for any chafed, pierced, pinched, or partially broken wires.
- Perform the ABS INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

2. CHECK CONNECTOR/TERMINAL FOR DAMAGE

NOTE: Check all terminals for broken, bent, pushed out, or corroded terminals.

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

1. Turn the ignition off.
2. Inspect the Anti-Lock Brake Module harness connector, Left Rear WSS, and Left Rear WSS harness connector.

Is the Left Rear WSS or any of the connectors/terminals damaged?

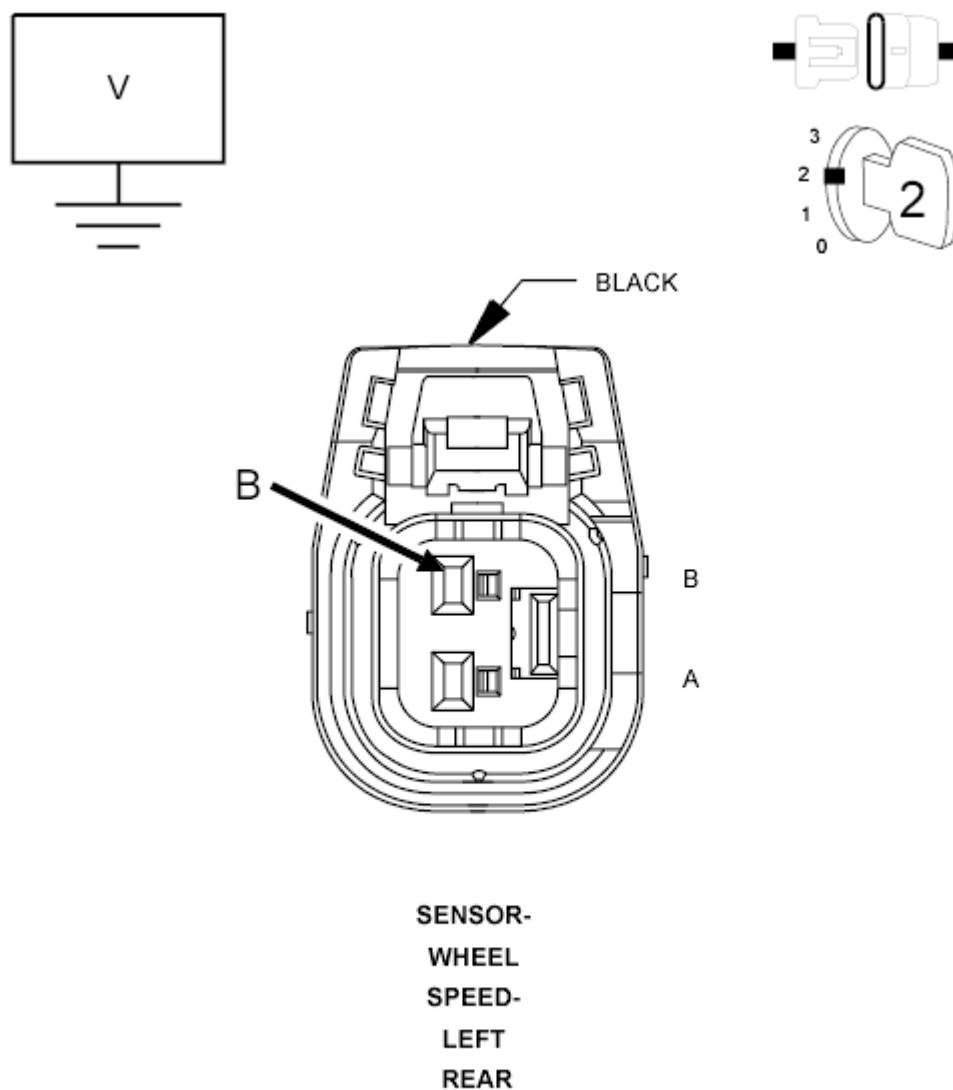
Yes

- Repair as necessary.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 3

3. **CHECK (B4) LEFT REAR WSS 12 VOLT SUPPLY CIRCUIT VOLTAGE**



2050363

Fig. 18: Checking Left Rear Wheel Speed Sensor 12 Volt Supply Circuit Voltage
Courtesy of CHRYSLER LLC

1. Disconnect the Left Rear WSS harness connector.
2. Turn the ignition on.
3. Measure the voltage of the (B4) Left Rear WSS 12 Volt Supply circuit.

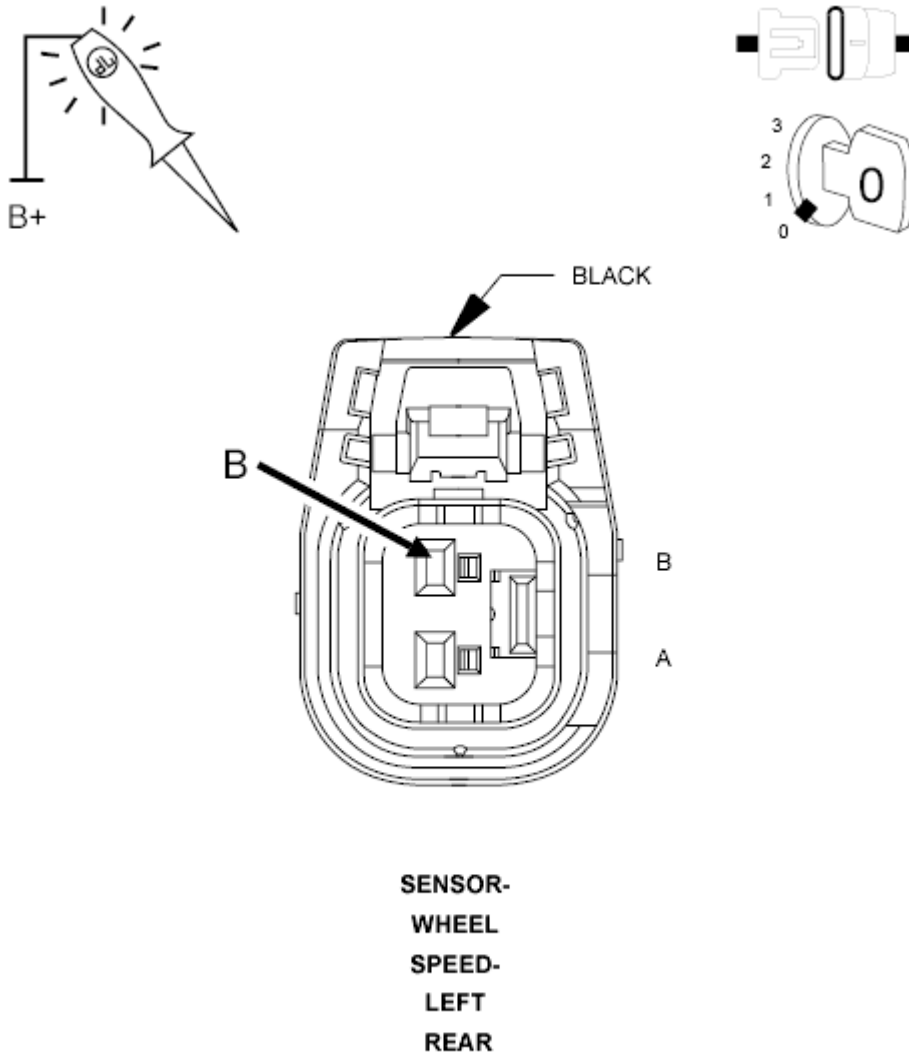
Is the voltage above 10.0 volts?

Yes

- Go to step 6

- Go to step 4

4. CHECK (B4) LEFT REAR WSS 12 VOLT SUPPLY CIRCUIT FOR A SHORT TO GROUND



2050384

Fig. 19: Checking Left Rear Wheel Speed Sensor 12 Volt Supply Circuit For A Short To Ground
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Left Rear WSS harness connector.
3. Disconnect the Anti-Lock Brake Module harness connector.
4. Using a 12-volt test light connected to 12 volts, probe the (B4) Left Rear WSS Supply circuit.

Does the test light illuminate brightly?

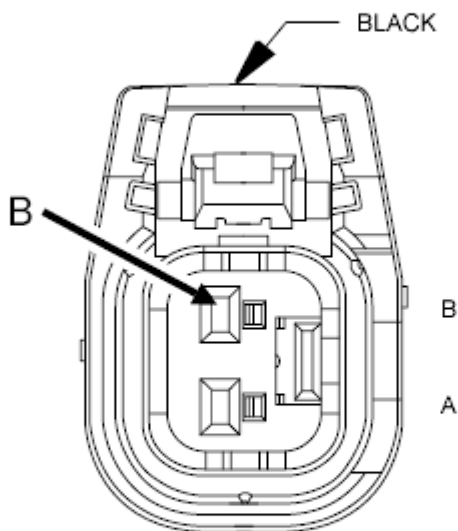
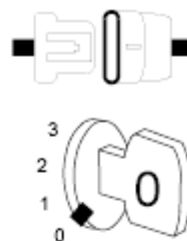
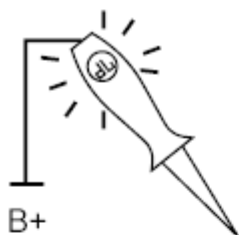
Yes

- Repair the (B4) Left Rear WSS Supply circuit for a short to ground.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 5

5. CHECK (B4) LEFT REAR WSS 12 VOLT SUPPLY CIRCUIT FOR AN OPEN



**SENSOR-
WHEEL
SPEED-
LEFT
REAR**

Fig. 20: Checking Left Rear Wheel Speed Sensor 12 Volt Supply Circuit For A Short To Ground
Courtesy of CHRYSLER LLC

1. Connect a jumper wire between ground and the (B4) Left Rear WSS Supply circuit in the Anti-Lock Brakes Module harness connector.
2. Using a 12-volt test light connected to 12 volts, probe the (B4) Left Rear WSS Supply circuit.

Does the test light illuminate brightly?

Yes

- Replace the Anti-Lock Brakes Module in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Repair the (B4) Left Rear WSS Supply circuit for an open.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

6. CHECK (B3) LEFT REAR WSS SIGNAL CIRCUIT FOR A SHORT TO GROUND

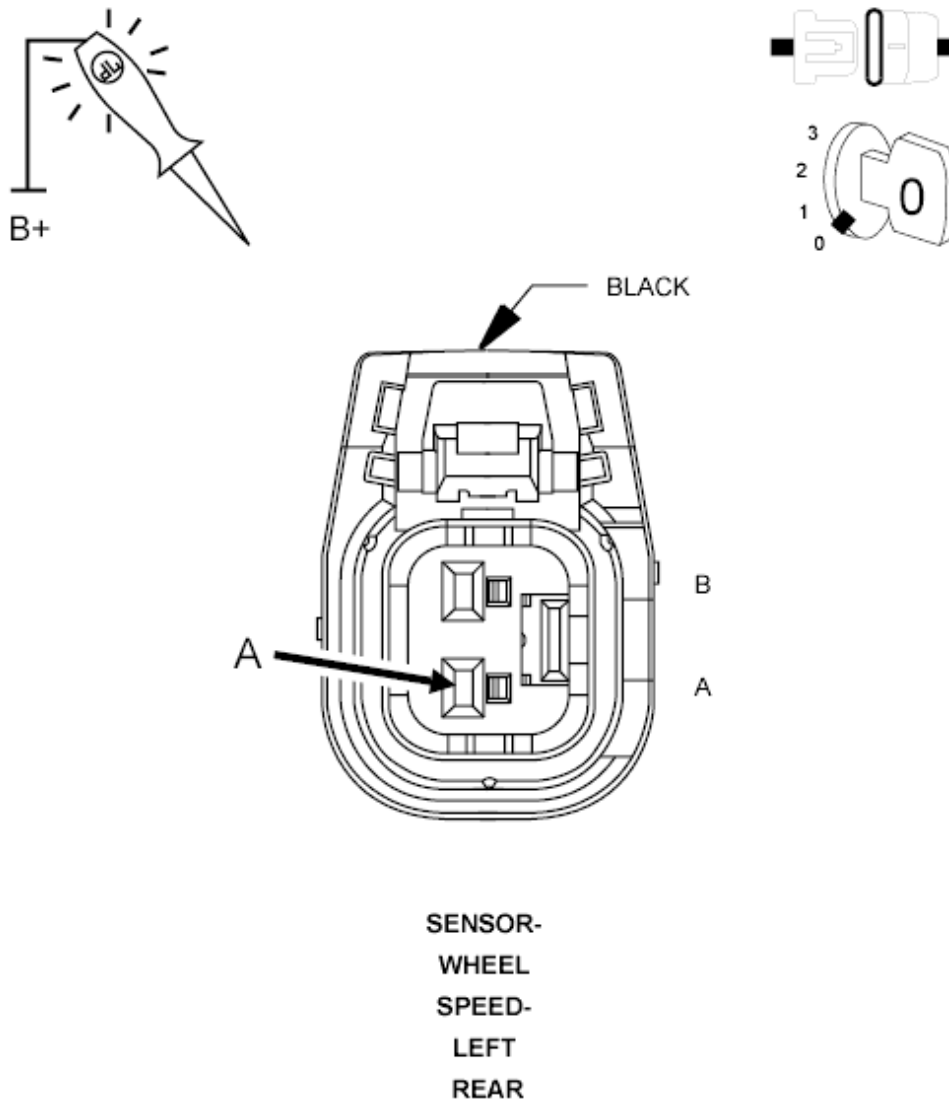


Fig. 21: Checking Left Rear Wheel Speed Sensor Signal Circuit For A Short To Ground
 Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. If not done previously, disconnect the Anti-Lock Brake Module harness connector.
3. Using a 12-volt test light connected to 12 volts, probe the (B3) Left Rear WSS Signal circuit.

Does the test light illuminate brightly?

Yes

- Repair the (B3) Left Rear WSS Signal circuit for a short to ground.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE,**

Antilock Brake (ABS) - Standard Procedure.

No

- Go to step 7

7. CHECK (B3) LEFT REAR WSS SIGNAL CIRCUIT FOR AN OPEN

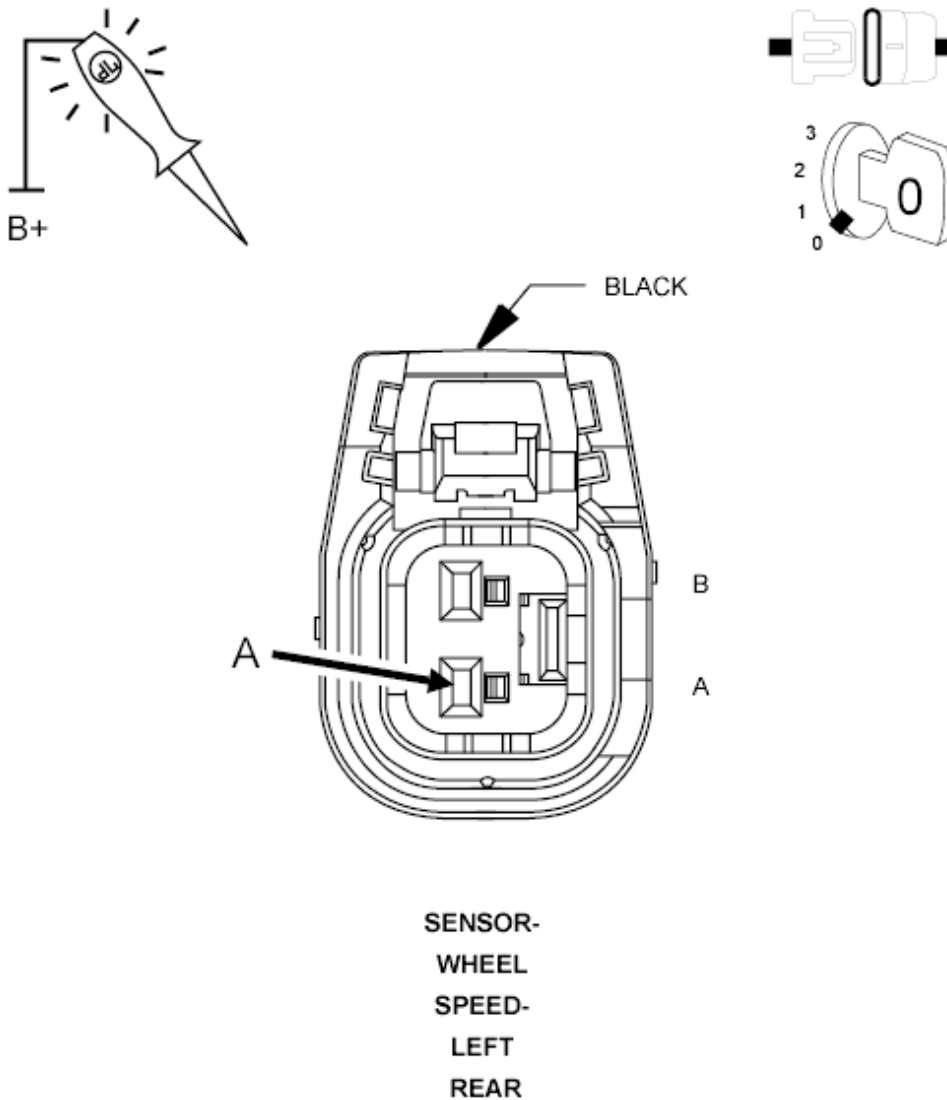


Fig. 22: Checking Left Rear Wheel Speed Sensor Signal Circuit For A Short To Ground
 Courtesy of CHRYSLER LLC

1. Connect a jumper wire between ground and the (B3) Left Rear WSS Signal circuit in the Anti-Lock Brakes Module harness connector.
2. Using a 12-volt test light connected to 12 volts, probe the (B3) Left Rear WSS Signal circuit.

Does the test light illuminate brightly?

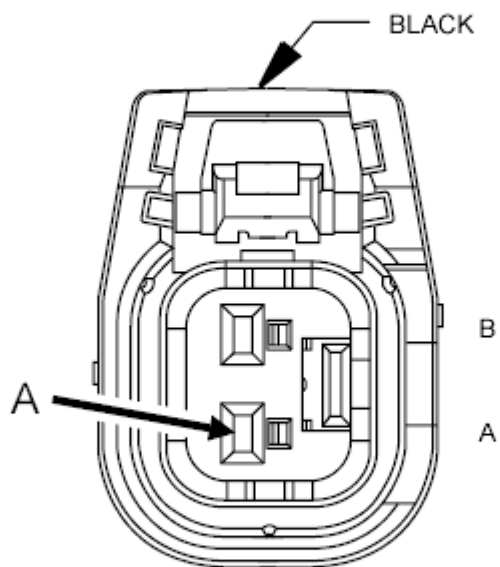
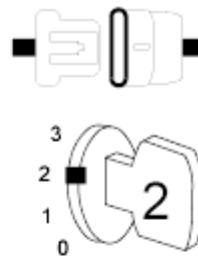
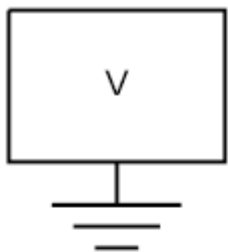
Yes

- Go to step 8

No

- Repair the (B3) Left Rear WSS Signal circuit for an open.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

8. CHECK (B3) LEFT REAR WSS SIGNAL CIRCUIT SHORT TO VOLTAGE



SENSOR-
WHEEL
SPEED-
LEFT
REAR

Fig. 23: Checking Left Rear Wheel Speed Sensor Signal Circuit Short To Voltage
Courtesy of CHRYSLER LLC

1. Turn the ignition on.
2. Remove all jumper wires.
3. Measure the voltage between the (B3) Left Rear WSS Signal circuit and ground.

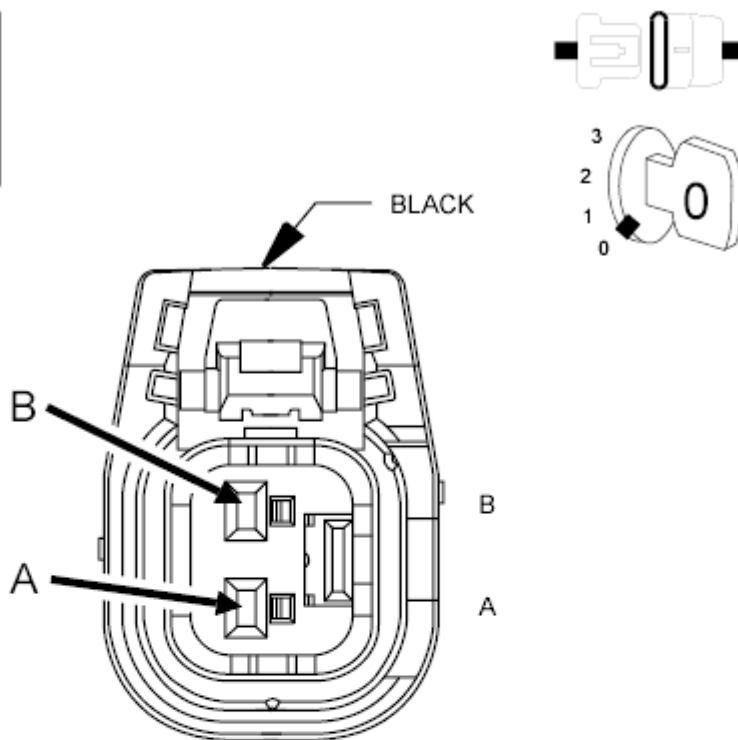
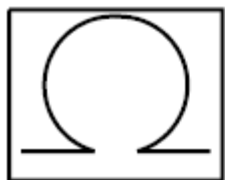
Is the voltage above 1 volt?

Yes

- Repair the (B3) Left Rear WSS Signal circuit for a short to voltage.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 9
9. **CHECK (B3) LEFT REAR WSS SIGNAL CIRCUIT AND (B4) LEFT REAR WSS 12 VOLT SUPPLY CIRCUIT SHORTED TOGETHER**



SENSOR-
WHEEL
SPEED-
LEFT
REAR

2050851

Fig. 24: Checking Left Rear Wheel Speed Sensor Signal Circuit & Left Rear Wheel Speed Sensor 12 Volt Supply Circuit Shorted Together
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Measure the resistance between the (B3) Left Rear WSS Signal circuit and the (B4) Left Rear WSS Supply circuit.

Is the resistance above 5.0 Ohms?

Yes

- Go to step 10

No

- Repair the (B3) Left Rear WSS Signal circuit and the (B4) Left Rear WSS Supply circuit for a short together.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

10. LEFT REAR WHEEL SPEED SENSOR

1. Replace the Left Rear Wheel Speed Sensor in accordance with the Service Information.
2. Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

CAUTION: Make sure brake capability is available before road testing.

3. Road test the vehicle over 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be meet.

4. With the scan tool, read ABS DTCs.

Did DTC C1020-LEFT REAR WHEEL SPEED SENSOR CIRCUIT reset?

Yes

- Replace the Anti-Lock Brakes Module in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Test Complete.

C1027-LEFT REAR WHEEL SPEED SENSOR SIGNAL ERRATIC PERFORMANCE

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

When the Left Rear Wheel Speed Sensor (WSS) Signal is intermittently missing while vehicle speed is above 40 km/h (25 mph) or erratic wheel speed signal during acceleration or sensed wheel speed is different from other wheels.

Possible Causes

LEFT REAR WSS LOOSE - B3, B4 CIRCUITS/CONNECTOR/TERMINAL DAMAGE
LEFT REAR TONE WHEEL DAMAGE
LEFT REAR WHEEL BEARING DAMAGE
AXLE SHAFT FASTENER HARDWARE
IMPROPER LEFT REAR TIRE PRESSURE/MISMATCHED TIRES
LEFT REAR WSS
ANTI-LOCK BRAKE MODULE

Diagnostic Test

1. CHECK FOR DTC C1027-LEFT REAR WHEEL SPEED SENSOR SIGNAL ERRATIC PERFORMANCE

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, record and erase DTCs.

CAUTION: Ensure brake capability is available before road testing.

3. Road test the vehicle over 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be met.

4. With the scan tool, read DTCs.

Does the scan tool display: C1027-LEFT REAR WHEEL SPEED SENSOR SIGNAL ERRATIC PERFORMANCE active?

Yes

- Go to step 3

No

- Go to step 2

2. CHECK WHEEL SPEED SENSOR SIGNALS

1. Turn the ignition on.
2. With the scan tool, monitor and graph ALL the WSS speeds and compare graph while an assistant drives the vehicle.

NOTE: If graph shows periodic dropouts pay close attention to the tone wheel.

3. Slowly accelerate as straight as possible from a stop to 40 km/h (25 mph).

Is the Left Rear WSS speed showing 0 km/h (0 mph) or not matching other wheels or showing erratic behavior?

Yes

- Go to step 3

No

- Refer to the ABS INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

3. CHECK FOR IMPROPER LEFT REAR TIRE PRESSURE/MISMATCHED TIRES

1. Turn the ignition off.
2. Check and adjust the Left Rear Tire pressure.
3. Check and adjust all other tire pressures.
4. Inspect for mismatched tires on vehicle.

Is the Left Rear Tire improperly inflated or mismatched tires on vehicle?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 4

4. CHECK AXLE SHAFT FASTENER HARDWARE FOR LOOSENESS

1. Inspect the axle shaft fastener for looseness, and not properly fastened. Tighten fastener to proper specification as required.

Was the Axle Shaft fastener loose?

Yes

- Repair as necessary.

No

- Go to step 5

5. CHECK LEFT REAR WSS LOOSENESS, INSPECT B3, B4 CIRCUITS/TERMINALS FOR DAMAGE

NOTE: Check all terminals for broken, bent, pushed out, or corroded terminals

1. Inspect the Anti-Lock Brake Module harness connector, Left Rear WSS, and Left Rear WSS harness connector
2. Inspect the Left Rear WSS for looseness, excessive corrosion and not properly fastened.
3. Inspect the (B3) Left Rear WSS Signal and (B4) Left Rear WSS Supply circuits between the Left Rear WSS and Anti-Lock Brake Module for damage.

Is the Left Rear WSS loose or any of the wiring/connectors/terminals damaged?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 6

6. CHECK LEFT REAR WHEEL SPEED SENSOR FOR DAMAGE

1. Remove the Left Rear Wheel Speed Sensor
2. Inspect the Left Rear Wheel Speed Sensor face for damage.

Is the Left Rear Wheel Speed Sensor damaged?

Yes

- Replace sensor and hub assembly.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 7

7. CHECK LEFT REAR TONE WHEEL FOR DAMAGE

1. Inspect the Left Rear Tone Wheel for damage, missing teeth, cracks, corrosion or looseness.

NOTE: The Tone Wheel teeth should be perfectly square, not bent, or nicked.

Is the Left Rear Tone Wheel damaged?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 8

8. CHECK LEFT REAR WHEEL BEARING FOR DAMAGE

1. Inspect the Left Rear wheel bearing for excessive runout or clearance.

NOTE: Refer to the appropriate service information, if necessary, for procedures or specifications. Refer to **Front Suspension/Front/HUB AND BEARING - Diagnosis and Testing**

Is the Left Rear Wheel Bearing Damaged?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 9

9. LEFT REAR WHEEL SPEED SENSOR

1. Replace the Left Rear Wheel Speed Sensor in accordance with the Service Information.
2. Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**
3. Road test the vehicle over 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be met.

4. With the scan tool, read ABS DTCs.

Did DTC C1027-LEFT REAR WHEEL SPEED SENSOR SIGNAL ERRATIC PERFORMANCE reset?

Yes

- Replace the Anti-Lock Brakes Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Test Complete.

C102A-LEFT REAR WHEEL SPEED COMPARATIVE PERFORMANCE

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

When the Left Rear Wheel Speed Sensor (WSS) reading is different from the readings received from the other sensors at a vehicle speed above 40 km/h (25 mph). The Anti-Lock Brake Module compares WSS readings from side-to-side on an axle and front-to-rear.

Possible Causes
LEFT REAR WSS LOOSE - B3, B4 CIRCUITS/CONNECTOR/TERMINAL DAMAGE
IMPROPER LEFT REAR TIRE PRESSURE/MISMATCHED TIRES
LEFT REAR TONE WHEEL DAMAGE
AXLE SHAFT FASTENER HARDWARE
LEFT REAR WSS
ANTI-LOCK BRAKE MODULE

Diagnostic Test**1. CHECK FOR DTC C102A-LEFT REAR WHEEL SPEED COMPARATIVE PERFORMANCE**

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, record and erase DTCs.

CAUTION: Ensure brake capability is available before road testing.

3. Road test the vehicle over 40 km/h (25 mph).

NOTE: **Vehicle must be driven above 40 km/h (25 mph) for set conditions to be met.**

4. With the scan tool, read DTCs.

Does the scan tool display: C102A-LEFT REAR WHEEL SPEED COMPARATIVE PERFORMANCE active?

Yes

- Go to step 3

No

- Go to step 2

2. CHECK WHEEL SPEED SENSOR SIGNALS

1. Turn the ignition on.
2. With the scan tool, monitor and graph ALL the WSS speeds and compare graph while an assistant drives the vehicle.

NOTE: **If graph shows periodic dropouts pay close attention to the tone wheel.**

3. Slowly accelerate as straight as possible from a stop to 40 km/h (25 mph).

Is the Left Rear WSS speed showing 0 km/h (0 mph) or not matching other wheels or showing erratic behavior?

Yes

- Go to step 3

No

- The condition that caused the symptom is currently not present. Inspect the related wiring for a possible intermittent condition. Look for any chafed, pierced, pinched, or partially broken wires.
- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

3. CHECK FOR IMPROPER LEFT REAR TIRE PRESSURE/MISMATCHED TIRES

1. Turn the ignition off.
2. Check and adjust the Left Rear Tire pressure.

3. Check and adjust all other tire pressures.
4. Inspect for mismatched tires on vehicle.

Is the Left Rear Tire improperly inflated or mismatched tires on vehicle?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 4

4. CHECK AXLE SHAFT FASTENER HARDWARE FOR LOOSENESS

1. Inspect the axle shaft fastener for looseness, and not properly fastened. Tighten fastener to proper specification as required.

Was the Axle Shaft fastener loose?

Yes

- Repair as necessary.

No

- Go to step 5

5. CHECK LEFT REAR WSS LOOSENESS, INSPECT B3, B4 CIRCUITS/TERMINALS FOR DAMAGE

NOTE: Check all terminals for broken, bent, pushed out, or corroded terminals

1. Inspect the Anti-Lock Brake Module harness connector, Left Rear WSS, and Left Rear WSS harness connector.
2. Inspect the Left Rear WSS for looseness, excessive corrosion and not properly fastened.
3. Inspect the (B3) Left Rear WSS Signal and (B4) Left Rear WSS Supply circuits between the Left Rear WSS and Anti-Lock Brake Module for damage.

Is the Left Rear WSS loose or any of the wiring/connectors/terminals damaged?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock**

Brake (ABS) - Standard Procedure.**No**

- Go to step 6

6. CHECK LEFT REAR WHEEL SPEED SENSOR FOR DAMAGE

1. Remove the Left Rear Wheel Speed Sensor
2. Inspect the Left Rear Wheel Speed Sensor face for damage.

Is the Left Rear Wheel Speed Sensor damaged?

Yes

- Replace sensor and hub assembly.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 7

7. CHECK LEFT REAR TONE WHEEL FOR DAMAGE

1. Inspect the Left Rear Tone Wheel for damage, missing teeth, cracks, corrosion or looseness.

NOTE: The Tone Wheel teeth should be perfectly square, not bent, or nicked.

Is the Left Rear Tone Wheel damaged?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 8

8. LEFT REAR WHEEL SPEED SENSOR

1. Replace the Left Rear Wheel Speed Sensor in accordance with the Service Information.
2. Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**
3. Road test the vehicle over 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to

be met.

4. With the scan tool, read ABS DTCs.

Did DTC C102A-LEFT REAR WHEEL SPEED COMPARATIVE PERFORMANCE reset?

Yes

- Replace the Anti-Lock Brakes Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Test Complete.

C102B-RIGHT REAR WHEEL SPEED SENSOR CIRCUIT

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

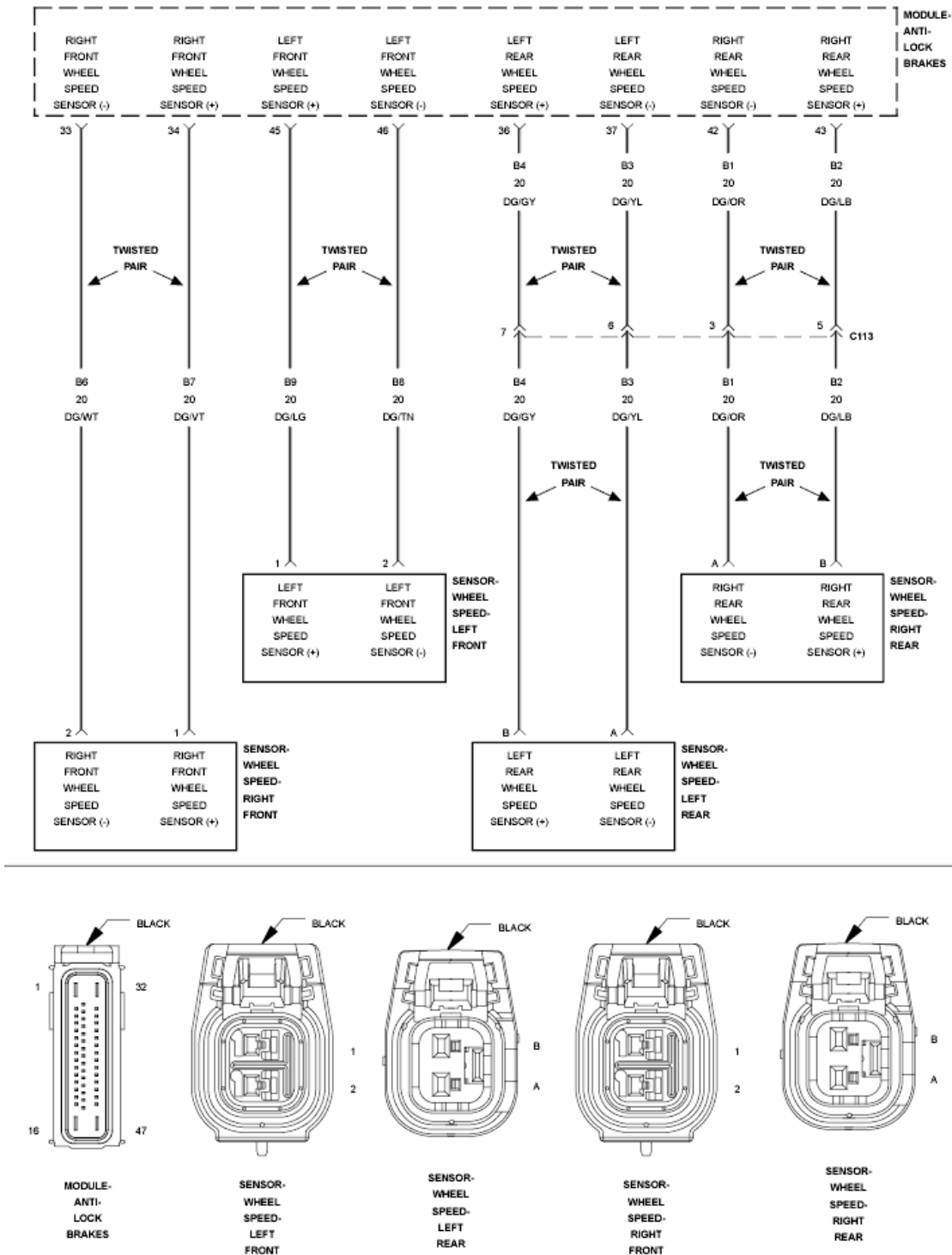


Fig. 25: Left Front Wheel Speed Sensor Signal Circuit Schematic
 Courtesy of CHRYSLER LLC

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

If the Right Rear Wheel Speed Sensor circuit fails the diagnostic test.

Possible Causes
WIRING HARNESS, TERMINAL, CONNECTOR DAMAGE
(B2) RIGHT REAR WSS 12 VOLT SUPPLY CIRCUIT SHORTED TO VOLTAGE, GROUND, OR OPEN
(B1) RIGHT REAR WSS SIGNAL CIRCUIT SHORTED TO VOLTAGE, GROUND, OR OPEN
(B1) RIGHT REAR WSS SIGNAL CIRCUIT SHORTED TO (B2) RIGHT REAR WSS 12 VOLT SUPPLY CIRCUIT
RIGHT REAR WSS
ANTI-LOCK BRAKES MODULE

Diagnostic Test

1. CHECK FOR DTC C102B-RIGHT REAR WHEEL SPEED SENSOR CIRCUIT

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, record and erase DTCs.
3. Cycle the ignition switch from off to on.
4. With the scan tool, read DTCs.

Does the scan tool display: C102B-RIGHT REAR WHEEL SPEED SENSOR CIRCUIT?

Yes

- Go to step 2

No

- The condition that caused the symptom is currently not present. Inspect the related wiring for a possible intermittent condition. Look for any chafed, pierced, pinched, or partially broken wires.
- Perform the ABS INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

2. CHECK CONNECTOR/TERMINAL FOR DAMAGE

NOTE: Check all terminals for broken, bent, pushed out, or corroded terminals.

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

1. Turn the ignition off.
2. Inspect the Anti-Lock Brake Module harness connector, Right Rear WSS, and Right Rear WSS harness connector.

Is the Right Rear WSS or any of the connectors/terminals damaged?

Yes

- Repair as necessary.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 3

3. **CHECK (B2) RIGHT REAR WSS 12 VOLT SUPPLY CIRCUIT VOLTAGE**

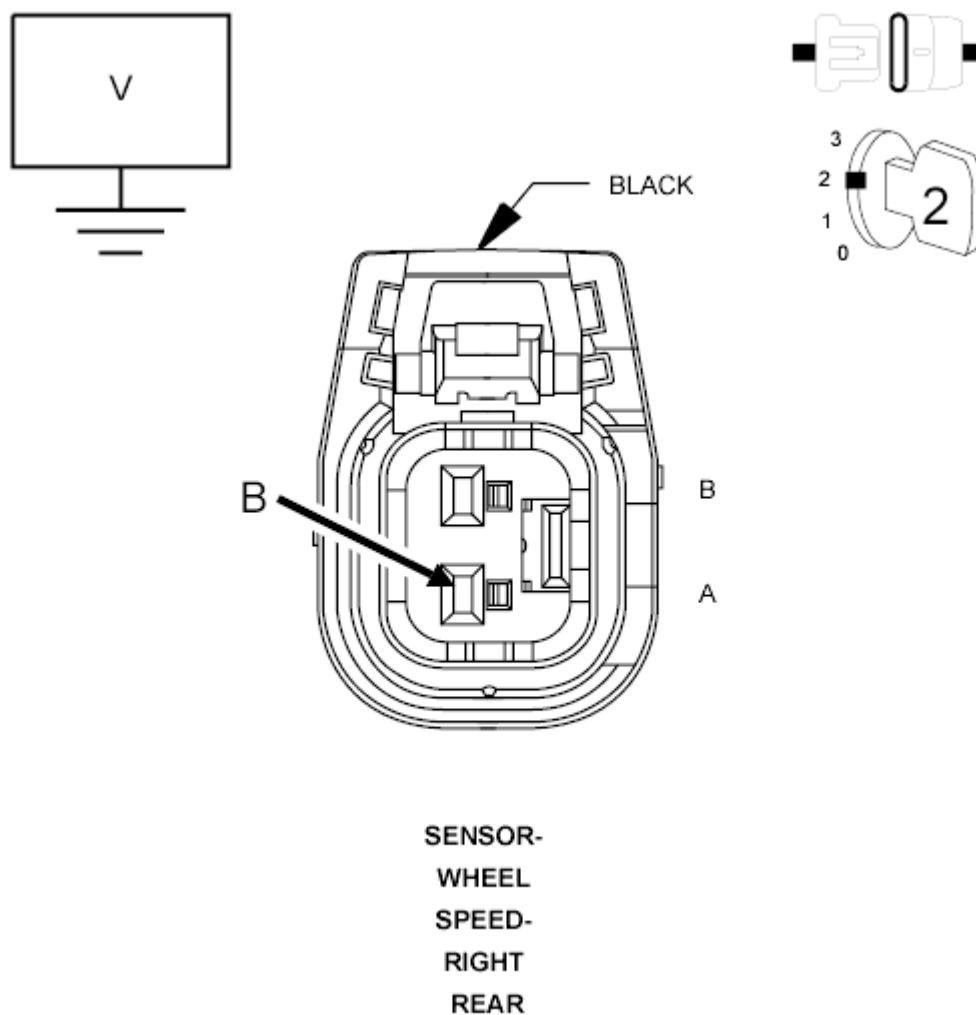


Fig. 26: Checking Right Rear Wheel Speed Sensor 12 Volt Supply Circuit Voltage
Courtesy of CHRYSLER LLC

1. Disconnect the Right Rear WSS harness connector.
2. Turn the ignition on.
3. Measure the voltage of the (B2) Right Rear WSS 12 Volt Supply circuit.

Is the voltage above 10.0 volts?

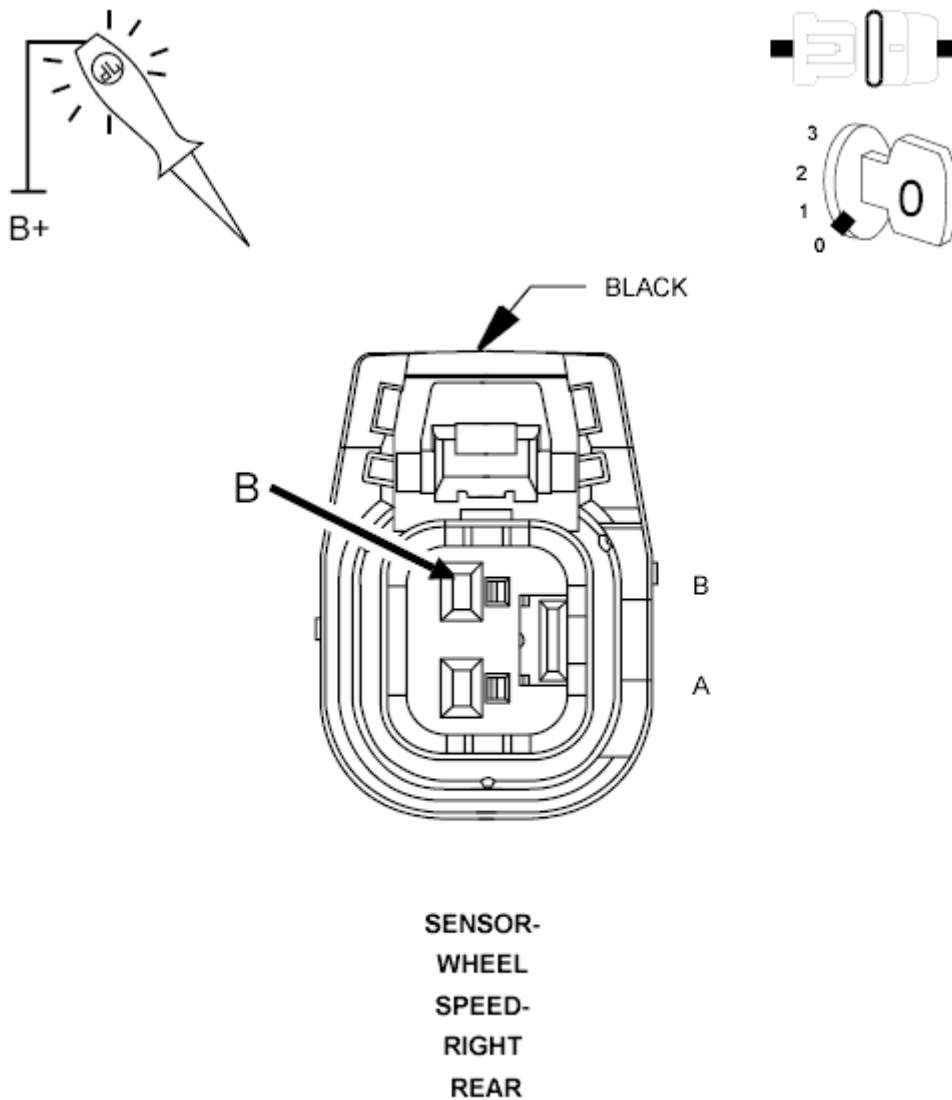
Yes

- Go to step 6

No

- Go to step 4

4. CHECK (B2) RIGHT REAR WSS 12 VOLT SUPPLY CIRCUIT FOR A SHORT TO GROUND



2050923

Fig. 27: Checking Right Rear Wheel Speed Sensor 12 Volt Supply Circuit For A Short To Ground
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Right Rear WSS harness connector.
3. Disconnect the Anti-Lock Brake Module harness connector.
4. Using a 12-volt test light connected to 12 volts, probe the (B2) Right Rear WSS Supply circuit.

Does the test light illuminate brightly?

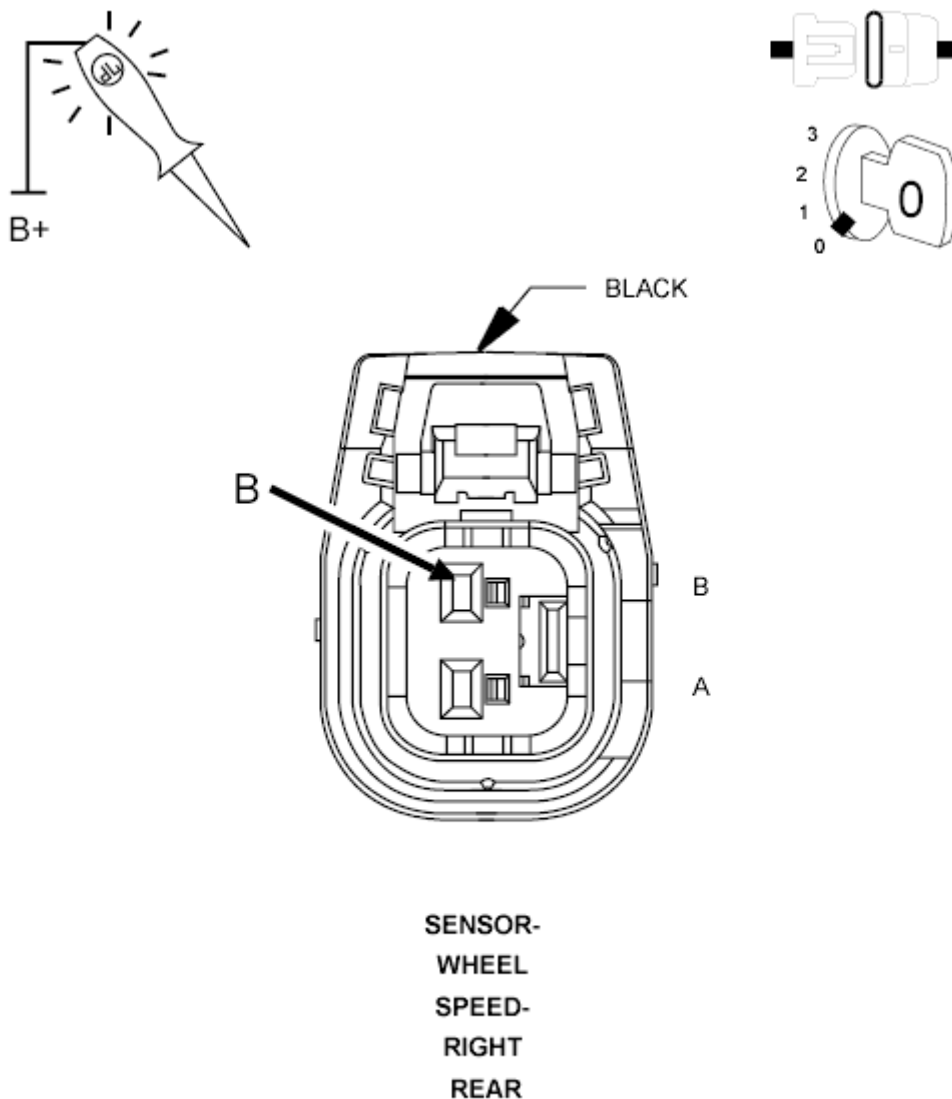
Yes

- Repair the (B2) Right Rear WSS Supply circuit for a short to ground.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 5

5. CHECK (B2) RIGHT REAR WSS 12 VOLT SUPPLY CIRCUIT FOR AN OPEN



2050923

Fig. 28: Checking Right Rear Wheel Speed Sensor 12 Volt Supply Circuit For A Short To Ground

Courtesy of CHRYSLER LLC

1. Connect a jumper wire between ground and the (B2) Right Rear WSS Supply circuit in the Anti-Lock Brakes Module harness connector.
2. Using a 12-volt test light connected to 12 volts, probe the (B2) Right Rear WSS Supply circuit.

Does the test light illuminate brightly?

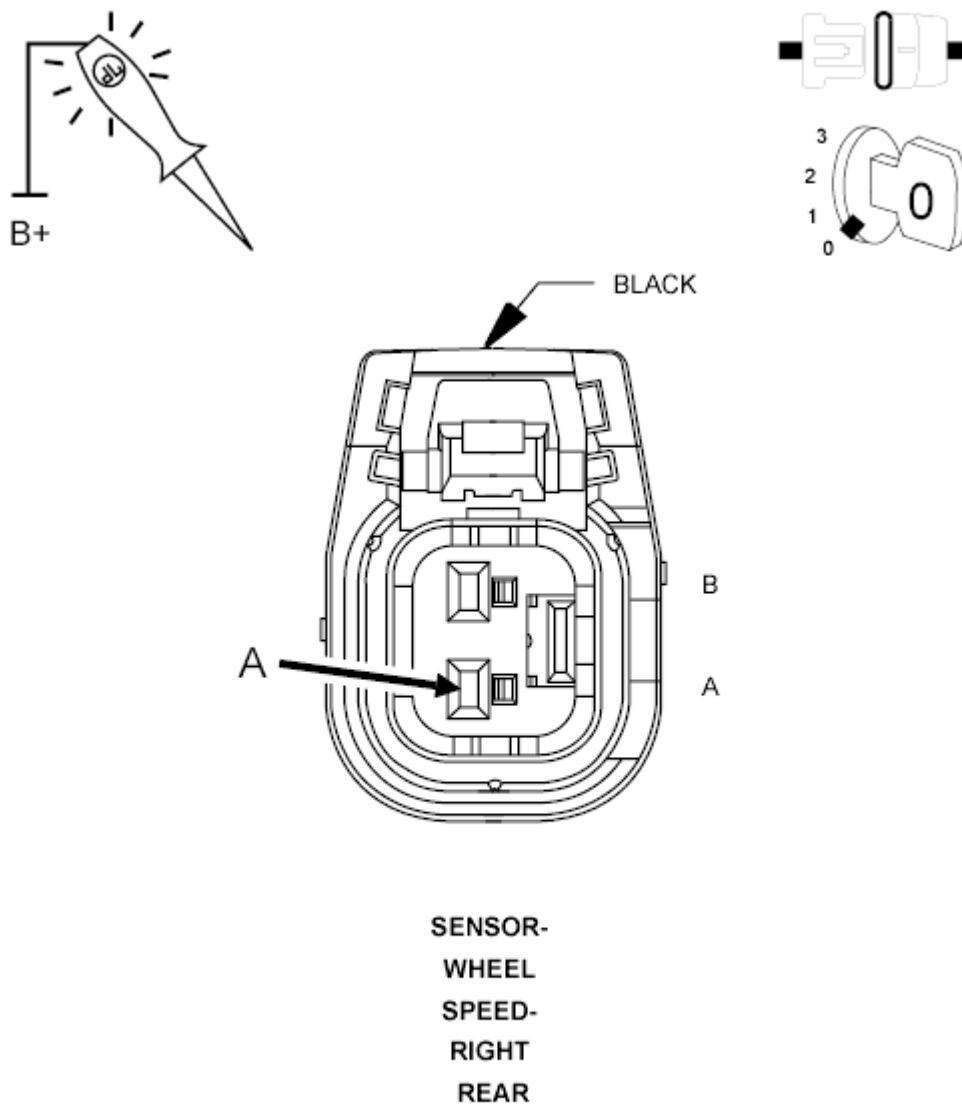
Yes

- Replace the Anti-Lock Brakes Module in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Repair the (B2) Right Rear WSS Supply circuit for an open.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

6. CHECK (B1) RIGHT REAR WSS SIGNAL CIRCUIT FOR A SHORT TO GROUND



2051120

Fig. 29: Checking Right Rear Wheel Speed Sensor Signal Circuit For A Short To Ground
 Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. If not done previously, disconnect the Anti-Lock Brake Module harness connector.
3. Using a 12-volt test light connected to 12 volts, probe the (B1) Right Rear WSS Signal circuit.

Does the test light illuminate brightly?

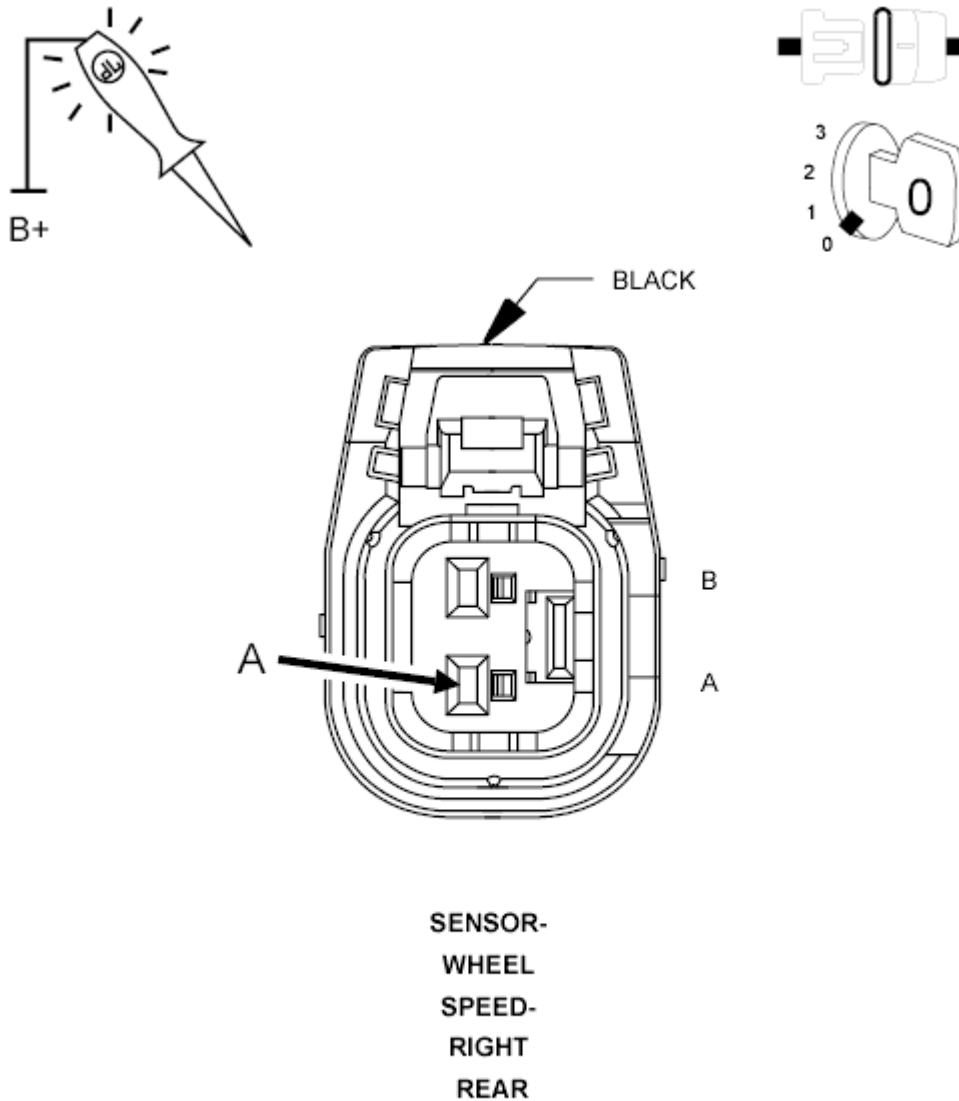
Yes

- Repair the (B1) Right Rear WSS Signal circuit for a short to ground.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 7

7. CHECK (B1) RIGHT REAR WSS SIGNAL CIRCUIT FOR AN OPEN



2051120

Fig. 30: Checking Right Rear Wheel Speed Sensor Signal Circuit For A Short To Ground
 Courtesy of CHRYSLER LLC

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

1. Connect a jumper wire between ground and the (B1) Right Rear WSS Signal circuit in the Anti-Lock Brakes Module harness connector.
2. Using a 12-volt test light connected to 12 volts, probe the (B1) Right Rear WSS Signal circuit.

Does the test light illuminate brightly?

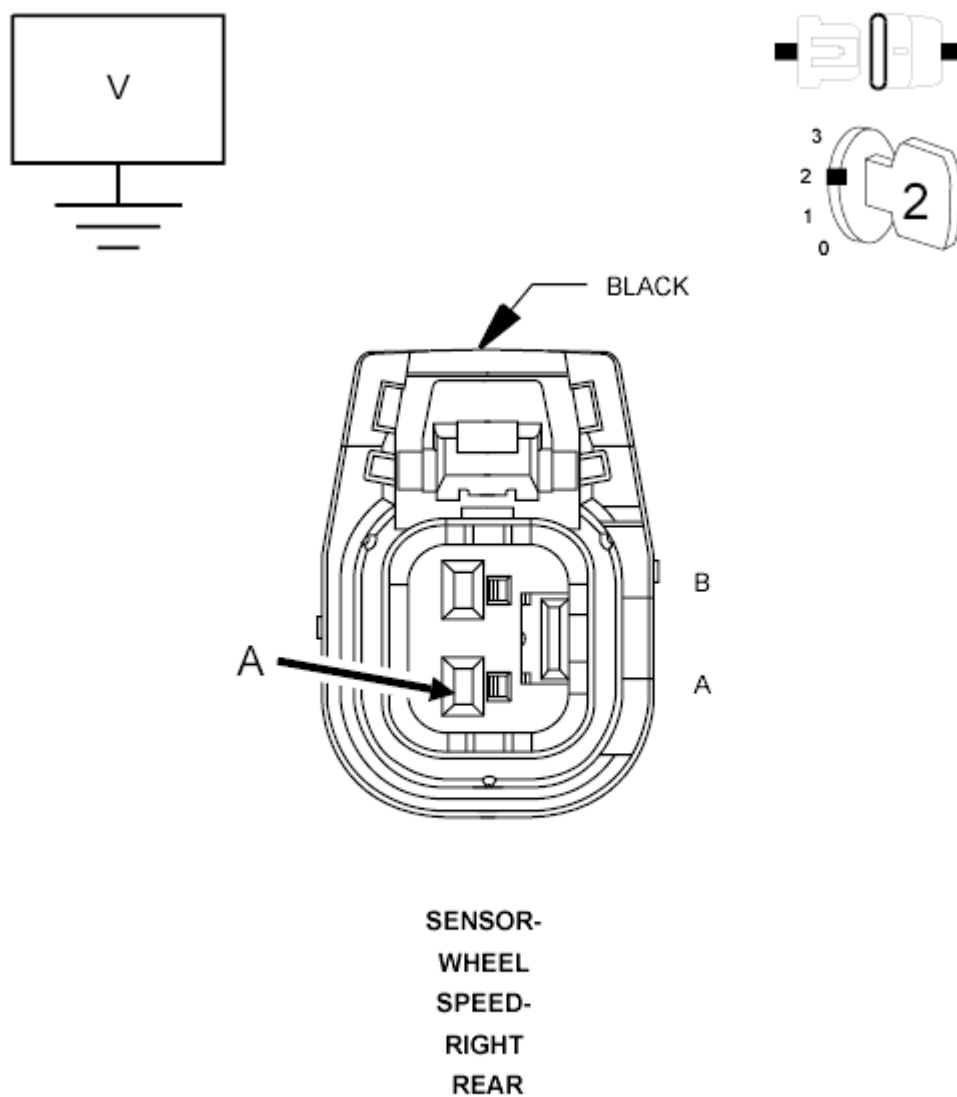
Yes

- Go to step 8

No

- Repair the (B1) Right Rear WSS Signal circuit for an open.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

8. CHECK (B1) RIGHT REAR WSS SIGNAL CIRCUIT SHORT TO VOLTAGE



2051223

Fig. 31: Checking Right Rear Wheel Speed Sensor Signal Circuit Short To Voltage
Courtesy of CHRYSLER LLC

1. Turn the ignition on.
2. Remove all jumper wires.
3. Measure the voltage between the (B1) Right Rear WSS Signal circuit and ground.

Is the voltage above 1 volt?

Yes

- Repair the (B1) Right Rear WSS Signal circuit for a short to voltage.

- Perform the ABS VERIFICATION TEST. See DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.

No

- Go to step 9

9. CHECK (B1) RIGHT REAR WSS SIGNAL CIRCUIT FOR A SHORT TO (B2) RIGHT REAR WSS 12 VOLT SUPPLY CIRCUIT

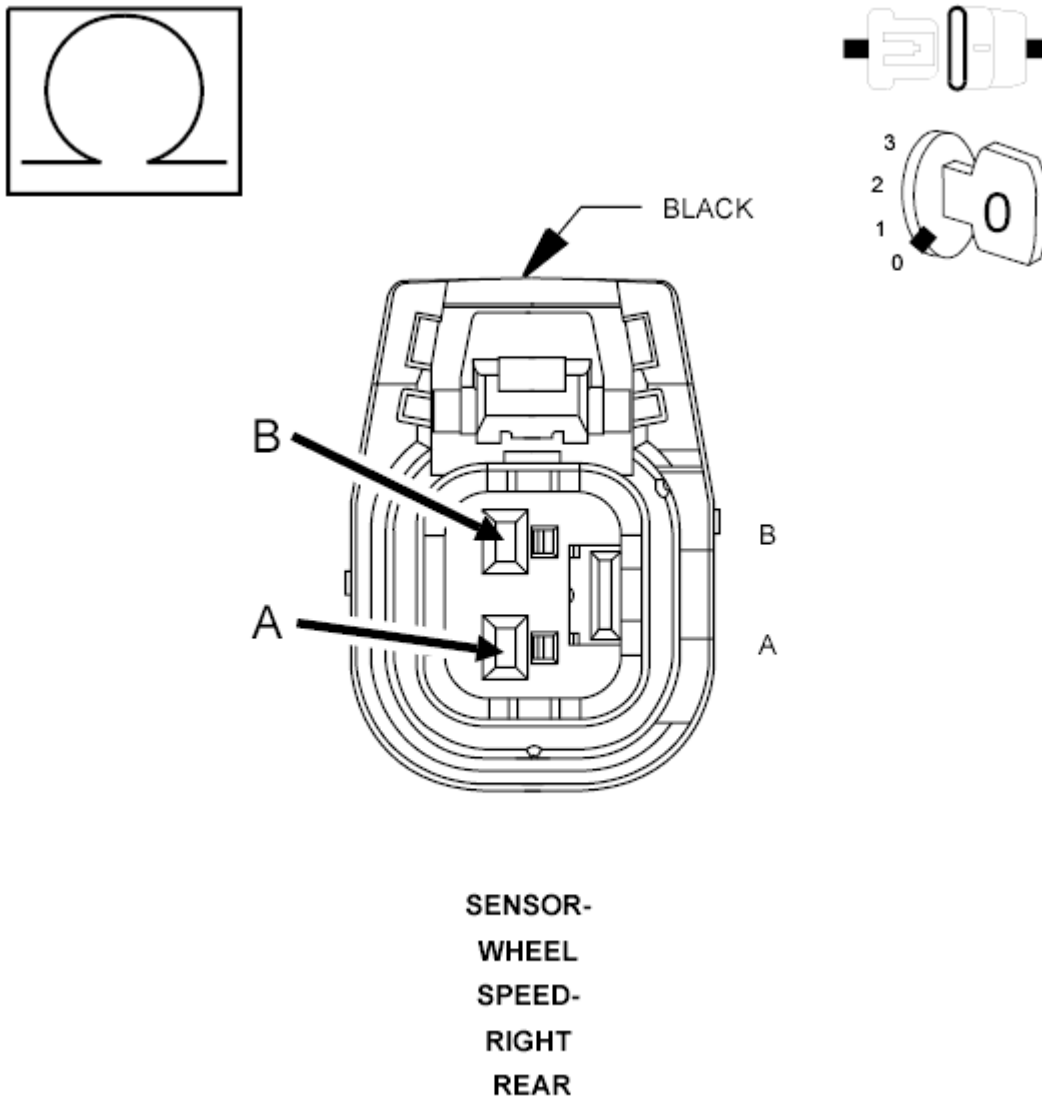


Fig. 32: Checking Right Rear Wheel Speed Sensor Signal Circuit For A Short To Right Rear Wheel Speed Sensor 12 Volt Supply Circuit

Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Measure the resistance between the (B1) Right Rear WSS Signal circuit and the (B2) Right Rear WSS Supply circuit.

Is the resistance above 5.0 Ohms?

Yes

- Go to step 10

No

- Repair the (B1) Right Rear WSS Signal circuit and the (B2) Right Rear WSS Supply circuit for a short together.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

10. RIGHT REAR WHEEL SPEED SENSOR

1. Replace the Right Rear Wheel Speed Sensor in accordance with the Service Information.
2. Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**

CAUTION: Make sure brake capability is available before road testing.

3. Road test the vehicle over 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be meet.

4. With the scan tool, read ABS DTCs.

Did DTC C102B-RIGHT REAR WHEEL SPEED SENSOR CIRCUIT reset?

Yes

- Replace the Anti-Lock Brakes Module in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Test Complete.

C102C-RIGHT REAR WHEEL SPEED SENSOR CIRCUIT PERFORMANCE

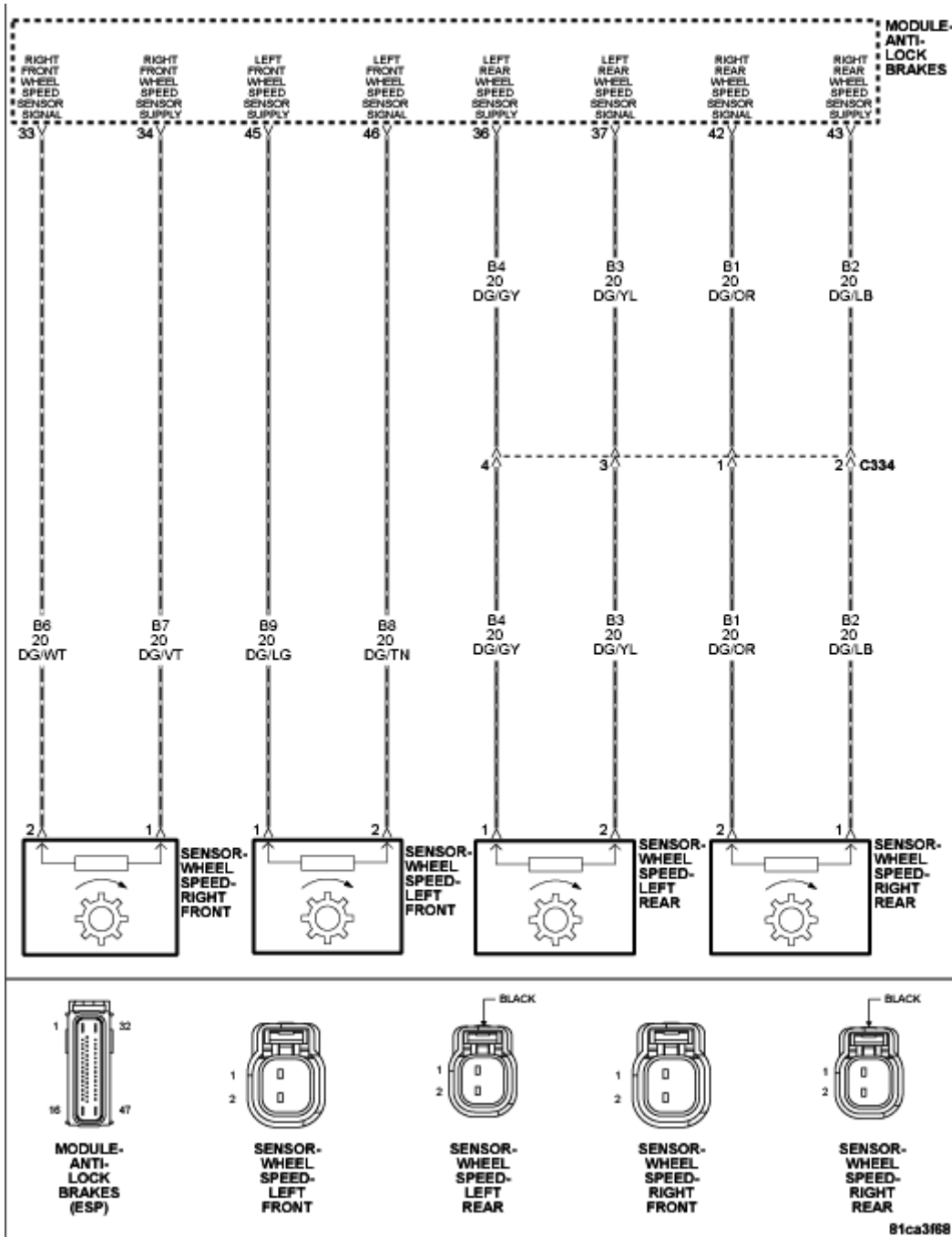


Fig. 33: Right Rear Wheel Speed Sensor 12 Volt Supply Circuit Schematic
Courtesy of CHRYSLER LLC

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

If the Right Rear Wheel Speed Sensor circuit fails the diagnostic test.

Possible Causes
WIRING HARNESS, TERMINAL, CONNECTOR DAMAGE
(B2) RIGHT REAR WSS 12 VOLT SUPPLY CIRCUIT SHORTED TO VOLTAGE, GROUND, OR OPEN
(B1) RIGHT REAR WSS SIGNAL CIRCUIT SHORTED TO VOLTAGE, GROUND, OR OPEN
(B1) RIGHT REAR WSS SIGNAL CIRCUIT SHORTED TO (B2) RIGHT REAR WSS 12 VOLT SUPPLY CIRCUIT
RIGHT REAR WSS
ANTI-LOCK BRAKE MODULE

Diagnostic Test**1. CHECK FOR DTC C102C-RIGHT REAR WHEEL SPEED SENSOR CIRCUIT PERFORMANCE**

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, record and erase DTCs.
3. Cycle the ignition switch from off to on.
4. With the scan tool, read DTCs.

Does the scan tool display: C102C-RIGHT REAR WHEEL SPEED SENSOR CIRCUIT PERFORMANCE?

Yes

- Go to step 2

No

- The condition that caused the symptom is currently not present. Inspect the related wiring for a possible intermittent condition. Look for any chafed, pierced, pinched, or partially broken wires.
- Perform the ABS INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

2. CHECK CONNECTOR/TERMINAL FOR DAMAGE

NOTE: Check all terminals for broken, bent, pushed out, or corroded terminals.

1. Turn the ignition off.
2. Inspect the Anti-Lock Brake Module harness connector, Right Rear WSS, and Right Rear WSS harness connector.

Is the Right Rear WSS or any of the connectors/terminals damaged?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 3

3. CHECK (B2) RIGHT REAR WSS 12 VOLT SUPPLY CIRCUIT VOLTAGE

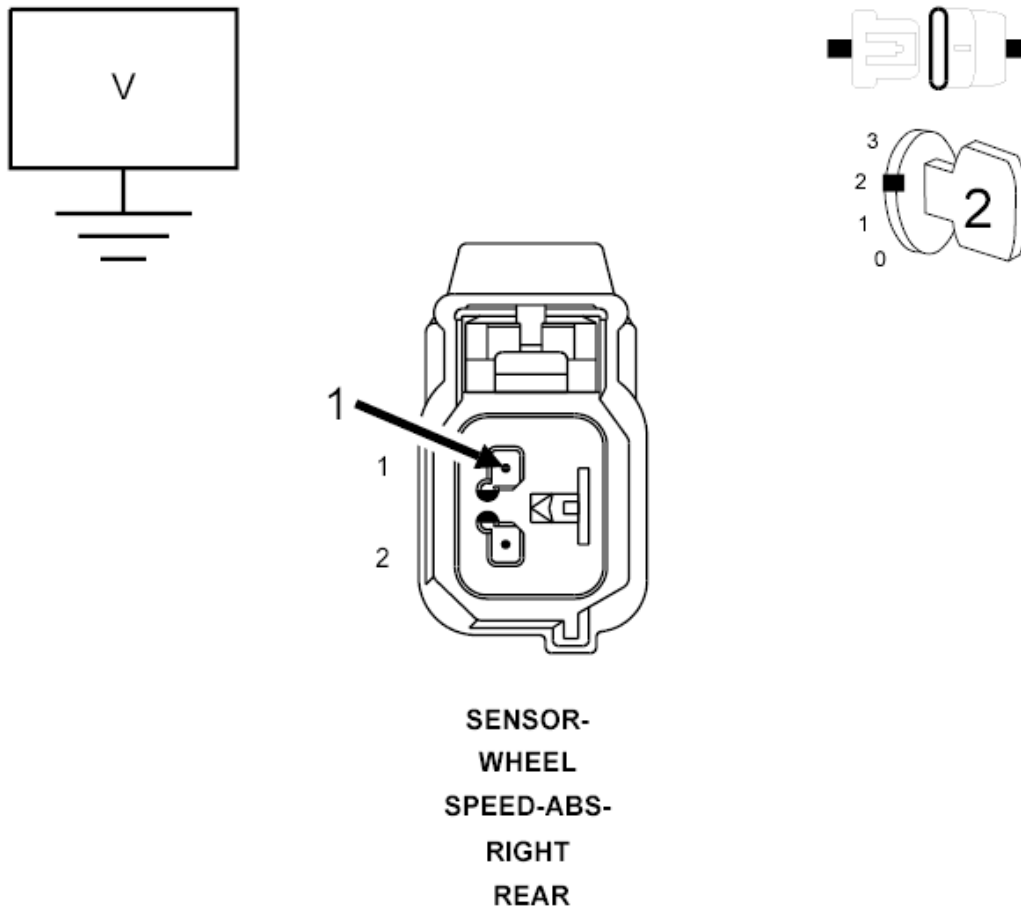


Fig. 34: Checking Right Rear Wheel Speed Sensor 12 Volt Supply Circuit Voltage

Courtesy of CHRYSLER LLC

1. Disconnect the Right Rear WSS harness connector.
2. Turn the ignition on.
3. Measure the voltage of the (B2) Right Rear WSS 12 Volt Supply circuit.

Is the voltage above 10.0 volts?

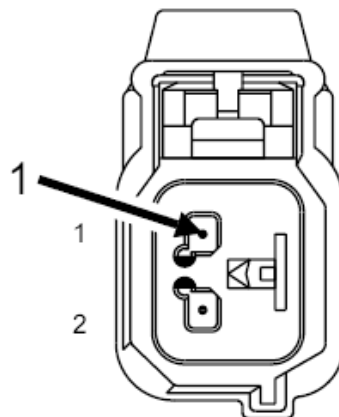
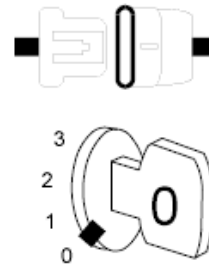
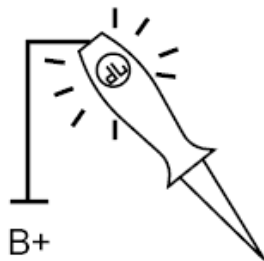
Yes

- Go to step 6

No

- Go to step 4

4. CHECK (B2) RIGHT REAR WSS 12 VOLT SUPPLY CIRCUIT FOR A SHORT TO GROUND



SENSOR-
WHEEL
SPEED-ABS-
RIGHT
REAR

Fig. 35: Checking Right Rear Wheel Speed Sensor 12 Volt Supply Circuit For A Short To Ground

Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Right Rear WSS harness connector.
3. Disconnect the Anti-Lock Brake Module harness connector.
4. Using a 12-volt test light connected to 12 volts, probe the (B2) Right Rear WSS Supply circuit.

Does the test light illuminate brightly?

Yes

- Repair the (B2) Right Rear WSS Supply circuit for a short to ground.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 5

5. CHECK (B2) RIGHT REAR WSS 12 VOLT SUPPLY CIRCUIT FOR AN OPEN

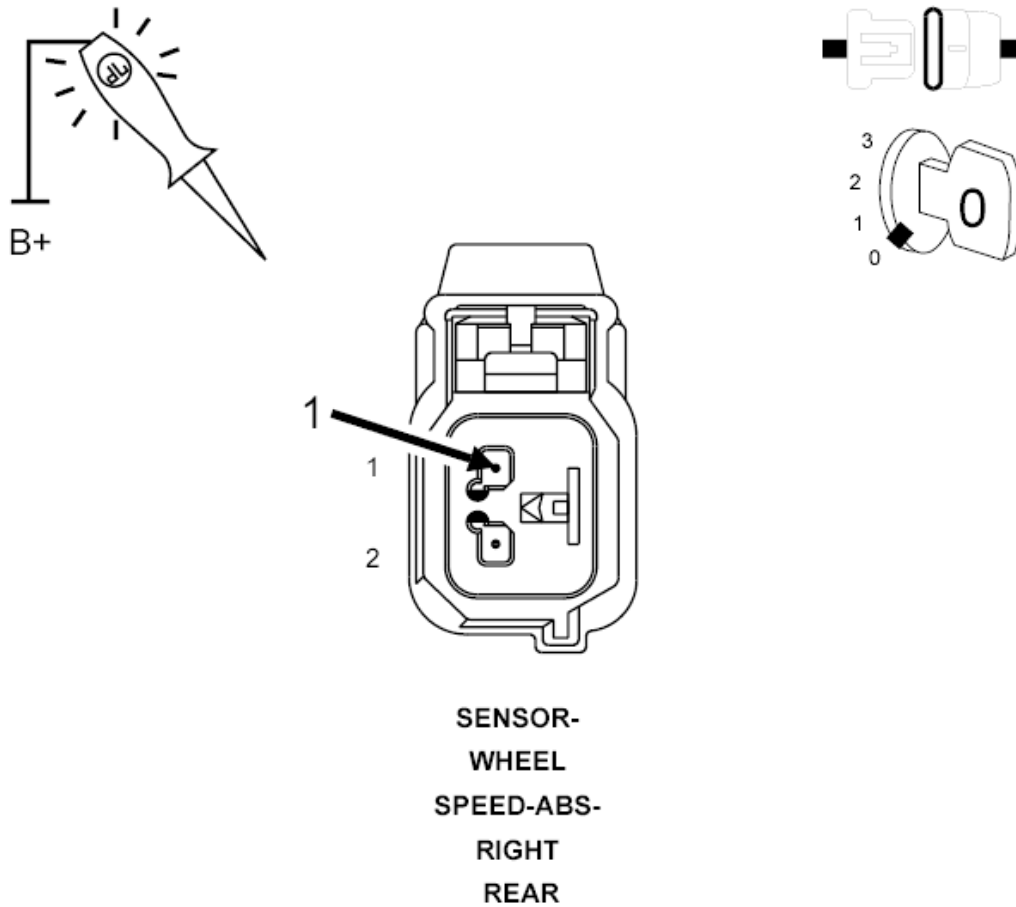


Fig. 36: Checking Right Rear Wheel Speed Sensor 12 Volt Supply Circuit For A Short To Ground
Courtesy of CHRYSLER LLC

1. Connect a jumper wire between ground and the (B2) Right Rear WSS Supply circuit in the Anti-Lock Brake Module harness connector.
2. Using a 12-volt test light connected to 12 volts, probe the (B2) Right Rear WSS Supply circuit.

Does the test light illuminate brightly?

Yes

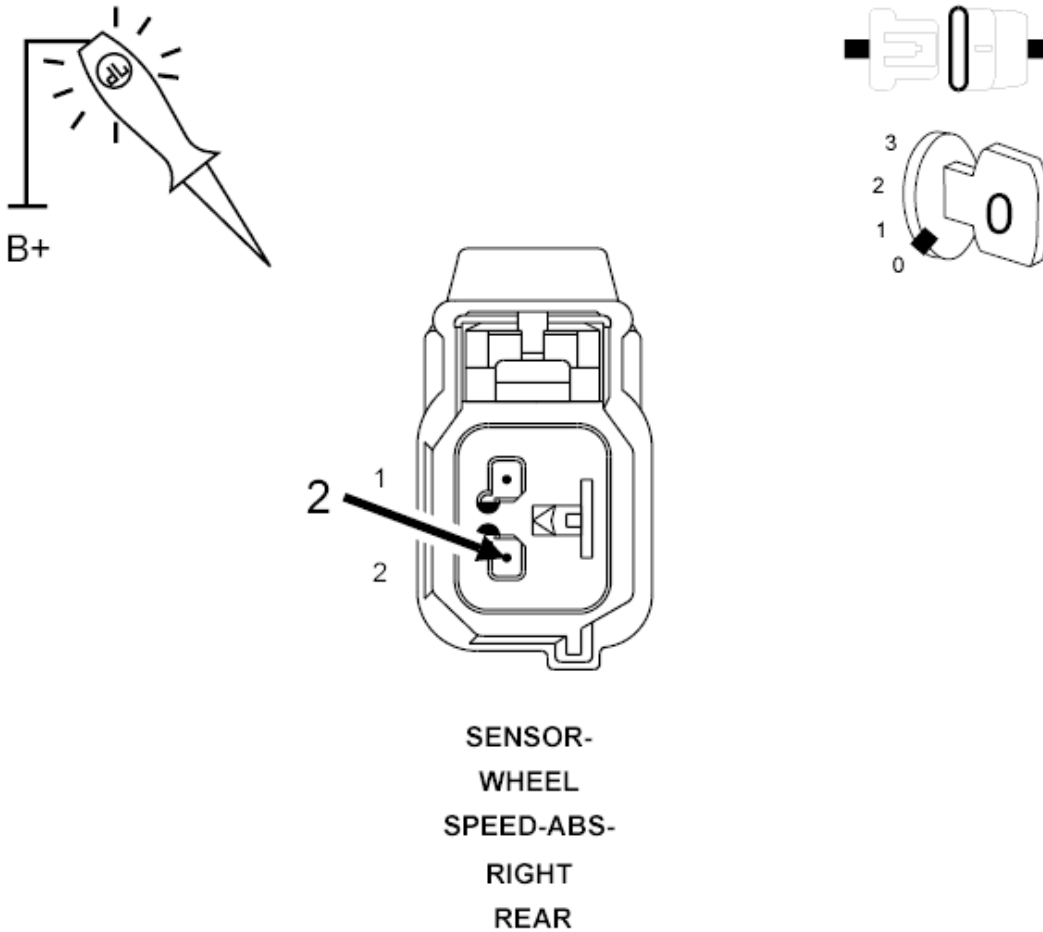
- Replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Repair the (B2) Right Rear WSS Supply circuit for an open.

- Perform ABS VERIFICATION TEST. See DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.

6. CHECK (B1) RIGHT REAR WSS SIGNAL CIRCUIT FOR A SHORT TO GROUND



71771

Fig. 37: Checking Right Rear Wheel Speed Sensor Signal Circuit For A Short To Ground
Courtesy of CHRYSLER LLC

1. Using a 12-volt test light connected to 12 volts, probe the (B1) Right Rear WSS Signal circuit.

Does the test light illuminate brightly?

Yes

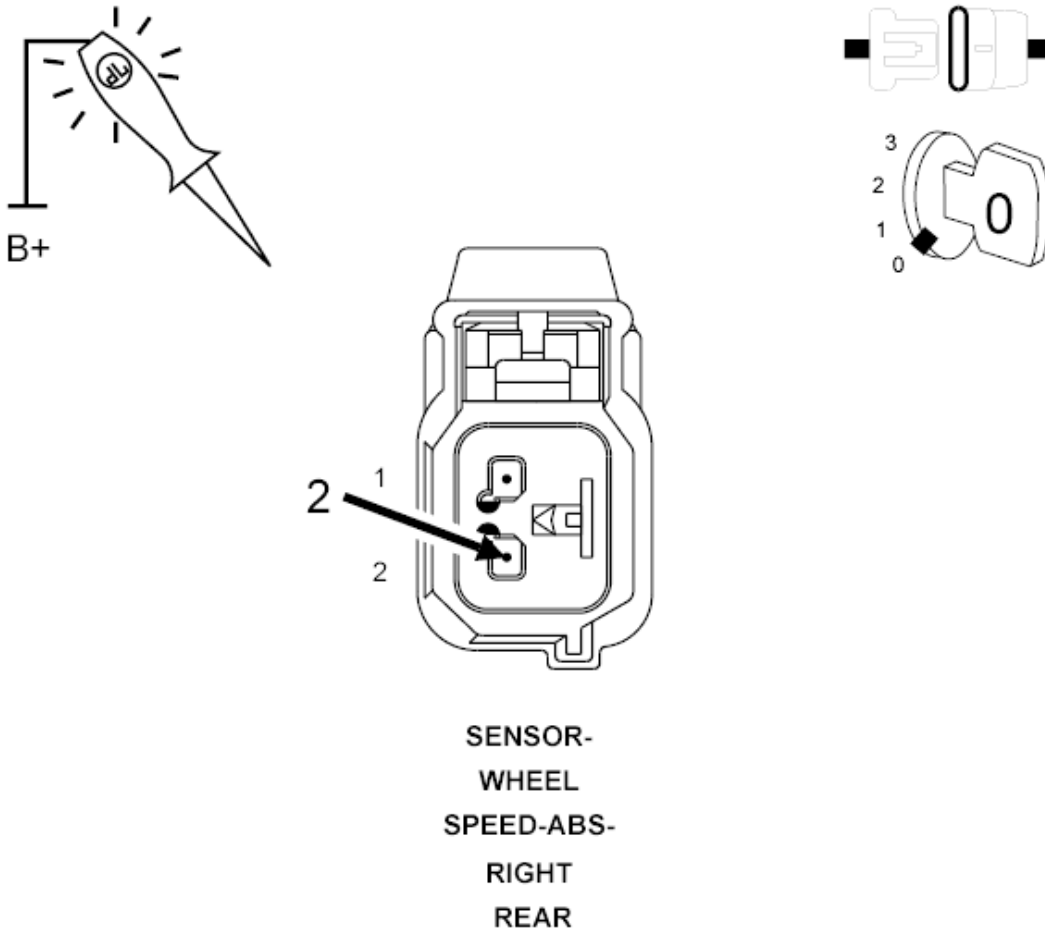
- Repair the (B1) Right Rear WSS Signal circuit for a short to ground.

- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 7

7. CHECK (B1) RIGHT REAR WSS SIGNAL CIRCUIT FOR AN OPEN



71771

Fig. 38: Checking Right Rear Wheel Speed Sensor Signal Circuit For A Short To Ground
Courtesy of CHRYSLER LLC

1. Connect a jumper wire between ground and the (B1) Right Rear WSS Signal circuit in the Anti-Lock Brake Module harness connector.
2. Using a 12-volt test light connected to 12 volts, probe the (B1) Right Rear WSS Signal circuit.

Does the test light illuminate brightly?

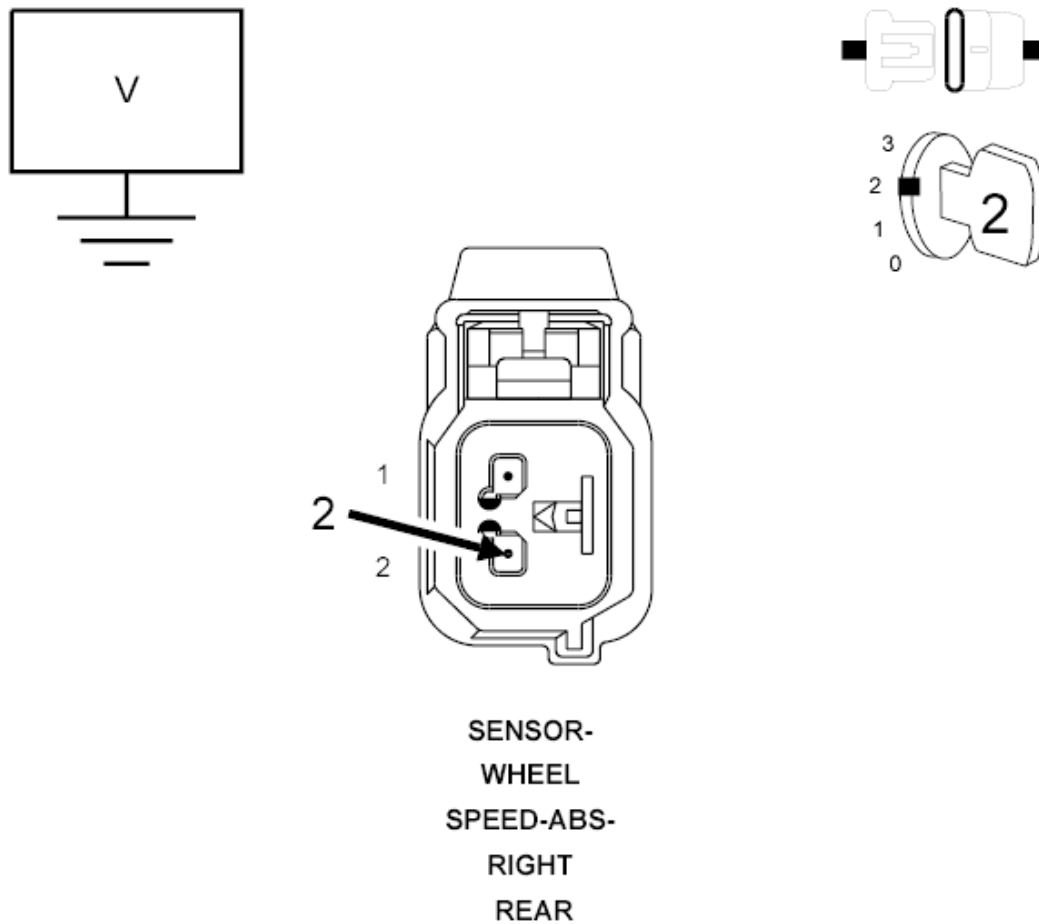
Yes

- Go to step 8

No

- Repair the (B1) Right Rear WSS Signal circuit for an open.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

8. CHECK (B1) RIGHT REAR WSS SIGNAL CIRCUIT SHORT TO VOLTAGE



71773

Fig. 39: Checking Right Rear Wheel Speed Sensor Signal Circuit Short To Voltage
Courtesy of CHRYSLER LLC

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

1. Turn the ignition on.
2. Remove all jumper wires.
3. Measure the voltage between the (B1) Right Rear WSS Signal circuit and ground.

Is the voltage above one volt?

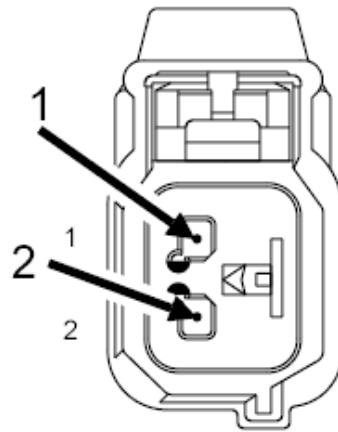
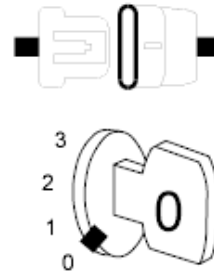
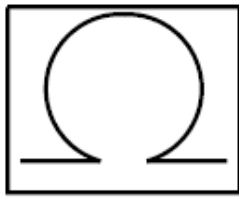
Yes

- Repair the (B1) Right Rear WSS Signal circuit for a short to voltage.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 9

9. **CHECK (B1) RIGHT REAR WSS SIGNAL CIRCUIT FOR A SHORT TO (B2) RIGHT REAR WSS 12 VOLT SUPPLY CIRCUIT**



SENSOR-
WHEEL
SPEED-ABS-
RIGHT
REAR

71775

Fig. 40: Checking Right Rear Wheel Speed Sensor Signal Circuit For A Short To Right Rear Wheel Speed Sensor 12 Volt Supply Circuit
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Measure the resistance between the (B1) Right Rear WSS Signal circuit and the (B2) Right Rear WSS Supply circuit.

Is the resistance above 5.0 ohms?

Yes

- Go to step 10

No

- Repair the (B1) Right Rear WSS Signal circuit and the (B2) Right Rear WSS Supply circuit for a short together.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

10. RIGHT REAR WHEEL SPEED SENSOR

1. Replace the Right Rear Wheel Speed Sensor in accordance with the Service Information.
2. Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

CAUTION: Ensure brake capability is available before road testing.

3. Road test the vehicle over 25 mph (40 km/h).

NOTE: Vehicle must be driven above 25 mph (40 km/h) for set conditions to be met.

4. With the scan tool, read ABS DTCs.

Did DTC C102C-RIGHT REAR WHEEL SPEED SENSOR CIRCUIT PERFORMANCE reset?

Yes

- Replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Test complete.

C1032-RIGHT REAR WHEEL SPEED SENSOR SIGNAL ERRATIC PERFORMANCE

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

When the Right Rear Wheel Speed Sensor (WSS) Signal is intermittently missing while vehicle speed is above 40 km/h (25 mph) or erratic wheel speed signal during acceleration or sensed wheel speed is different from other wheels.

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

Possible Causes

RIGHT REAR WSS LOOSE - B1, B2 CIRCUITS/CONNECTOR/TERMINAL DAMAGE
RIGHT REAR TONE WHEEL DAMAGE
RIGHT REAR WHEEL BEARING DAMAGE
AXLE SHAFT FASTENER HARDWARE
IMPROPER RIGHT REAR TIRE PRESSURE/MISMATCHED TIRES
RIGHT REAR WSS
ANTI-LOCK BRAKE MODULE

Diagnostic Test

1. CHECK FOR DTC C1032-RIGHT REAR WHEEL SPEED SENSOR SIGNAL ERRATIC PERFORMANCE

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, record and erase DTCs.

CAUTION: Ensure brake capability is available before road testing.

3. Road test the vehicle over 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be met.

4. With the scan tool, read DTCs.

Does the scan tool display: C1032-RIGHT REAR WHEEL SPEED SENSOR SIGNAL ERRATIC PERFORMANCE active?

Yes

- Go to step 3

No

- Go to step 2

2. CHECK WHEEL SPEED SENSOR SIGNALS

1. Turn the ignition on.
2. With the scan tool, monitor and graph ALL the WSS speeds and compare graph while an assistant drives the vehicle.

NOTE: If graph shows periodic dropouts pay close attention to the tone wheel.

3. Slowly accelerate as straight as possible from a stop to 40 km/h (25 mph).

Is the Right Rear WSS speed showing 0 km/h (0 mph) or not matching other wheels or showing erratic behavior?

Yes

- Go to step 3

No

- Perform the INTERMITTENT CONDITION diagnostic procedure. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

3. CHECK FOR IMPROPER RIGHT REAR TIRE PRESSURE/MISMATCHED TIRES

1. Turn the ignition off.
2. Check and adjust the Right Rear Tire pressure.
3. Check and adjust all other tire pressures.
4. Inspect for mismatched tires on vehicle.

Is the Right Rear Tire improperly inflated or mismatched tires on vehicle?

Yes

- Repair as necessary.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 4

4. CHECK AXLE SHAFT FASTENER HARDWARE FOR LOOSENESS

1. Inspect the axle shaft fastener for looseness, and not properly fastened. Tighten fastener to proper specification as required.

Was the Axle Shaft fastener loose?

Yes

- Repair as necessary.

No

- Go to step 5

5. CHECK RIGHT REAR WSS LOOSENESS, INSPECT B1, B2 CIRCUITS/TERMINALS FOR DAMAGE

NOTE: Check all terminals for broken, bent, pushed out, or corroded terminals.

1. Inspect the Anti-Lock Brake Module harness connector, Right Rear WSS, and Right Rear WSS harness connector.
2. Inspect the Right Rear WSS for looseness, excessive corrosion and not properly fastened.
3. Inspect the (B1) Right Rear WSS Signal and (B2) Right Rear WSS Supply circuits between the Right Rear WSS and Anti-Lock Brake Module for damage.

Is the Right Rear WSS loose or any of the wiring/connectors/terminals damaged?

Yes

- Repair as necessary.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 6

6. CHECK RIGHT REAR WHEEL SPEED SENSOR FOR DAMAGE

1. Remove the Right Rear Wheel Speed Sensor.
2. Inspect the Right Rear Wheel Speed Sensor face for damage.

Is the Right Rear Wheel Speed Sensor damaged?

Yes

- Replace sensor and hub assembly.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 7

7. CHECK RIGHT REAR TONE WHEEL FOR DAMAGE

1. Inspect the Right Rear Tone Wheel for damage, missing teeth, cracks, corrosion or looseness.

NOTE: The Tone Wheel teeth should be perfectly square, not bent, or nicked.

Is the Right Rear Tone Wheel damaged?

Yes

- Repair as necessary.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 8

8. CHECK RIGHT REAR WHEEL BEARING FOR DAMAGE

1. Inspect the Right Rear wheel bearing for excessive runout or clearance.

NOTE: Refer to the appropriate service information, if necessary, for procedures or specifications. Refer to **Front Suspension/Front/HUB AND BEARING - Diagnosis and Testing**

Is the Right Rear Wheel Bearing Damaged?

Yes

- Repair as necessary.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 9

9. RIGHT REAR WHEEL SPEED SENSOR

1. Replace the Right Rear Wheel Speed Sensor in accordance with the Service Information.
2. Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**
3. Road test the vehicle over 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be met.

4. With the scan tool, read ABS DTCs.

Did DTC C1032-RIGHT REAR WHEEL SPEED SENSOR SIGNAL ERRATIC PERFORMANCE reset?

Yes

- Replace the Anti-Lock Brakes Module in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Test Complete.

C1035-RIGHT REAR WHEEL SPEED COMPARATIVE PERFORMANCE

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

When the Right Rear Wheel Speed Sensor (WSS) reading is different from the readings received from the other sensors at a vehicle speed above 40 km/h (25 mph). The Anti-Lock Brake Module compares WSS readings from side-to-side on an axle and front-to-rear.

Possible Causes
RIGHT REAR WSS LOOSE - B1, B2 CIRCUITS/CONNECTOR/TERMINAL DAMAGE
IMPROPER RIGHT REAR TIRE PRESSURE/MISMATCHED TIRES
RIGHT REAR TONE WHEEL/BEARING DAMAGE
AXLE SHAFT FASTENER HARDWARE
RIGHT REAR WSS
ANTI-LOCK BRAKE MODULE

Diagnostic Test

1. CHECK FOR DTC C1035-RIGHT REAR WHEEL SPEED COMPARATIVE PERFORMANCE

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, record and erase DTCs.

CAUTION: Ensure brake capability is available before road testing.

3. Road test the vehicle over 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be met.

4. With the scan tool, read DTCs.

Does the scan tool display: C1035-RIGHT REAR WHEEL SPEED COMPARATIVE PERFORMANCE active?

Yes

- Go to step 3

No

- Go to step 2

2. CHECK WHEEL SPEED SENSOR SIGNALS

1. Turn the ignition on.
2. With the scan tool, monitor and graph ALL the WSS speeds and compare graph while an assistant drives the vehicle.

NOTE: If graph shows periodic dropouts pay close attention to the tone wheel.

3. Slowly accelerate as straight as possible from a stop to 40 km/h (25 mph).

Is the Right Rear WSS speed showing 0 km/h (0 mph) or not matching other wheels or showing erratic behavior?

Yes

- Go to step 3

No

- The condition that caused the symptom is currently not present. Inspect the related wiring for a possible intermittent condition. Look for any chafed, pierced, pinched, or partially broken wires.
- Perform the ABS INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

3. CHECK FOR IMPROPER RIGHT REAR TIRE PRESSURE/MISMATCHED TIRES

1. Turn the ignition off.
2. Check and adjust the Right Rear Tire pressure.
3. Check and adjust all other tire pressures.
4. Inspect for mismatched tires on vehicle.

Is the Right Rear Tire improperly inflated or mismatched tires on vehicle?

Yes

- Repair as necessary.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 4

4. CHECK AXLE SHAFT FASTENER HARDWARE FOR LOOSENESS

1. Inspect the axle shaft fastener for looseness, and not properly fastened. Tighten fastener to proper specification as required.

Was the Axle Shaft fastener loose?

Yes

- Repair as necessary.

No

- Go to step 5

5. CHECK RIGHT REAR WSS LOOSENESS, INSPECT B1, B2 CIRCUITS/TERMINALS FOR DAMAGE

NOTE: Check all terminals for broken, bent, pushed out, or corroded terminals

1. Inspect the Anti-Lock Brake Module harness connector, Right Rear WSS, and Right Rear WSS harness connector
2. Inspect the Right Rear WSS for looseness, excessive corrosion and not properly fastened.
3. Inspect the (B1) Right Rear WSS Signal and (B2) Right Rear WSS Supply circuits between the Right Rear WSS and Anti-Lock Brake Module for damage.

Is the Right Rear WSS loose or any of the wiring/connectors/terminals damaged?

Yes

- Repair as necessary.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 6

6. CHECK RIGHT REAR WHEEL SPEED SENSOR FOR DAMAGE

1. Remove the Right Rear Wheel Speed Sensor.
2. Inspect the Right Rear Wheel Speed Sensor face for damage.

Is the Right Rear Wheel Speed Sensor damaged?

Yes

- Replace sensor and hub assembly.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 7

7. CHECK RIGHT REAR TONE WHEEL/BEARING FOR DAMAGE

1. Inspect the Right Rear Tone Wheel/Bearing for damage, missing teeth, cracks, corrosion or looseness.

NOTE: **The Tone Wheel teeth should be perfectly square, not bent, or nicked.**

Is the Right Rear Tone Wheel/Bearing damaged?

Yes

- Repair as necessary.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 8

8. RIGHT REAR WHEEL SPEED SENSOR

1. Replace the Right Rear Wheel Speed Sensor in accordance with the Service Information.
2. Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**
3. Road test the vehicle over 40 km/h (25 mph).

NOTE: **Vehicle must be driven above 40 km/h (25 mph) for set conditions to be met.**

4. With the scan tool, read ABS DTCs.

Did DTC C1035-RIGHT REAR WHEEL SPEED COMPARATIVE PERFORMANCE reset?

Yes

- Replace the Anti-Lock Brakes Module in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Test Complete.

C1041-LEFT FRONT TONE WHEEL PERFORMANCE

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

When the Anti-Lock Brake Module detects periodic drops of a WSS signal.

Possible Causes
LEFT FRONT TONE WHEEL/ BEARING DAMAGE
IMPROPER LEFT FRONT TIRE PRESSURE/MISMATCHED TIRES
DIRTY TONE WHEEL/SENSOR

Diagnostic Test

1. CHECK FOR A DTC C1041-LEFT FRONT TONE WHEEL PERFORMANCE

NOTE: This DTC must be active for the results of this test to be valid. If DTC C100A Left Front Wheel Speed Sensor Circuit is present it must be repaired before continuing.

1. Turn the ignition on.
2. With the scan tool, read DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase DTCs.
5. Cycle the ignition switch off then on.

CAUTION: Ensure brake capability is available before road testing.

6. Test drive the vehicle in a straight line to 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be meet.

7. With the scan tool, read DTCs.

Does the scan tool display: C1041-LEFT FRONT TONE WHEEL PERFORMANCE?

Yes

- Go to step 3

No

- Go to step 2

2. CHECK WHEEL SPEED SENSOR SIGNALS

1. Turn the ignition on.
2. With the scan tool, monitor and graph ALL the WSS speeds and compare graph while an assistant drives the vehicle.

NOTE: If graph shows periodic dropouts pay close attention to the tone wheel.

3. Slowly accelerate as straight as possible from a stop to 40 km/h (25 mph).

Is the Left Front WSS speed showing 0 km/h (0 mph) or not matching other wheels or showing erratic behavior?

Yes

- Go to step 3

No

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

3. CHECK FOR IMPROPER LEFT FRONT TIRE PRESSURE/MISMATCHED TIRES

1. Turn the ignition off.
2. Check and adjust the Left Front Tire pressure.
3. Check and adjust all other tire pressures.

4. Inspect for mismatched tires on vehicle.

Is the Left Front Tire improperly inflated or mismatched tires on vehicle?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 4

4. CHECK THE LEFT FRONT TONE WHEEL/BEARING FOR DAMAGE

NOTE: Check the tone wheel teeth for missing teeth, cracks, or looseness. Teeth should be perfectly square, not bent, or nicked.

1. Check the Left Front Tone Wheel/Bearing for damage.
2. Check the Left Front Tone Wheel for dirt.

Was the tone wheel dirty?

Yes

- Clean tone wheel and sensor. Clear codes and retest.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Replace the Left Front Tone Wheel/Bearing in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

C1042-RIGHT FRONT TONE WHEEL PERFORMANCE

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

When the Anti-Lock Brake Module detects periodic drops of a WSS signal.

Possible Causes

RIGHT FRONT TONE WHEEL/BEARING DAMAGE
IMPROPER RIGHT FRONT TIRE PRESSURE/MISMATCHED TIRES
DIRTY TONE WHEEL/SENSOR

Diagnostic Test

1. CHECK FOR A DTC C1042-RIGHT FRONT TONE WHEEL PERFORMANCE

NOTE: This DTC must be active for the results of this test to be valid. If DTC C1015 Right Front Wheel Speed Sensor Circuit is present it must be repaired before continuing.

1. Turn the ignition on.
2. With the scan tool, read DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase DTCs.
5. Cycle the ignition switch off then on.

CAUTION: Ensure brake capability is available before road testing.

6. Test drive the vehicle in a straight line to 25 mph (40 km/h).

NOTE: Vehicle must be driven above 25 mph (40 km/h) for set conditions to be met.

7. With the scan tool, read DTCs.

Does the scan tool display: C1042-RIGHT FRONT TONE WHEEL PERFORMANCE?

Yes

- Go to step 3

No

- Go to step 2

2. CHECK WHEEL SPEED SENSOR SIGNALS

1. Turn the ignition on.

2. With the scan tool, monitor and graph ALL the WSS speeds and compare graph while an assistant drives the vehicle.

NOTE: **If graph shows periodic dropouts pay close attention to the tone wheel.**

3. Slowly accelerate as straight as possible from a stop to 25 mph (40 km/h).

Is the Right Front WSS speed showing 0 mph (0 km/h) or not matching other wheels or showing erratic behavior?

Yes

- Go to step 3

No

- Perform the ABS INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

3. CHECK FOR IMPROPER RIGHT FRONT TIRE PRESSURE/MISMATCHED TIRES

1. Turn the ignition off.
2. Check and adjust the Right Front Tire pressure.
3. Check and adjust all other tire pressures.
4. Inspect for mismatched tires on vehicle.

Is the Right Front Tire improperly inflated or mismatched tires on vehicle?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 4

4. CHECK THE RIGHT FRONT TONE WHEEL/BEARING FOR DAMAGE

NOTE: **Check the tone wheel teeth for missing teeth, cracks, or looseness. Teeth should be perfectly square, not bent, or nicked.**

1. Check the Right Front Tone Wheel/Bearing for damage.
2. Check the Right Front Tone Wheel for dirt.

Was the tone wheel dirty?

Yes

- Clean tone wheel and sensor. Clear codes and retest.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Replace the Right Front Tone Wheel/Bearing in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

C1043-LEFT REAR TONE WHEEL PERFORMANCE

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

When the Anti-Lock Brake Module detects periodic drops of a WSS signal.

Possible Causes
LEFT REAR TONE WHEEL/BEARING DAMAGE
IMPROPER LEFT REAR TIRE PRESSURE/MISMATCHED TIRES
AXLE SHAFT FASTENER HARDWARE
DIRTY TONE WHEEL/SENSOR

Diagnostic Test

1. CHECK FOR A DTC C1043-LEFT REAR TONE WHEEL PERFORMANCE

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, read DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase DTCs.
5. Cycle the ignition switch off then on.

CAUTION: Ensure brake capability is available before road testing.

6. Test drive the vehicle in a straight line to 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be met.

7. With the scan tool, read DTCs.

Does the scan tool display: C1043-LEFT REAR TONE WHEEL PERFORMANCE?

Yes

- Go to step 3

No

- Go to step 2

2. CHECK WHEEL SPEED SENSOR SIGNALS

1. Turn the ignition on.
2. With the scan tool, monitor and graph ALL the WSS speeds and compare graph while an assistant drives the vehicle.

NOTE: If graph shows periodic dropouts pay close attention to the tone wheel.

3. Slowly accelerate as straight as possible from a stop to 40 km/h (25 mph).

Is the Left Rear WSS speed showing 0 km/h (0 mph) or not matching other wheels or showing erratic behavior?

Yes

- Go to step 3

No

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

3. CHECK FOR IMPROPER LEFT REAR TIRE PRESSURE/MISMATCHED TIRES

1. Turn the ignition off.
2. Check and adjust the Left Rear Tire pressure.

3. Check and adjust all other tire pressures.
4. Inspect for mismatched tires on vehicle.

Is the Left Rear Tire improperly inflated or mismatched tires on vehicle?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**

No

- Go to step 4

4. CHECK AXLE SHAFT FASTENER HARDWARE FOR LOOSENESS

1. Inspect the axle shaft fastener for looseness, and not properly fastened. Tighten fastener to proper specification as required.

Was the Axle Shaft fastener loose?

Yes

- Repair as necessary.

No

- Go to step 5

5. CHECK THE LEFT REAR TONE WHEEL FOR DAMAGE

NOTE: Check the tone wheel teeth for missing teeth, cracks, or looseness. Teeth should be perfectly square, not bent, or nicked.

1. Check the Left Rear Tone Wheel for damage.
2. Check the Left Rear Tone Wheel for dirt.

Was the tone wheel dirty?

Yes

- Clean tone wheel and sensor. Clear codes and retest.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Replace the Left Rear Tone Wheel in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

C1044-RIGHT REAR TONE WHEEL PERFORMANCE

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

When the Anti-Lock Brake Module detects periodic drops of a WSS signal.

Possible Causes
RIGHT REAR TONE WHEEL/BEARING DAMAGE
IMPROPER RIGHT REAR TIRE PRESSURE/MISMATCHED TIRES
AXLE SHAFT FASTENER HARDWARE
DIRTY TONE WHEEL/SENSOR

Diagnostic Test**1. CHECK FOR A DTC C1044-RIGHT REAR TONE WHEEL PERFORMANCE**

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, read DTCs.
3. Record DTC and Freeze Frame information.
4. With the scan tool, erase DTCs.
5. Cycle the ignition switch off then on.

CAUTION: Ensure brake capability is available before road testing.

6. Test drive the vehicle in a straight line to 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be meet.

7. With the scan tool, read DTCs.

Does the scan tool display: C1044-RIGHT REAR TONE WHEEL PERFORMANCE?

Yes

- Go to step 3

No

- Go to step 2

2. CHECK WHEEL SPEED SENSOR SIGNALS

1. Turn the ignition on.
2. With the scan tool, monitor and graph ALL the WSS speeds and compare graph while an assistant drives the vehicle.

NOTE: If graph shows periodic dropouts pay close attention to the tone wheel.

3. Slowly accelerate as straight as possible from a stop to 40 km/h (25 mph).

Is the Right Rear WSS speed showing 0 km/h (0 mph) or not matching other wheels or showing erratic behavior?

Yes

- Go to step 3

No

- Refer to the INTERMITTENT CONDITION diagnostic procedure. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**

3. CHECK FOR IMPROPER RIGHT REAR TIRE PRESSURE/MISMATCHED TIRES

1. Turn the ignition off.
2. Check and adjust the Right Rear Tire pressure.
3. Check and adjust all other tire pressures.
4. Inspect for mismatched tires on vehicle.

Is the Right Rear Tire improperly inflated or mismatched tires on vehicle?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**

No

- Go to step 4

4. CHECK AXLE SHAFT FASTENER HARDWARE FOR LOOSENESS

1. Inspect the axle shaft fastener for looseness, and not properly fastened. Tighten fastener to proper specification as required.

Was the Axle Shaft fastener loose?

Yes

- Repair as necessary.

No

- Go to step 5

5. CHECK THE RIGHT REAR TONE WHEEL FOR DAMAGE

NOTE: Check the tone wheel teeth for missing teeth, cracks, or looseness. Teeth should be perfectly square, not bent, or nicked.

1. Check the Right Rear Tone Wheel for damage.
2. Check the Right Rear Tone Wheel for dirt.

Was the tone wheel dirty?

Yes

- Clean tone wheel and sensor. Clear codes and retest.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**

No

- Replace the Right Rear Tone Wheel in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**

C1046-LEFT FRONT WHEEL PRESSURE PHASE MONITORING

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

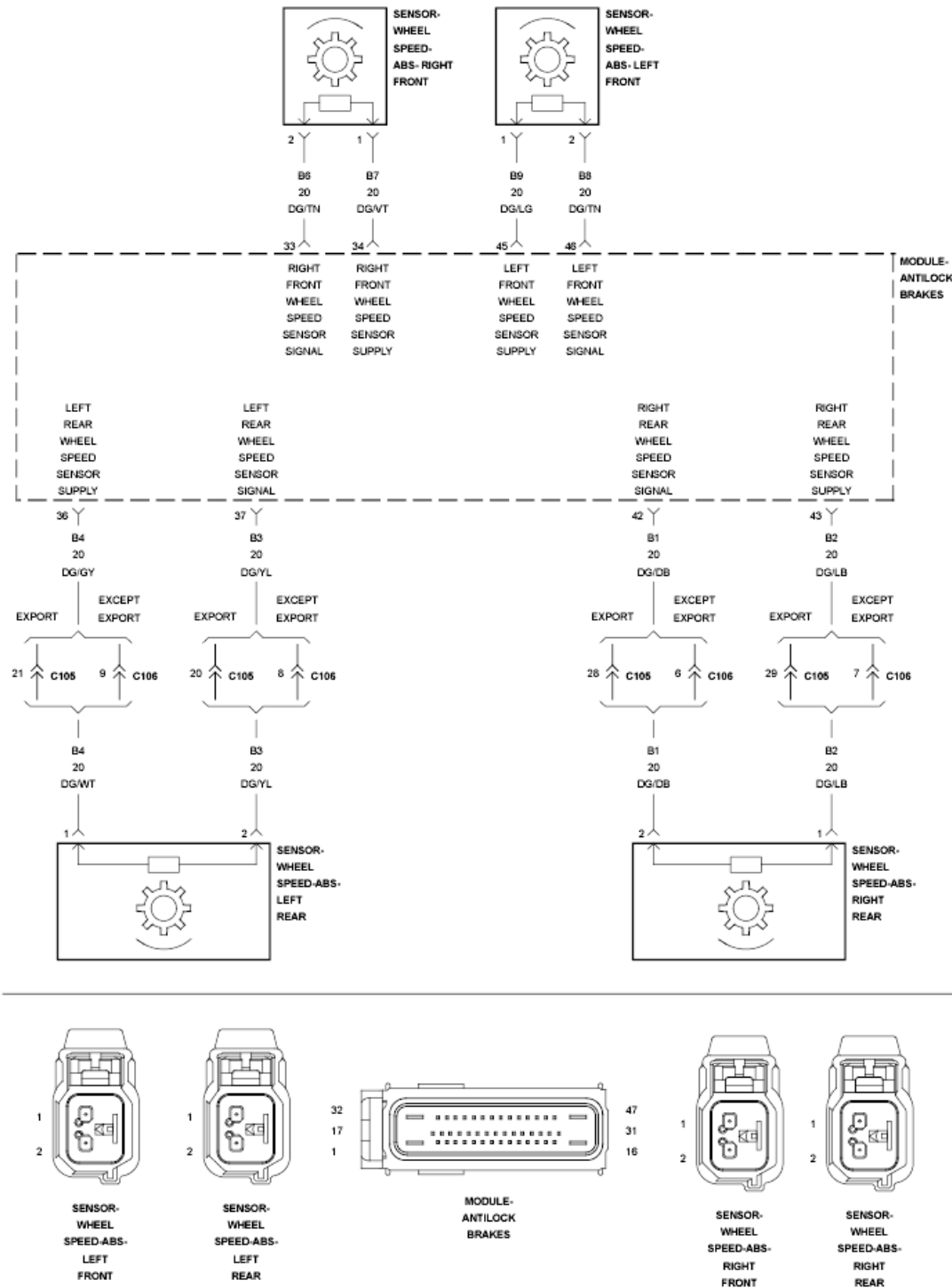


Fig. 41: Rear Wheel Speed Sensor Signal/Supply Circuit Schematic
Courtesy of CHRYSLER LLC

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

- When Monitored:**

During active ABS control.

- **Set Condition:**

If the Anti-Lock Brake Module detects a pressure reduction phase and the following pressure hold phase is too long.

Possible Causes
LEFT FRONT TONE WHEEL/BEARING DAMAGED
WHEEL SPEED SIGNALS SWAPPED
LEFT FRONT WSS
ANTI-LOCK BRAKE MODULE

Diagnostic Test**1. COMPARE WHEEL SPEED SENSOR SIGNALS**

WARNING: Ensure brake capability is available before road testing.

1. With the scan tool, monitor ALL the WSS speeds while an assistant drives the vehicle.
2. Slowly accelerate as straight as possible from a stop to 25 mph (40 km/h).

Does the Left Front WSS speed differ from the other WSS speeds by 5 mph (8 km/h) or show NO speed?

Yes

- Go to step 3

No

- Go to step 2

2. CHECKING INSIDE WHEEL SPEED

1. Slowly accelerate as straight as possible from a stop to 25 mph (40 km/h) and perform a 90 degree turn while monitoring if inside wheel is slower than outside.

Was the inside wheel slower than outside?

Yes

- Perform the ABS INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 3

3. INSPECT TONE WHEEL/BEARING

1. Turn the ignition off.
2. Visually inspect the tone wheel and bearing for damage.
3. Check the tone wheel teeth for missing teeth, cracks, and looseness. The teeth must be perfectly square, not bent, or nicked. Check the wheel bearing for worn/looseness.

Were any problems found?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 4

4. CHECK WHEEL SPEED SENSOR WIRING

1. Check the Anti-Lock Brake Module and Wheel Speed Sensors harness connectors for incorrectly wired connectors.

Were any problems found?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 5

5. LEFT FRONT WHEEL SPEED SENSOR

1. Replace the Left Front Wheel Speed Sensor in accordance with the Service Information.
2. Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

CAUTION: Ensure brake capability is available before road testing.

3. Road test the vehicle over 25 mph (40 km/h).

NOTE: Vehicle must be driven above 25 mph (40 km/h) for set conditions to be meet.

4. With the scan tool, read ABS DTCs.

NOTE: The Anti-Lock Brake Module must sense ALL 4 wheels at 7.5 mph (12 km/h) before it will extinguish the ABS indicators.

Did DTC C1046 LEFT FRONT WHEEL PRESSURE PHASE MONITORING reset?

Yes

- Replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Test complete.

C1047-RIGHT FRONT WHEEL PRESSURE PHASE MONITORING

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

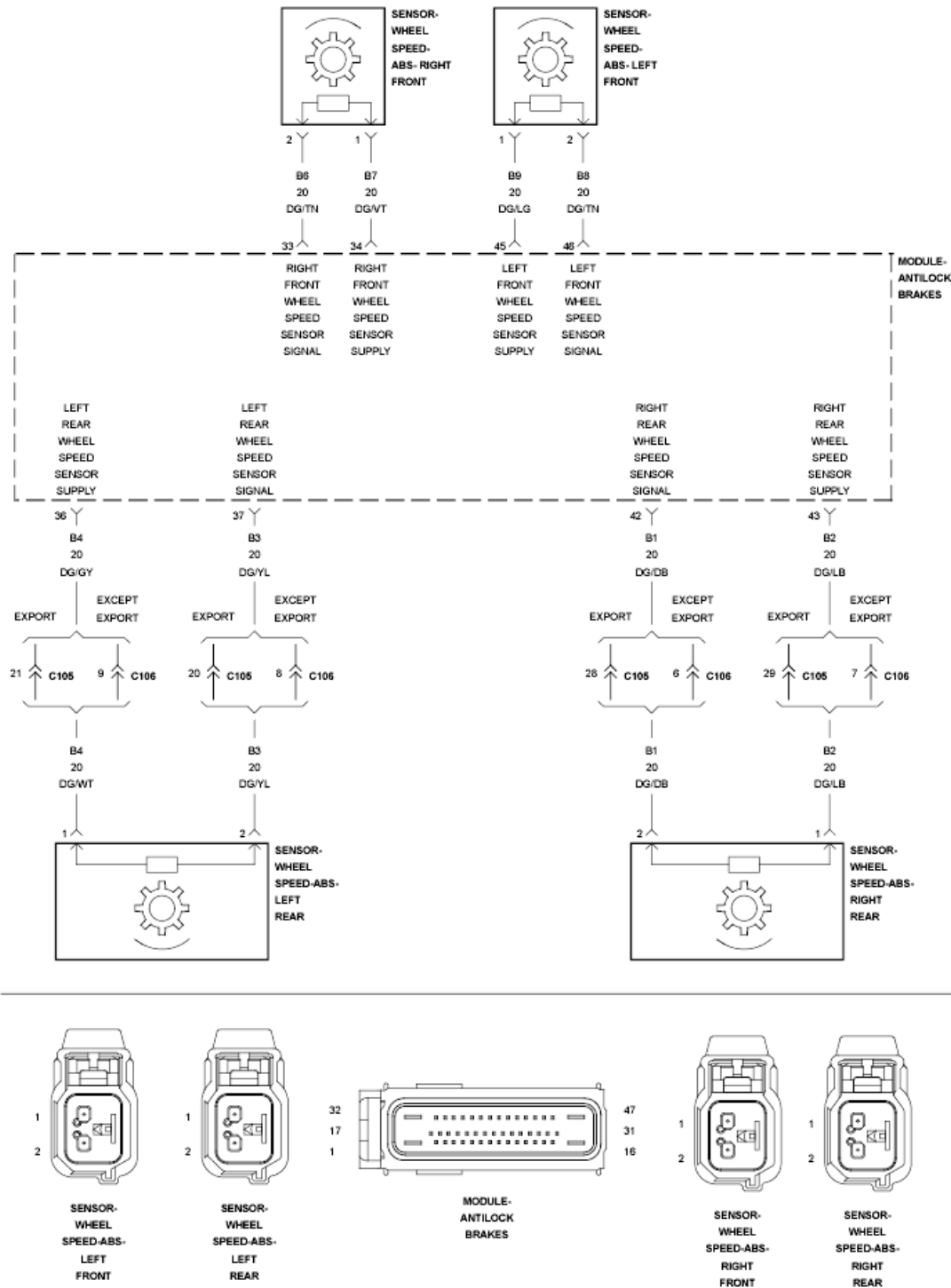


Fig. 42: Rear Wheel Speed Sensor Signal/Supply Circuit Schematic
Courtesy of CHRYSLER LLC

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

- When Monitored:**

During active ABS control.

- **Set Condition:**

If the Anti-Lock Brakes Module detects a pressure reduction phase and the following pressure hold phase is too long.

Possible Causes
RIGHT FRONT TONE WHEEL DAMAGED
WHEEL SPEED SIGNALS SWAPPED
RIGHT FRONT WSS
ANTI-LOCK BRAKES MODULE

Diagnostic Test

1. COMPARE WHEEL SPEED SENSOR SIGNALS

WARNING: Ensure brake capability is available before road testing.

1. With the scan tool, monitor ALL the WSS speeds while an assistant drives the vehicle.
2. Slowly accelerate as straight as possible from a stop to 40 km/h (25 mph).

Does the Right Front WSS speed differ from the other WSS speeds by 8 km/h (5 mph) or show NO speed?

Yes

- Go to step 3

No

- Go to step 2

2. CHECKING INSIDE WHEEL SPEED

1. Slowly accelerate as straight as possible from a stop to 40 km/h (25 mph) and perform a 90 degree turn while monitoring if inside wheel is slower than outside.

Was the inside wheel slower than outside?

Yes

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**

No

- Go to step 3

3. INSPECT TONE WHEEL/BEARING

1. Turn the ignition off.
2. Visually inspect the tone wheel and bearing for damage.
 - Check the tone wheel teeth for missing teeth, cracks, and looseness. The teeth must be perfectly square, not bent, or nicked. Check the wheel bearing for worn/looseness.

Were any problems found?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 4

4. CHECK WHEEL SPEED SENSOR WIRING

1. Check the Anti-Lock Brakes Module and Wheel Speed Sensors harness connectors for incorrectly wired connectors.

Were any problems found?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 5

5. RIGHT FRONT WHEEL SPEED SENSOR

1. Replace the Right Front Wheel Speed Sensor in accordance with the Service Information.
2. Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

CAUTION: Ensure brake capability is available before road testing.

3. Road test the vehicle over 40 km/h (25 mph).

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be meet.

4. With the scan tool, read ABS DTCs.

NOTE: The Anti-Lock Brake Module must sense ALL 4 wheels at 12 km/h (7.5 mph) before it will extinguish the ABS indicators.

Did DTC C1047 RIGHT FRONT WHEEL PRESSURE PHASE MONITORING reset?

Yes

- Replace the Anti-Lock Brakes Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Test Complete.

C1048-LEFT REAR WHEEL PRESSURE PHASE MONITORING

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

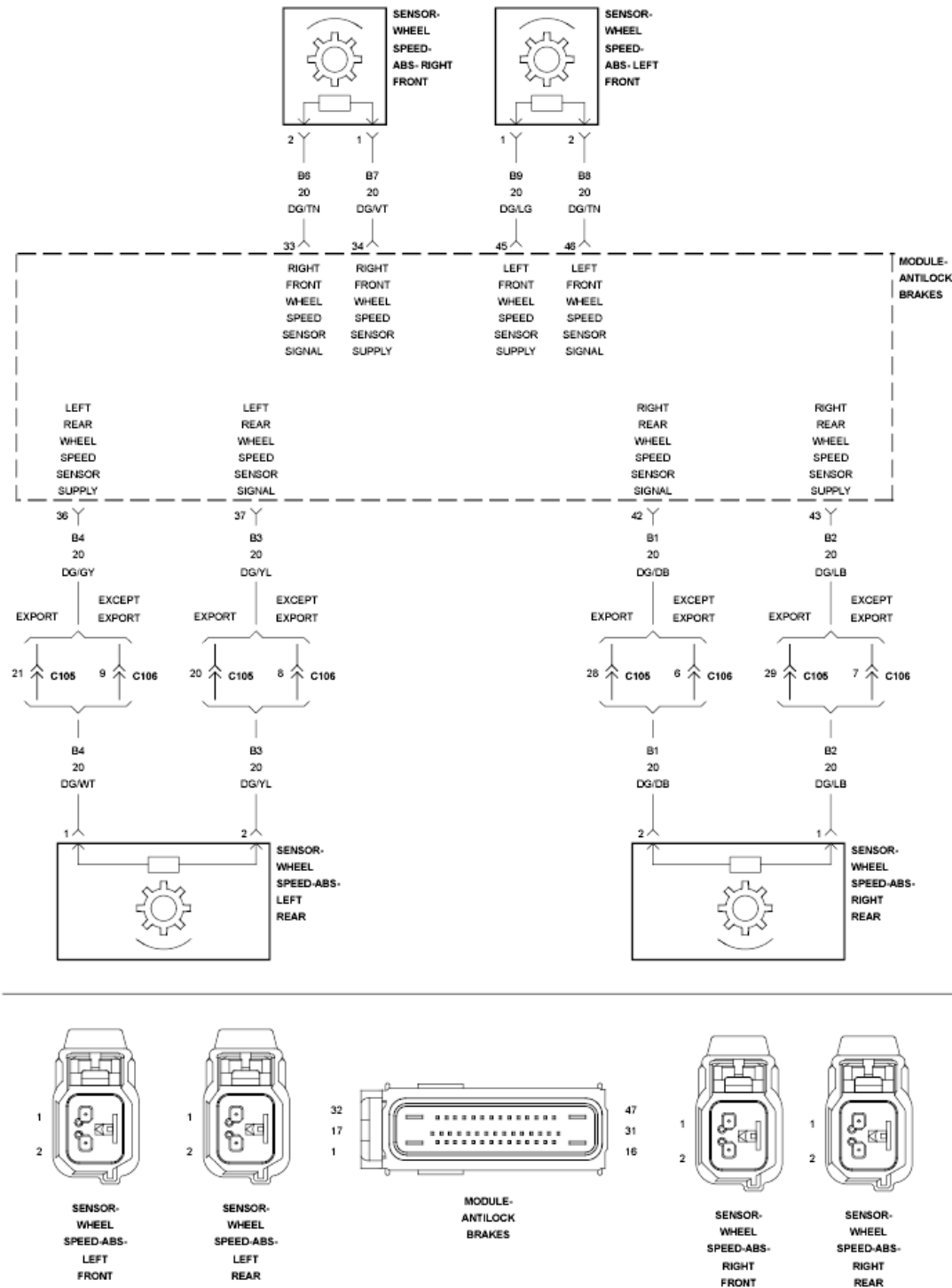


Fig. 43: Rear Wheel Speed Sensor Signal/Supply Circuit Schematic
 Courtesy of CHRYSLER LLC

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

- When Monitored:**

During active ABS control.

- **Set Condition:**

If the Anti-Lock Brakes Module detects a pressure reduction phase and the following pressure hold phase is too long.

Possible Causes
LEFT REAR TONE WHEEL/WHEEL BEARING
WHEEL SPEED SIGNALS SWAPPED
LEFT REAR WSS
ANTI-LOCK BRAKES MODULE

Diagnostic Test

1. COMPARE WHEEL SPEED SENSOR SIGNALS

WARNING: Ensure brake capability is available before road testing.

1. With the scan tool, monitor ALL the WSS speeds while an assistant drives the vehicle.
2. Slowly accelerate as straight as possible from a stop to 40 km/h (25 mph).

Does the Left Rear WSS speed differ from the other WSS speeds by 8 km/h (5 mph) or show NO speed?

Yes

- Go to step 3

No

- Go to step 2

2. CHECKING INSIDE WHEEL SPEED

1. Slowly accelerate as straight as possible from a stop to 40 km/h (25 mph) and perform a 90 degree turn while monitoring if inside wheel is slower than outside.

Was the inside wheel slower than outside?

Yes

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 3

3. INSPECT TONE WHEEL/BEARING

1. Turn the ignition off.
2. Visually inspect the tone wheel and bearing for damage.
 - Check the tone wheel teeth for missing teeth, cracks, and looseness. The teeth must be perfectly square, not bent, or nicked. Check the wheel bearing for worn/looseness.

Were any problems found?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 4

4. CHECK WHEEL SPEED SENSOR WIRING

1. Check the Anti-Lock Brakes Module and Wheel Speed Sensors harness connectors for incorrectly wired connectors.

Were any problems found?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 5

5. LEFT REAR WHEEL SPEED SENSOR

1. Replace the Left Rear Wheel Speed Sensor in accordance with the Service Information.
2. Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

CAUTION: Ensure brake capability is available before road testing.

3. Road test the vehicle over 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be meet.

4. With the scan tool, read ABS DTCs.

NOTE: The Anti-Lock Brake Module must sense ALL 4 wheels at 12 km/h (7.5 mph) before it will extinguish the ABS indicators.

Did DTC C1048 LEFT REAR WHEEL PRESSURE PHASE MONITORING reset?

Yes

- Replace the Anti-Lock Brakes Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Test Complete.

C1049-RIGHT REAR WHEEL PRESSURE PHASE MONITORING

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

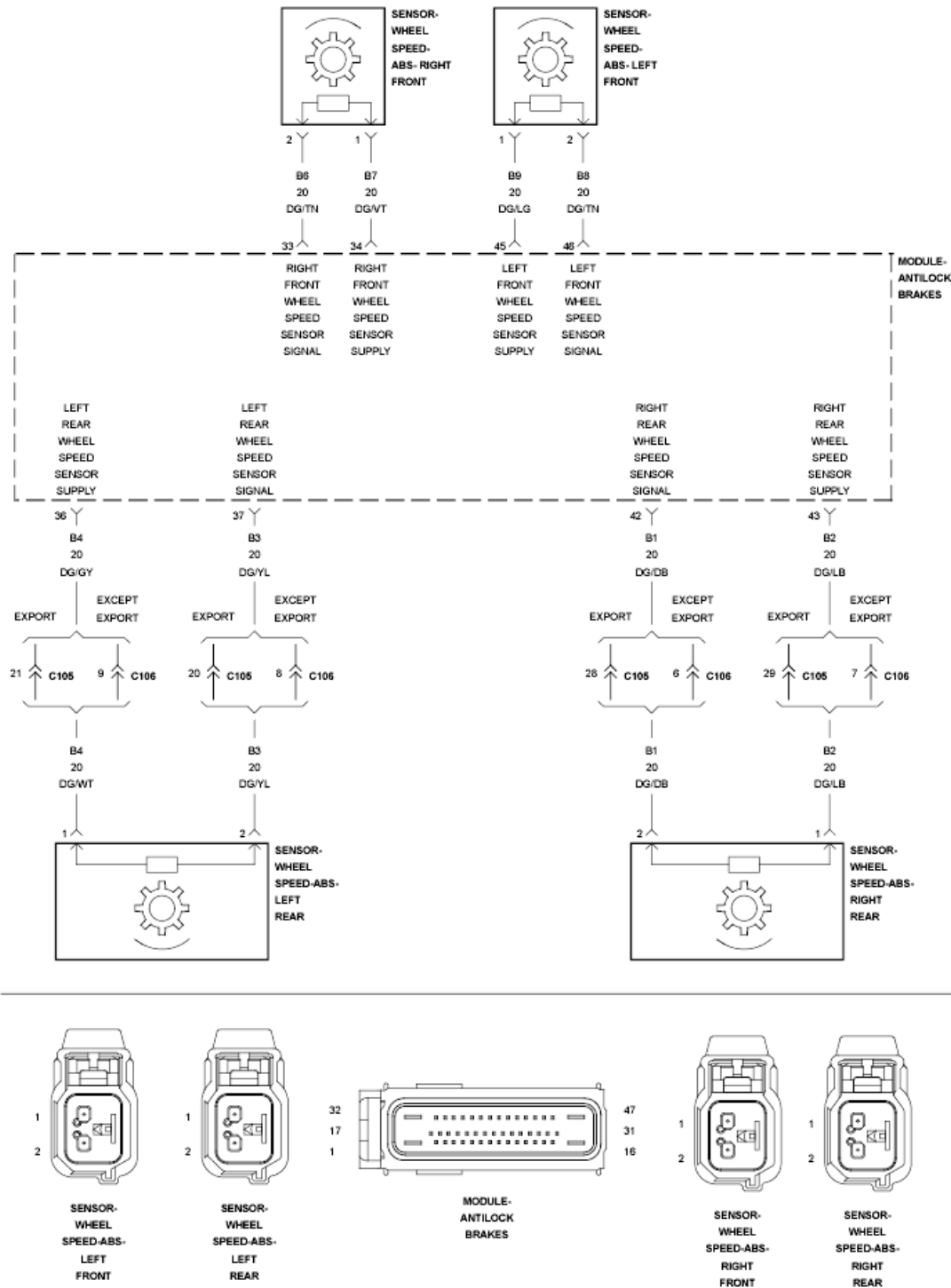


Fig. 44: Rear Wheel Speed Sensor Signal/Supply Circuit Schematic
Courtesy of CHRYSLER LLC

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

- When Monitored:**

During active ABS control.

- **Set Condition:**

When the Anti-Lock Brakes Module detects a pressure reduction phase and the following pressure hold phase is too long.

Possible Causes
RIGHT REAR TONE WHEEL DAMAGED
WHEEL SPEED SIGNALS SWAPPED
RIGHT REAR WSS
ANTI-LOCK BRAKES MODULE

Diagnostic Test

1. COMPARE WHEEL SPEED SENSOR SIGNALS

WARNING: Ensure brake capability is available before road testing.

1. With the scan tool, monitor ALL the WSS speeds while an assistant drives the vehicle.
2. Slowly accelerate as straight as possible from a stop to 40 km/h (25 mph).

Does the Right Rear WSS speed from the other WSS speeds by 8 km/h (5 mph) or show NO speed?

Yes

- Go to step 3

No

- Go to step 2

2. CHECKING INSIDE WHEEL SPEED

1. Slowly accelerate as straight as possible from a stop to 40 km/h (25 mph) and perform a 90 degree turn while monitoring if inside wheel is slower than outside.

Was the inside wheel slower than outside?

Yes

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 3

3. INSPECT TONE WHEEL/BEARING

1. Turn the ignition off.
2. Visually inspect the tone wheel and bearing for damage.
 - Check the tone wheel teeth for missing teeth, cracks, and looseness. The teeth must be perfectly square, not bent, or nicked. Check the wheel bearing for worn/looseness.

Were any problems found?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 4

4. CHECK WHEEL SPEED SENSOR WIRING

1. Check the Anti-Lock Brakes Module and Wheel Speed Sensors harness connectors for incorrectly wired connectors.

Were any problems found?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 5

5. RIGHT REAR WHEEL SPEED SENSOR

1. Replace the Right Rear Wheel Speed Sensor in accordance with the Service Information.
2. Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

CAUTION: Ensure brake capability is available before road testing.

3. Road test the vehicle over 40 km/h (25 mph).

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be meet.

4. With the scan tool, read ABS DTCs.

NOTE: The Anti-Lock Brake Module must sense ALL 4 wheels at 12 km/h (7.5 mph) before it will extinguish the ABS indicators.

Did DTC C1049 RIGHT REAR WHEEL PRESSURE PHASE MONITORING reset?

Yes

- Replace the Anti-Lock Brakes Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Test Complete.

C1073-ABS PUMP MOTOR CONTROL CIRCUIT

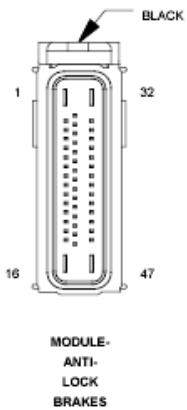
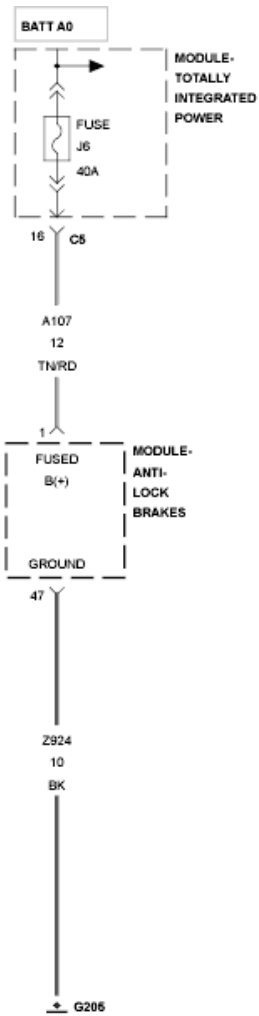


Fig. 45: Fused B+ Ground Circuit Schematic
Courtesy of CHRYSLER LLC

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

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

- **When Monitored:**

With the ignition on.

- **Set Condition:**

The ABM detects low pump motor feedback voltage with actuation of the pump motor relay.

Possible Causes
BLOWN PUMP FUSE
HIGH RESISTANCE IN B+ CIRCUITS
HIGH RESISTANCE IN GROUND CIRCUITS
INTEGRATED CONTROL UNIT

Diagnostic Test

1. CHECK FOR A DTC C1073-ABS PUMP MOTOR CONTROL CIRCUIT

NOTE: This DTC must be active for the results of this test to be valid. If present, diagnose and repair DTC C2116-ABS PUMP MOTOR SUPPLY LOW VOLTAGE before diagnosing this DTC.

1. Turn the ignition on.
2. With the scan tool, record and erase DTCs.
3. Cycle the ignition switch from off to on.
4. Road test the vehicle over 40 km/h (25 mph).

NOTE: Vehicle must be driven above 40 km/h (25 mph) for set conditions to be meet.

5. With the scan tool, read DTCs.

NOTE: The Anti-Lock Brake Module must sense ALL 4 wheels at 12 km/h (7.5 mph) before it will extinguish the ABS indicators.

Does the scan tool display: C1073-ABS PUMP MOTOR CONTROL CIRCUIT?

Yes

- Go to step 2

No

- Perform the INTERMITTENT CONDITION diagnostic procedure. See **DTC-Based**

Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.

2. CHECK THE ABS PUMP MOTOR FUSED B+ FOR AN OPEN

1. Turn the ignition off.
2. Remove and visually inspect the ABS Pump Motor B+ fuse.

Is the ABS Pump Motor B+ fuse open?

Yes

- Go to step 3

No

- Go to step 5

3. CHECK THE (A107) FUSED B(+) FOR A SHORT TO GROUND

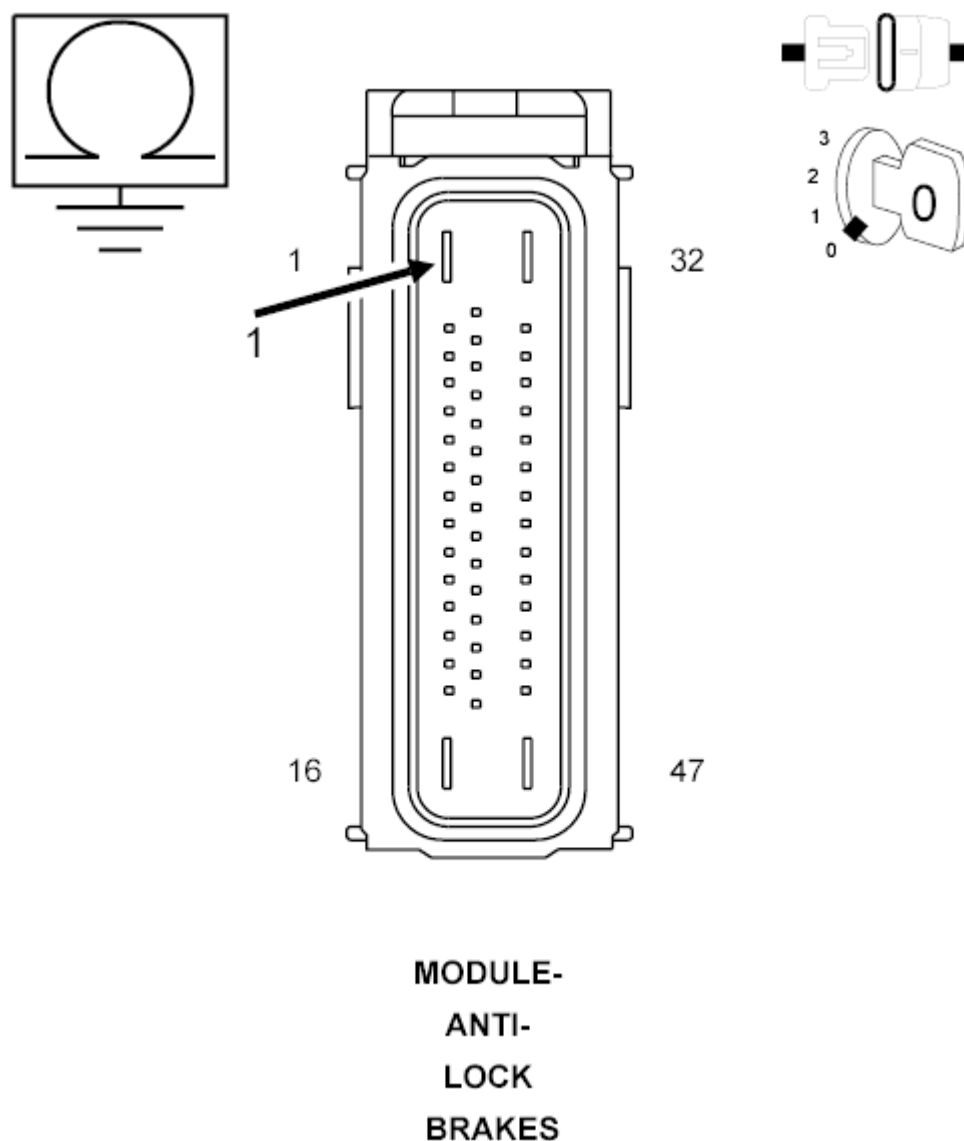


Fig. 46: Checking Fused B(+) For A Short To Ground
 Courtesy of CHRYSLER LLC

1. Disconnect the Anti-Lock Brake Module harness connector.
2. Using a 12-volt test light connected to 12-volts, probe the (A107) Fused B+ circuit.

Does the test light illuminate brightly?

Yes

- Repair the (A107) Fused B(+) circuit for a short to ground.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 4

4. CHECK THE (A107) FUSED B(+) CIRCUIT

1. Visually inspect the (A107) Fused B(+) circuit in the wiring harness.
2. Look for any signs of intermittent short to ground.

Is the wiring harness OK?

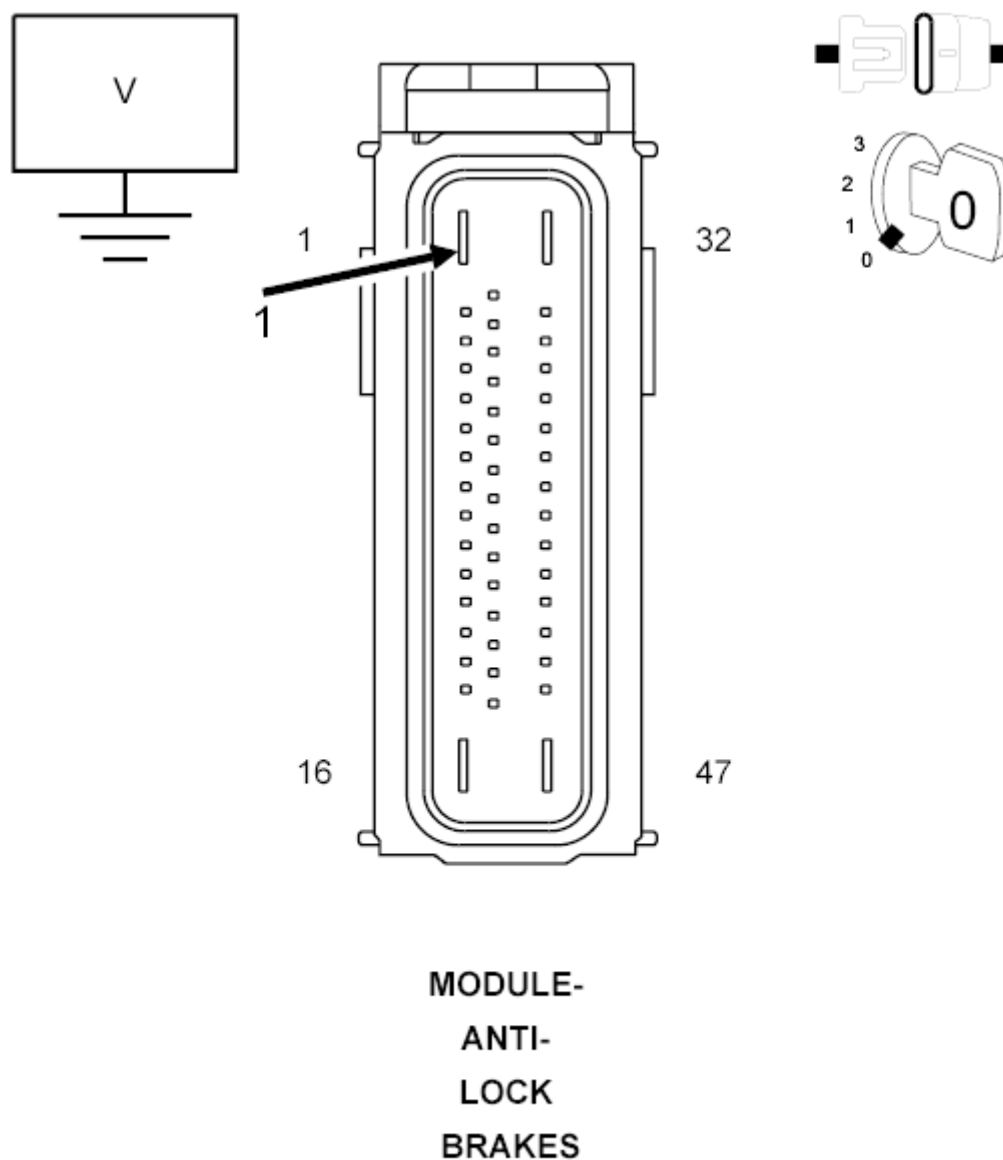
Yes

- Go to step 5

No

- Repair the (A107) Fused B(+) circuit for a short to ground.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

5. CHECK THE VOLTAGE ON THE (A107) FUSED B(+) CIRCUIT



71831

Fig. 47: Checking Voltage On Fused B(+) Circuit
Courtesy of CHRYSLER LLC

1. Disconnect the Anti-Lock Brake Module harness connector.
2. Measure the voltage of the (A107) Fused B(+) circuit in the Anti-Lock Brake Module harness connector.

Is the voltage above 10 volts?

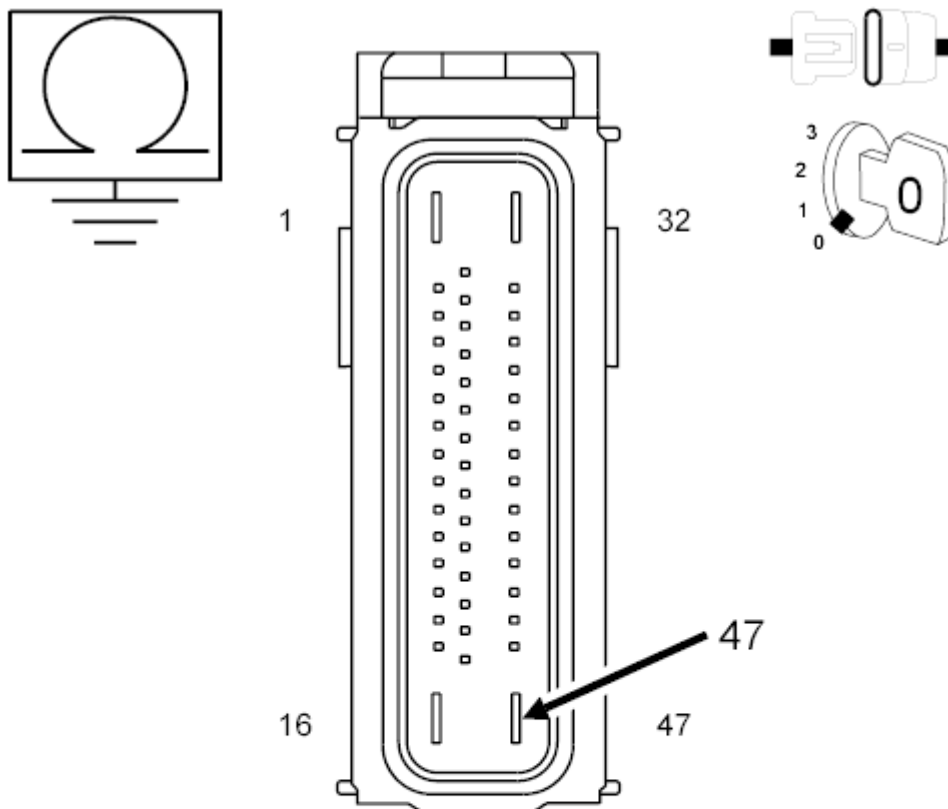
Yes

- Go to step 6

No

- Repair the (A107) Fused B(+) circuit for an open.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

6. CHECK THE (Z924) GROUND CIRCUIT FOR AN OPEN



MODULE-
ANTI-
LOCK
BRAKES

71833

Fig. 48: Checking Ground Circuit For An Open
Courtesy of CHRYSLER LLC

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

1. Measure the resistance of the (Z924) Ground circuit between the Anti-Lock Brake Module harness connector and ground

Is the resistance below 5.0 ohms?

Yes

- Replace the ICU per service information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Repair the high resistance in the affected circuit.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

C1078-TIRE REVOLUTIONS RANGE PERFORMANCE

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

- **When Monitored:**

Continuous.

- **Set Condition:**

Programmed value for tire size is not within acceptable range.

Possible Causes

INCORRECT VALUE PROGRAMMED INTO TOTALLY INTEGRATED POWER MODULE

Diagnostic Test

1. INCORRECT VALUE PROGRAMMED INTO TIPM

TIRE SIZE	BODY STYLE	ENGINE SIZE	SALES CODE	TIRE CIRCUMFERENCE (MM PER REV)
P225/70R 16 ALL SEASON	JC	ALL	TRD	2206
225/65R 17 BSW TOURING	JC	ALL	TRF	2220
225/65R 16 BSW THREE SEASON	JC	ALL	TUJ	2130

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P225/65R 17 BSW A/S TOURING	JC	ALL	TVK	2230
225/55R 19 BSW THREE SEASON	JC	ALL	TWC	2250
P225//55R 19 BSW AS TOURING	JC	ALL	TWV	2270

1. Verify the correct tire/wheel information is programmed in the TIPM.

Is the correct value programmed in the TIPM according to the chart?

Yes

- Test complete.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**

No

- Program the correct Tire/Wheel information in the TIPM.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**

C107C-BRAKE PEDAL SWITCH 1/2 STUCK

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

Diagnostic Test

1. **POWERTRAIN CONTROL MODULE (PCM) or ENGINE CONTROL MODULE (ECM) DTCS PRESENT**

1. With the scan tool, read ECM/PCM Brake DTCs.

Are there any ECM/PCM Brake DTCs present?

Yes

- Perform the appropriate diagnostic procedure. Refer to **DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Diagnosis and Testing** for gas engine applications or **DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Diagnosis and Testing** for diesel engine applications.

No

- Using the schematics as a guide, check the ECM/PCM terminals for corrosion, damage, or terminal push out. Pay particular attention to all power and ground circuits.

- Perform the appropriate VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure** for gas engine applications or **DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure** for diesel engine applications.

C107D-BRAKE PEDAL SWITCH 1/2 CORRELATION

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

Diagnostic Test**1. POWERTRAIN CONTROL MODULE (PCM) or ENGINE CONTROL MODULE (ECM) DTCS PRESENT**

1. With the scan tool, read ECM/PCM Brake DTCS.

Are there any ECM/PCM Brake DTCS present?

Yes

- Perform the appropriate diagnostic procedure. Refer to **DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Diagnosis and Testing** for gas engine applications or **DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Diagnosis and Testing** for diesel engine applications.

No

- Using the schematics as a guide, check the ECM/PCM terminals for corrosion, damage, or terminal push out. Pay particular attention to all power and ground circuits.
- Perform the appropriate VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure** for gas engine applications or **DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure** for diesel engine applications.

C1090-ABS BRAKE LAMP CONTROL CIRCUIT LOW

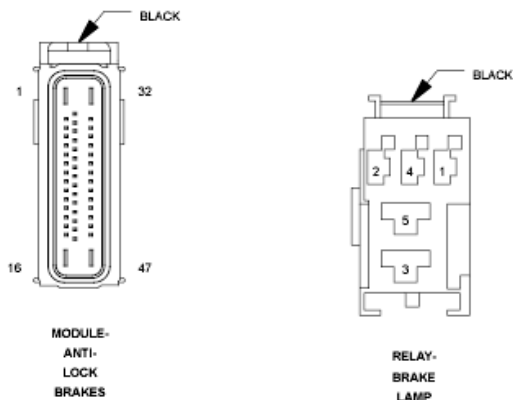
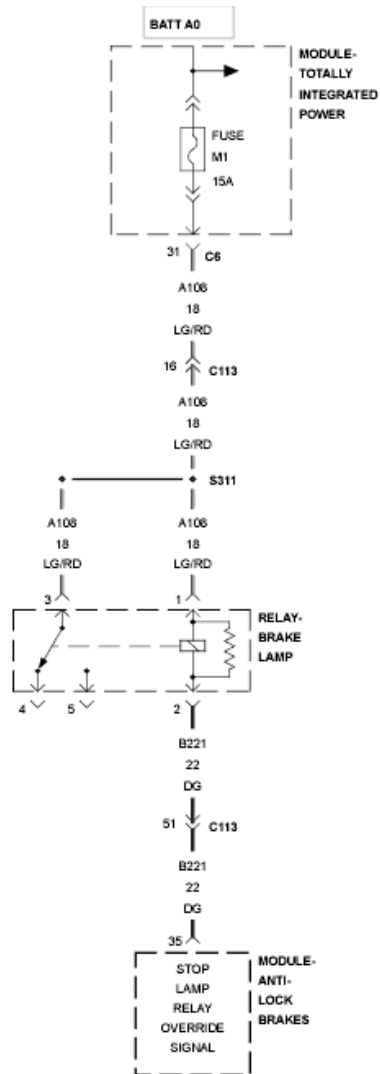


Fig. 49: Stop Lamp Relay Override Signal Circuit Schematic
 Courtesy of CHRYSLER LLC

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

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

- **When Monitored:**

With the ignition on.

- **Set Condition:**

When monitoring the Stop Lamp Relay Override Signal circuit the module detects a short to ground.

Possible Causes
(B221) STOP LAMP RELAY OVERRIDE SIGNAL OPEN OR SHORTED TO GROUND
BLOWN FUSE
BRAKE LAMP RELAY
ANTI-LOCK BRAKE MODULE (ABM)

Diagnostic Test

1. CHECK FOR DTC C1090-ABS BRAKE LAMP CONTROL CIRCUIT LOW

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, record and erase DTCs.
3. Start the engine.
4. Apply pressure to the brake pedal firmly with at least 80 bar (1160 psi.).
5. With the scan tool, read the DTCs.

Does the scan tool display: C1090-ABS BRAKE LAMP CONTROL CIRCUIT LOW?

Yes

- Go to step 2

No

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

2. CHECK CONNECTOR/TERMINAL FOR DAMAGE

NOTE: Check all terminals for broken, bent, pushed out or corroded terminals.

1. Turn the ignition off.
2. Inspect the Anti-Lock Brake Module harness connector and the Brake Lamp Relay harness connector.

Is the Anti-Lock Brake Module or any of the connectors/terminals damaged?

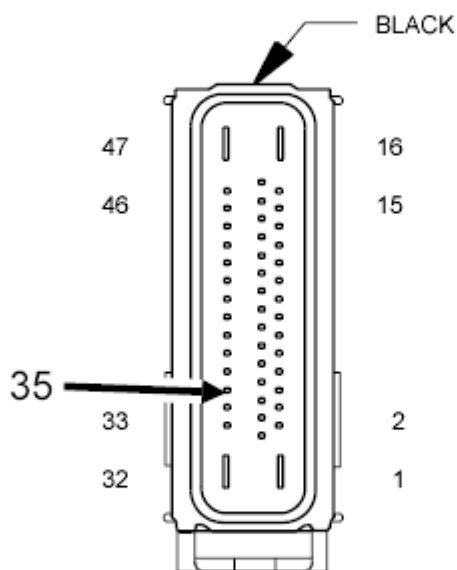
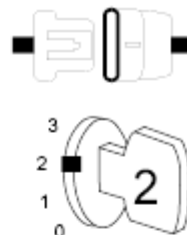
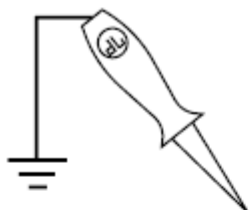
Yes

- Repair as necessary.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 3

3. CHECK (B221) STOP LAMP RELAY OVERRIDE SIGNAL SHORTED TO GROUND



**MODULE-
ANTI-
LOCK BRAKES
(ESP)**

Fig. 50: Checking Stop Lamp Relay Override Signal Shorted To Ground

Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Anti-Lock Brake Module
3. Turn the key on.
4. Using a 12-volt test light connected to ground, probe the (B221) Stop Lamp Relay Override Signal circuit at the Anti-Lock Brake Module harness connector.

Does the test light illuminate?

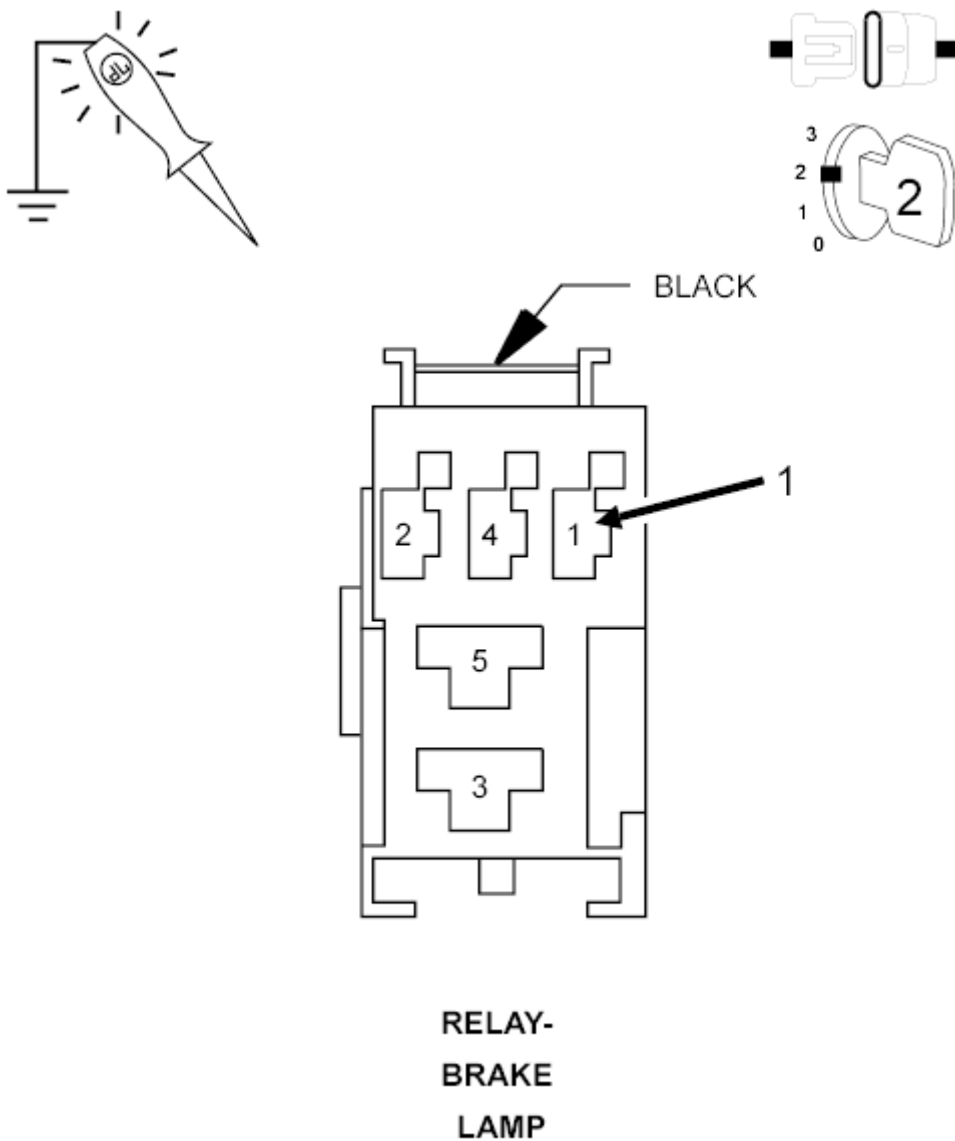
Yes

- Replace the Anti-Lock Brake Module in accordance with the service information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 4

4. CHECK (A108) FUSED B+



2048733

Fig. 51: Checking Brake Lamp Relay

Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Brake Lamp Relay.
3. Turn the key on.
4. Using a 12-volt test light connected to ground, probe the (A108) Fused B+ circuit at the Brake Lamp Relay harness connector.

Does the test light illuminate brightly?

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

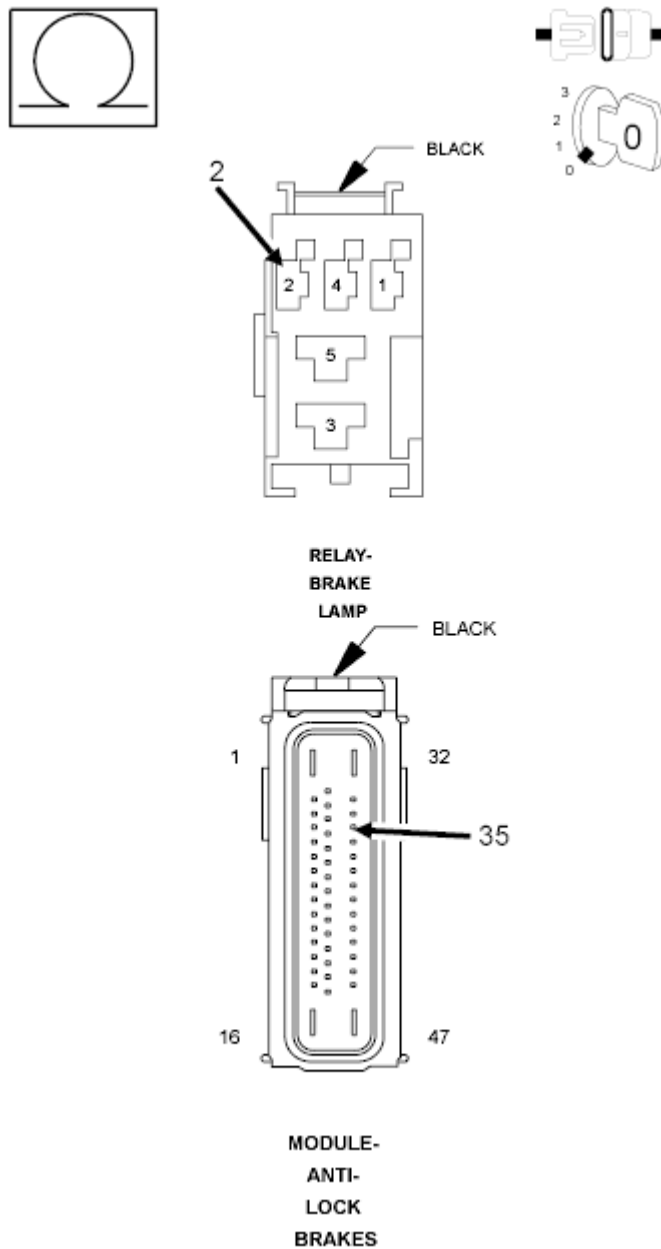
Yes

- Go to step 5

No

- Check for open fuse, if OK repair open or short to ground in the (A108) Fused B+ circuit.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

5. BRAKE LAMP RELAY



2048759

Fig. 52: Measuring Resistance Of Stop Lamp Relay Override Signal Circuit
 Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Measure the resistance of the (B221) Stop Lamp Relay Override Signal Circuit between the Brake Lamp Relay and the Anti-Lock Brake Module.

Is the resistance below 5 Ohms?

Yes

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

- Replace the Brake Lamp Relay in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Repair open in the (B221) Brake Lamp Inhibit Relay Control circuit.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

C1091-ABS BRAKE LAMP CONTROL CIRCUIT HIGH

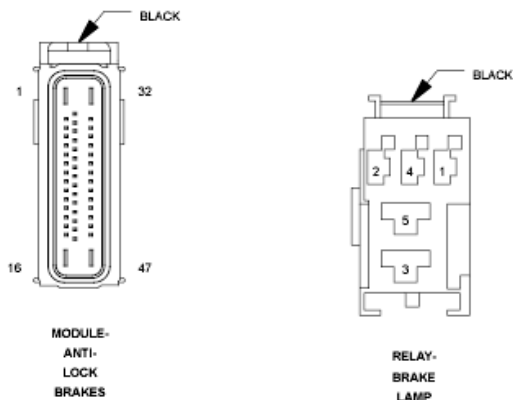
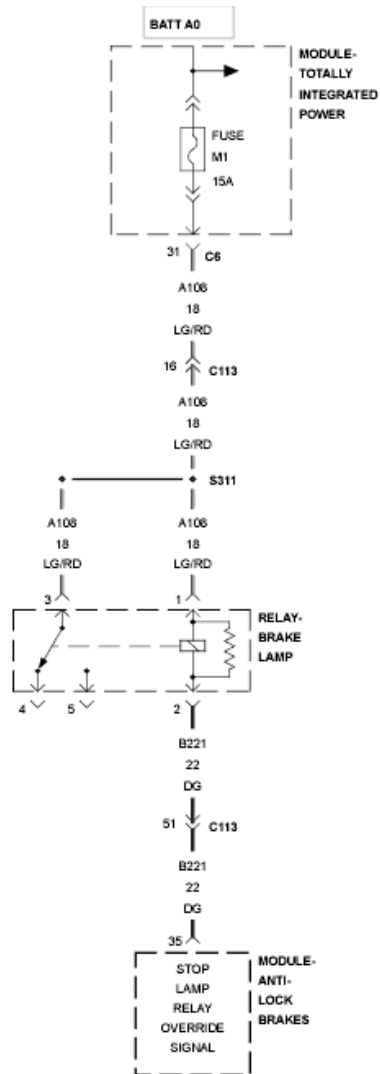


Fig. 53: Stop Lamp Relay Override Signal Circuit Schematic
Courtesy of CHRYSLER LLC

For complete wiring diagrams, refer to SYSTEM WIRING DIAGRAMS.

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

- **When Monitored:**

With the ignition on.

- **When Set:**

When monitoring the Stop Lamp Relay Override Signal circuit the module detects a short to B+.

Possible Causes
(B221) STOP LAMP RELAY OVERRIDE SIGNAL SHORTED TO VOLTAGE
BRAKE LAMP RELAY
ANTI-LOCK BRAKE MODULE

Diagnostic Test

1. CHECK FOR DTC C1091-ABS BRAKE LAMP CONTROL CIRCUIT HIGH

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, record and erase DTCs.
3. Start the engine.
4. Apply brake pedal firmly with at least 80 bar (1160 psi.).
5. With the scan tool, read DTCs.

Does the scan tool display: C1091-ABS BRAKE LAMP CONTROL CIRCUIT HIGH?

Yes

- Go to step 2

No

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

2. CHECK CONNECTOR/TERMINAL FOR DAMAGE

NOTE: Check all terminals for broken, bent, pushed out, or corroded terminals.

1. Turn the ignition off.
2. Inspect the Anti-Lock Brake Module harness connector and the Brake Lamp Relay harness connector.

Is the Anti-Lock Brake Module or any of the connectors/terminals damaged?

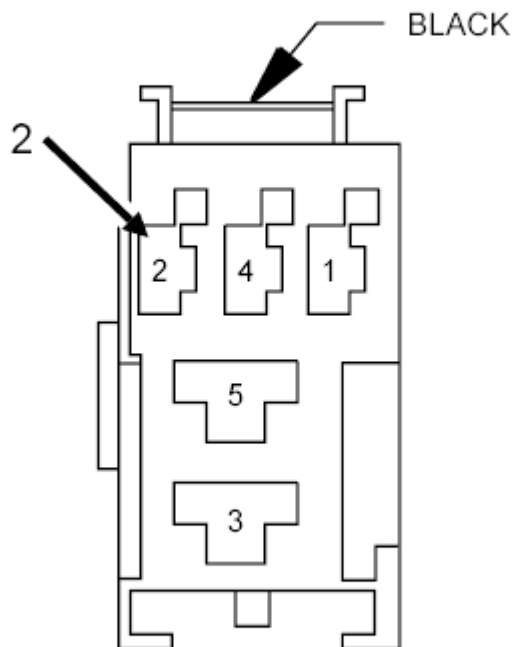
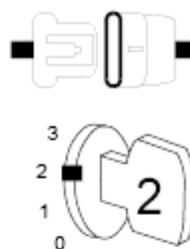
Yes

- Repair as necessary.
- Perform the ABS VERIFICATION TEST. See DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.

No

- Go to step 3

3. CHECK (B221) STOP LAMP RELAY OVERRIDE SIGNAL SHORTED TO VOLTAGE



RELAY-
BRAKE
LAMP

2048835

Fig. 54: Checking Stop Lamp Relay Override Signal Shorted To Voltage

Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Anti-Lock Brake Module.
3. Disconnect the Brake Lamp Relay.
4. Turn the ignition on.
5. Using a 12-volt test light connected to ground, probe the (B221) Stop Lamp Relay Override Signal circuit at the Brake Lamp Relay harness connector.

Does the test light illuminate brightly?

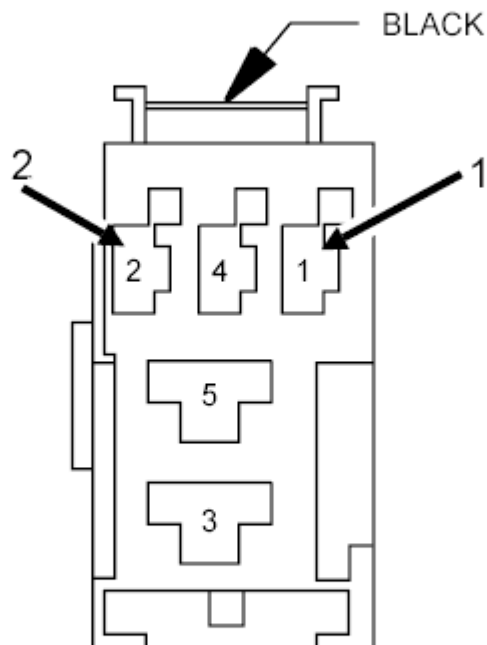
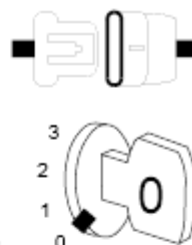
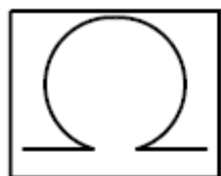
Yes

- Repair the short to voltage in the (B221) Stop Lamp Relay Override Signal circuit.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 4

4. BRAKE LAMP RELAY



RELAY-
BRAKE
LAMP

2048815

Fig. 55: Measuring Resistance Across Relay Between Stop Lamp Relay Override Signal Circuit
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Measure the resistance across the relay between the (B221) Stop Lamp Relay Override Signal circuit and the (A103) Fused B+ circuit.

Is the resistance 75 ± 5 Ohms?

Yes

- Replace the Anti-Lock Brake Module in accordance with the service information.

- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Replace the Brake Lamp Relay in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

C1210-G SENSOR INPUT CIRCUIT PERFORMANCE

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

- **When Monitored:**

Continuously, with ignition on, until vehicle speed exceeds 20 km/h (12.4 mph) for the first time, but not if the sensor voltage is out of range.

Or, during diagnostic mode.

Or, if the monitoring was inhibited by a corresponding diagnostics command.

- **Set Condition:**

If the measured acceleration signal is higher than 0.8 g for longer than the specified detection time.

Possible Causes
DYNAMICS SENSOR INSTALLATION DYNAMICS SENSOR

Diagnostic Test

1. CHECK FOR A DTC C1210-G SENSOR INPUT CIRCUIT PERFORMANCE

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, read and record DTCs.
3. With the scan tool, read and record information.
4. With the scan tool, erase DTCs.
5. Cycle the ignition switch from off to on.
6. With the scan tool, read and record DTCs.

Does the scan tool display: C1210-G SENSOR INPUT CIRCUIT PERFORMANCE?

Yes

- Replace the Dynamics Sensor in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Perform the INTERMITTENT CONDITION diagnostic procedure. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

C1219-STEERING ANGLE SENSOR ERRATIC PERFORMANCE

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

- **When Monitored:**

Continuous monitoring.

- **Set Condition:**

If the Anti-Lock Brake Module detects that the calculated steering wheel angle and the actual steering angle disagree.

Possible Causes
VEHICLE DAMAGE
STEERING COLUMN / INTERMEDIATE SHAFT DAMAGE
STEERING ANGLE SENSOR LOOSE
CLOCKSPRING (SAS)

Diagnostic Test**1. PERFORM TEST DRIVE AND VERIFY DTC IS STILL ACTIVE**

NOTE: If present, diagnose and repair DTC C123F-STEERING ANGLE SENSOR COMPARATIVE PERFORMANCE before diagnosing this DTC.

1. Turn the ignition on.
2. With the scan tool, read and record DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the DTC was set.
4. Perform ECU initialization with drive test. Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

WARNING: To avoid possible serious or fatal injury, check brake capability is available before road testing.

5. Test drive the vehicle by driving straight at a velocity between 10 and 25 km/hr (6 and 15 mph.) for 1 minute.
6. Park the vehicle.
7. Turn the steering wheel from stop to stop.
8. With the scan tool, read ABS DTCs.

Does this DTC reset?

Yes

- Go to step 2

No

- The condition that caused the symptom is currently not present. Inspect the related wiring for a possible intermittent condition. Look for any chafed, pierced, pinched, or partially broken wires.
- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

2. CHECK STEERING ANGLE SENSOR OUTPUT

1. Start the engine.
2. Center the steering wheel.
3. With the scan tool, read the Steering Angle Sensor Position.

Is the Steering Angle Sensor Position within $\pm 15^\circ$?

Yes

- Go to step 3

No

- Go to step 4

3. INSPECT VEHICLE, STEERING COLUMN, AND INTERMEDIATE SHAFT FOR DAMAGE

NOTE: If possible, check vehicle repair history for collision damage. ABS module must be reinitializes after repair.

1. Turn the ignition off.
2. Inspect the vehicle for damage causing tracking problems.

3. Inspect the steering column and intermediate shaft for damage.

Were any problems found?

Yes

- Repair as necessary and clear offsets by initializing ECU with wheels pointing straight ahead.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 4

4. CHECK CLOCKSPrING (SAS) INSTALLATION

WARNING: To avoid serious or fatal injury on vehicles equipped with airbags, disable the Supplemental Restraint System (SRS) before attempting any steering wheel, steering column, airbag, seat belt tensioner, impact sensor, or instrument panel component diagnosis or service. Disconnect and isolate the battery negative (ground) cable, then wait two minutes for the system capacitor to discharge before performing further diagnosis or service. This is the only sure way to disable the SRS. Failure to take the proper precautions could result in accidental airbag deployment.

NOTE: Proper Clockspring (SAS) installation is crucial for proper operation.

1. Verify that the Clockspring (SAS) is properly installed.

Is the Steering Angle Sensor properly installed?

Yes

- Replace the Clockspring (SAS) in accordance with the Service Information and clear offsets by initializing ECU with wheels pointing straight ahead.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Repair as necessary and clear offsets by initializing ECU with wheels pointing straight ahead.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

C121A-STEERING ANGLE SENSOR NOT INITIALIZED

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

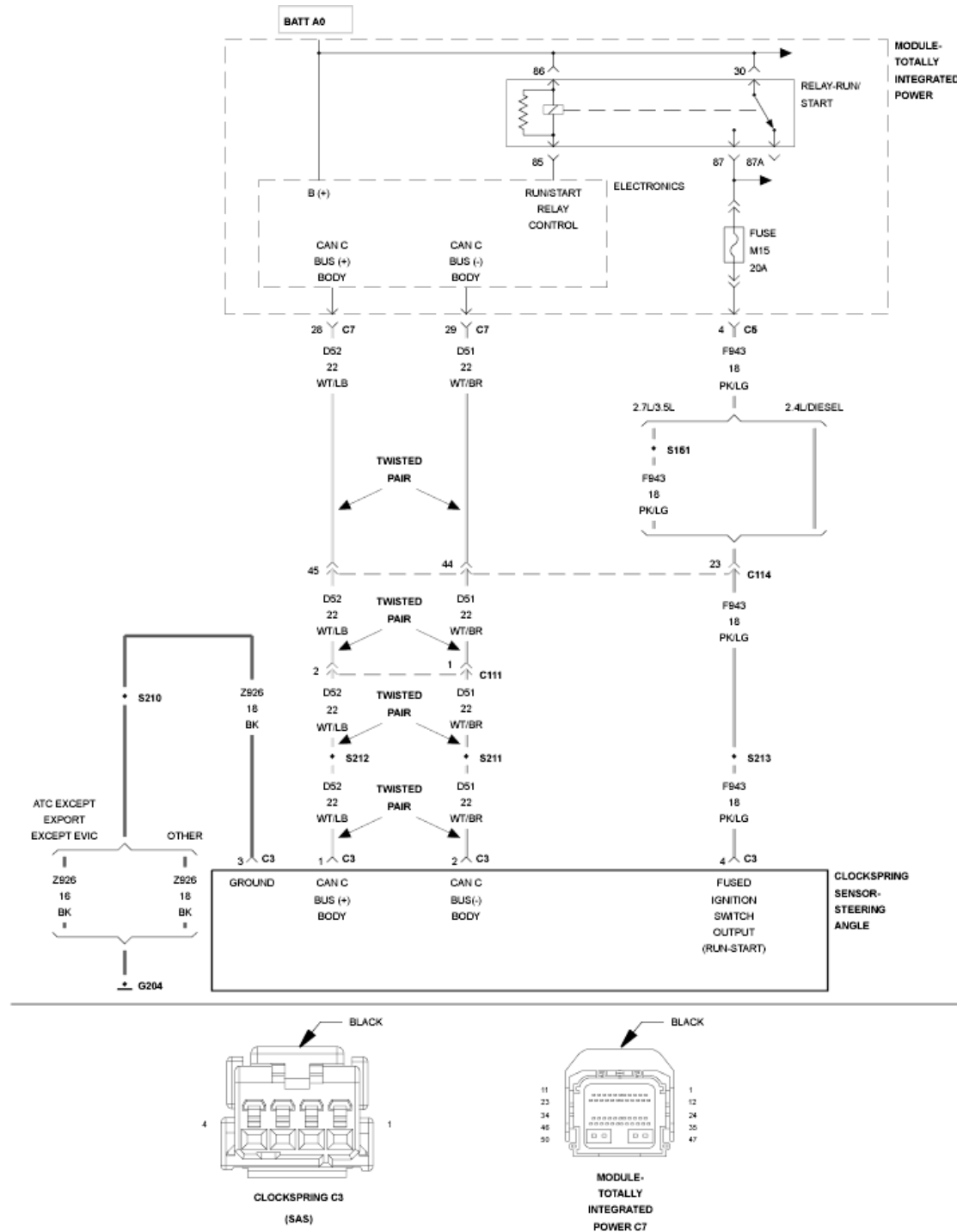


Fig. 56: Fused Ignition Switch Output Circuit Schematic
Courtesy of CHRYSLER LLC

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

When the Anti-Lock Brake Module detects a low voltage at the Steering Angle Sensor or Steering Angle Sensor failure.

Possible Causes
TERMINAL/CONNECTOR/WIRING HARNESS DAMAGE (F943) FUSED IGNITION SWITCH OUTPUT CIRCUIT OPEN (Z926) GROUND CIRCUIT OPEN CLOCKSPRING (SAS)

Diagnostic Test

1. CHECK FOR A DTC C121A-STEERING ANGLE SENSOR NOT INITIALIZED

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, read and record DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase DTCs.
5. Test drive the vehicle by turning the vehicle left or right in a curving manner at a velocity between 10 and 25 km/hr (6 and 15 m.p.h.) for 1 minute.
6. With the scan tool, read and record DTCs.

Does the scan tool display: C121A-STEERING ANGLE SENSOR NOT INITIALIZED?

Yes

- Go to step 2

No

- Perform the ABS-INTERMITTENT CONDITION diagnostic procedure. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

2. CHECK THE TERMINALS/CONNECTORS/WIRING HARNESS FOR DAMAGE

WARNING: To avoid serious or fatal injury on vehicles equipped with airbags, disable the Supplemental Restraint System (SRS) before attempting any steering wheel, steering column, airbag, seat belt tensioner, impact sensor, or instrument panel component diagnosis or service.

Disconnect and isolate the battery negative (ground) cable, then wait two minutes for the system capacitor to discharge before performing further diagnosis or service. This is the only sure way to disable the SRS. Failure to take the proper precautions could result in accidental airbag deployment.

NOTE: Proper Clockspring (SAS) installation is crucial for proper operation.

1. Check the Clockspring (SAS) installation.
2. Check all related wiring for bruised, chafed, pierced, or partially broken wires.
3. Check all related connectors for broken, bent, pushed out, or corroded terminals.

Were any problems found?

Yes

- Repair as necessary.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 3

3. CHECK THE VOLTAGE ON THE (F943) FUSED IGNITION SWITCH OUTPUT CIRCUIT

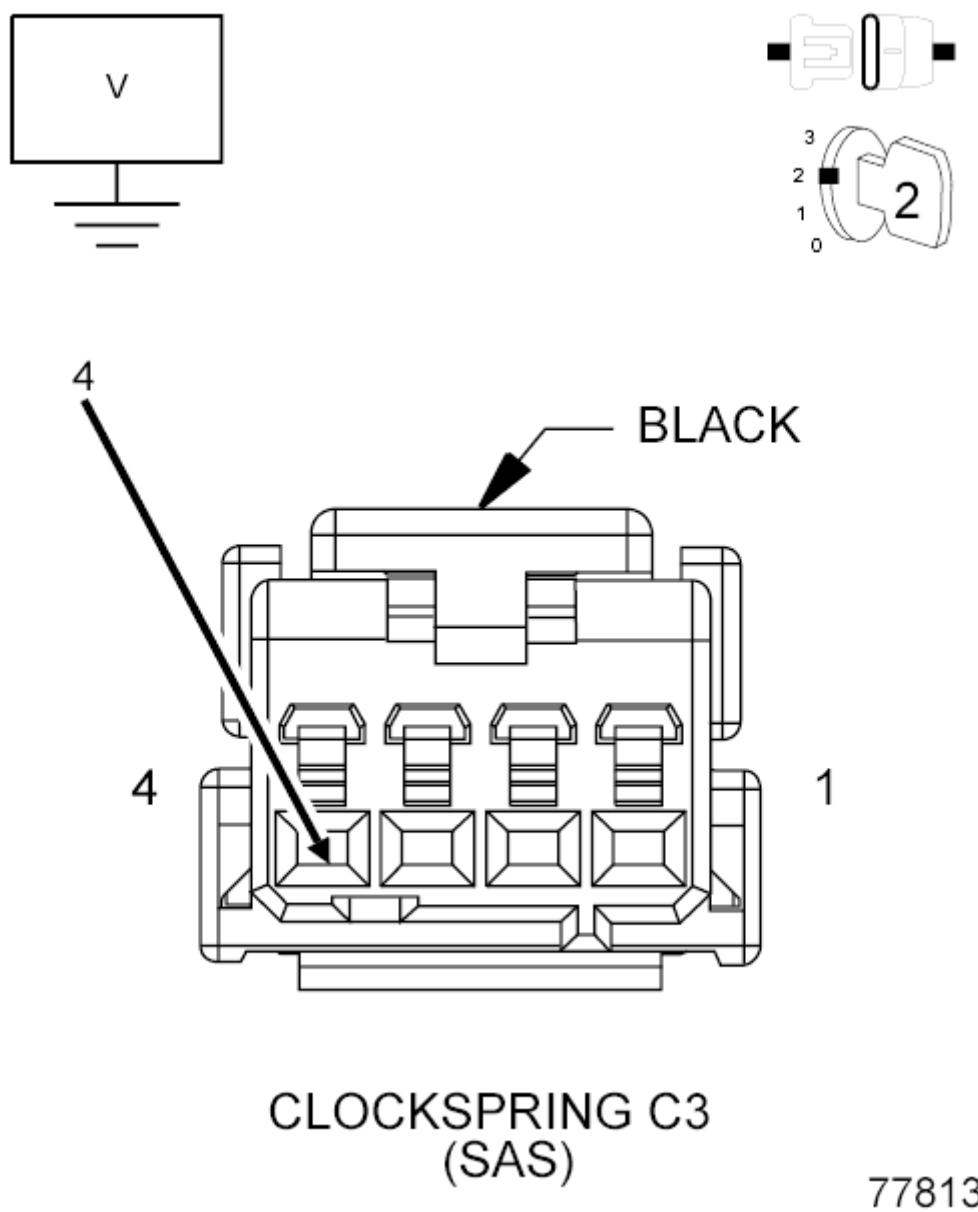


Fig. 57: Checking Voltage On Fused Ignition Switch Output Circuit
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Clockspring C3 (SAS) harness connector.
3. Turn the ignition on.
4. Measure the voltage of the (F943) Fused Ignition Switch Output circuit.

Is the voltage above 10 volts?

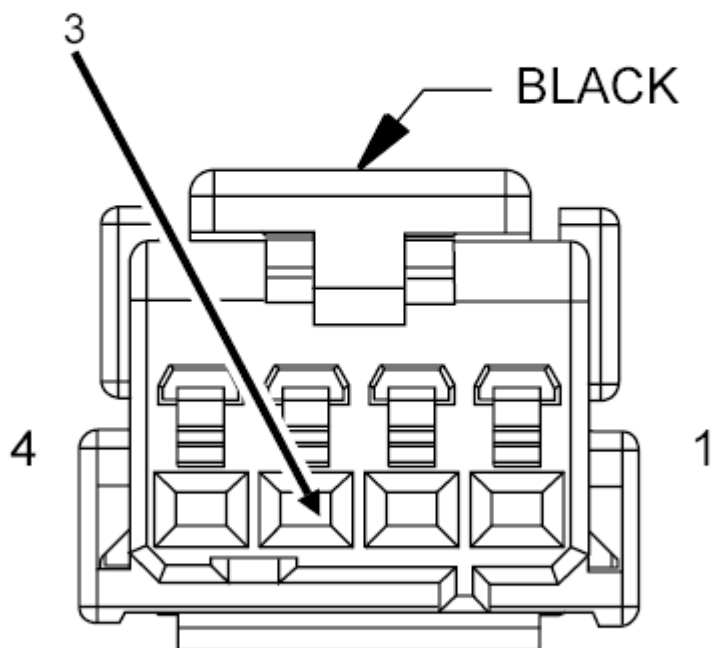
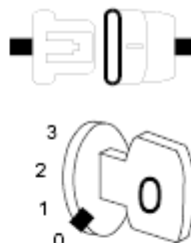
Yes

- Go to step 4

No

- Repair the (F943) Fused Ignition Switch Output circuit for an open.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

4. CHECK THE RESISTANCE OF THE (Z926) GROUND CIRCUIT



CLOCKSPRING C3
(SAS)

77815

Fig. 58: Checking Resistance Of Ground Circuit
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Measure the resistance between the (Z926) Ground circuit and ground.

Is the resistance below 5.0 Ohms?

Yes

- Replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Repair the (Z926) Ground circuit for an open.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

C121C-TORQUE REQUEST SIGNAL DENIED

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

• **When Monitored:**

With the engine running.

• **Set Condition:**

When the Powertrain Control Module indicates, for an extended period of time, that engine management relevant for Automatic Yaw Control/Traction Control System control can not be accomplished.

Possible Causes
ANTI-LOCK BRAKE MODULE
POWERTRAIN CONTROL MODULE

Diagnostic Test

1. CHECK FOR A DTC C121C-TORQUE REQUEST SIGNAL DENIED

NOTE: This DTC must be active for the results of this test to be valid and this DTC may set while driving under severe load conditions.

1. Turn the ignition on.
2. With the scan tool, read and record DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the

DTC was set.

4. With the scan tool, erase DTCs.
5. Cycle the ignition switch from off to on.
6. Start Engine.
7. With the scan tool, read and record DTCs and monitor ESP Torque Request status.

Does the scan tool display: C121C-TORQUE REQUEST SIGNAL DENIED?

Yes

- Go to step 2

No

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

2. CHECK THE POWERTRAIN DTCS

1. With the scan tool, read and record Powertrain DTCs.

Were any Powertrain related DTCs found?

Yes

- Repair the Powertrain Diagnostics. Refer to **DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Diagnosis and Testing** .

No

- Go to step 3

3. ESP TORQUE REQUEST SIGNAL

1. Engine started.
2. With the scan tool, read the Allow ESP Torque Request status bit.

Was the Allow ESP Torque Request showing NOT set?

Yes

- Replace the Powertrain Module in accordance with the Service Information.
- Perform POWERTRAIN VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure** .

No

- Replace the Anti-Lock Brake Module in accordance with the Service Information.

- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

C121D-BRAKE PRESSURE SENSOR CIRCUIT

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

When the Anti-Lock Brake Module indicates that the Brake Pressure Sensor Signal is out of range.

Possible Causes
AIR IN BRAKE SYSTEM/WORN MECHANICAL COMPONENTS
ECU INTERNAL FAILURE
HCU INTERNAL FAILURE

Diagnostic Test

1. CHECK FOR A DTC C121D-BRAKE PRESSURE SENSOR CIRCUIT

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, read and record DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase DTCs.
5. Start the engine.
6. Slowly depress and release the brake pedal.
7. With the scan tool, read and record DTCs.

Does the scan tool display: C121D-BRAKE PRESSURE SENSOR CIRCUIT?

Yes

- Go to step 2

No

- Perform the INTERMITTENT CONDITION diagnostic procedure. See **DTC-Based**

Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**2. HCU/ECU ISOLATION**

1. Turn the ignition off.
2. Separate the ECU from the HCU.
3. With the scan tool, monitor brake pressure.

Does the scan tool display brake pressure above 218 bar (3162 psi)?

Yes

- Replace the HCU in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Replace the ECU in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

C121E-BRAKE PRESSURE SENSOR COMPARATIVE PERFORMANCE

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

When the Anti-Lock Brake Module indicates that the Brake Pressure Sensor Signal is out of range.

Possible Causes
ECU INTERNAL FAILURE
HCU INTERNAL FAILURE

Diagnostic Test**1. CHECK FOR A DTC C121E-BRAKE PRESSURE SENSOR COMPARATIVE PERFORMANCE**

NOTE: This DTC must be active for the results of this test to be valid.

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

3. With the scan tool, read and record the Environmental Data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase the DTCs.
5. Start the engine.
6. Slowly press and release the brake pedal.
7. With the scan tool, read and record the DTCs.

Does the scan tool display: C121E-BRAKE PRESSURE SENSOR COMPARATIVE PERFORMANCE?

Yes

- Go to step 2

No

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

2. HCU/ECU ISOLATION

1. Turn the ignition off.
2. Separate the ECU from the HCU.
3. Turn the ignition on.
4. With the scan tool, monitor the brake pressure.

Does the scan tool display brake pressure above 218 bar (3162 psi)?

Yes

- Replace the HCU in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Replace the ECU in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

C1231-DRIVE TEST: STEERING ANGLE SENSOR

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

- **When Monitored:**

During the Drive Test.

• **Set Condition:**

If the Anti-Lock Brakes Module detects implausible Steering Angle Sensor data.

Possible Causes
CLOCKSPRING INSTALLATION CLOCKSPRING (SAS) ANTI-LOCK BRAKES MODULE

Diagnostic Test

1. CHECK FOR A DTC C1231 DRIVE TEST: STEERING ANGLE SENSOR

NOTE: This DTC must be active for the results of this test to be valid.

NOTE: If any of the following DTCs are present they must be repaired before continuing.

- DTC C1219-STEERING ANGLE SENSOR ERRATIC PERFORMANCE
- DTC C121A-STEERING ANGLE SENSOR NOT INITIALIZED

1. Turn the ignition on.
2. With the scan tool, read and record DTCs.
3. With the scan tool, read and record Freeze Frame information.
4. Perform ECU initialization with drive test. Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**
5. **NOTE: The drive test requires a 90° turn.**
6. Start the engine.
7. With the scan tool, read and record DTCs.

Does the scan tool display: C1231 DRIVE TEST: STEERING ANGLE SENSOR?

Yes

- Go to step 2

No

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

2. VERIFY THAT THE STEERING ANGLE SENSOR IS ACTIVE ON THE BUS

1. With the scan tool, select ECU View.
2. Verify that the Steering Angle Sensor is active on the bus.

Is the Steering Angle Sensor active on the bus?

Yes

- Go to step 3

No

- Perform the appropriate diagnostic procedure. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Diagnosis and Testing** .

3. CHECK STEERING ANGLE

1. Turn steering wheel so wheels point in a straight ahead position.
2. With scan tool check steering angle.

Is the Steering Angle reading within 15°?

Yes

- Go to step 4

No

- Go to step 5

4. CHECK STEERING ANGLE CHANGE

1. Turn steering wheel so wheels point in a straight ahead position.
2. With scan tool check steering angle.
3. Rotate steering wheel to the right and the degrees will decrease and rotating steering wheel to the left the degrees will increase.

Did the steering angle change accordingly?

Yes

- Replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Replace the Clockspring (SAS) in accordance with the Service Information and clear offsets by initializing ECU with wheels pointing straight ahead.

- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

5. CHECK CLOCKSPRING INSTALLATION

WARNING: To avoid possible serious or fatal injury, on vehicles equipped with airbags, disable the supplemental restraint system before attempting any steering wheel, steering column, airbag, occupant classification system, seat belt tensioner, impact sensor, or instrument panel component diagnosis or service. Disconnect and isolate the battery negative (ground) cable, then wait two minutes for the system capacitor to discharge before performing further diagnosis or service. This is the only sure way to disable the supplemental restraint system. Failure to take the proper precautions could result in accidental airbag deployment.

NOTE: Proper Clockspring (SAS) installation is crucial for proper operation.

1. Turn the ignition off.
2. Verify that the Clockspring (SAS) is properly installed. Refer to **Restraints/CLOCKSPRING - Installation**.

Is the Clockspring (SAS) properly installed?

Yes

- Replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Repair as necessary and clear offsets by initializing ECU with wheels pointing straight ahead.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

C1232-DRIVE TEST: PRESSURE SENSOR

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

- **When Monitored:**

During the Drive Test.

- **Set Condition:**

If the Pressure Sensor fails to activate.

Possible Causes
HYDRAULIC / BRAKE SYSTEM COMPONENT INSTALLATION
INTEGRATED CONTROL UNIT
PRESSURE SENSOR (HYDRAULIC CONTROL UNIT)

Diagnostic Test**1. CHECK FOR A DTC C1232 DRIVE TEST: PRESSURE SENSOR**

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, read and record DTCs.
3. With the scan tool, read and record Freeze Frame information.
4. Perform ECU initialization with drive test. Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.
5. Start the engine and apply the brake firmly.
6. With the scan tool, read and record DTCs.

Does the scan tool display: C1232 DRIVE TEST: PRESSURE SENSOR?

Yes

- Go to step 2

No

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

2. CHECK HYDRAULIC SYSTEM AND BRAKE SYSTEM COMPONENT INSTALLATION AND FUNCTION

1. Verify that the Anti-Lock Brakes Module and Hydraulic Control Unit are properly installed.
2. Verify that the hydraulic system is properly filled and bled.
3. Verify that the brake system components are installed and functioning properly.

Were any problems found?

Yes

- Repair as necessary.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE,**

Antilock Brake (ABS) - Standard Procedure.**No**

- Clean contacts in HCU first if problem reoccurs replace the Integrated Control Unit in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

C1234-DRIVE TEST: SENSOR CLUSTER INSTALLATION

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

- **When Monitored:**

During the Drive Test.

- **Set Condition:**

If the Anti-Lock Brakes Module detects implausible Dynamics Sensor data.

Possible Causes
DYNAMICS SENSOR INSTALLATION
DYNAMICS SENSOR
ANTI-LOCK BRAKES MODULE

Diagnostic Test**1. CHECK FOR A DTC C1234 DRIVE TEST: SENSOR CLUSTER INSTALLATION**

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, read and record DTCs.
3. With the scan tool, read and record Freeze Frame information.
4. Perform ECU initialization with drive test. Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**
5. **NOTE: The drive test requires a 90° turn.**
6. Start the engine.
7. With the scan tool, read and record DTCs.

Does the scan tool display: C1234 DRIVE TEST: SENSOR CLUSTER INSTALLATION?

Yes

- Go to step 2

No

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

2. CHECK THE DYNAMICS SENSOR INSTALLATION

NOTE: Dynamics Sensor installation and mounting bolt torque is crucial for proper operation.

1. Turn the ignition off.
2. Check the Dynamics Sensor for damaged, modified, and bent mounting brackets.
3. Check the Dynamics Sensor mounting bolts for a loose or over tightened condition.

Were any problems found?

Yes

- Repair as necessary.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Replace the Dynamics Sensor in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

C1238-DRIVE TEST: UNSUCCESSFUL

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

- **When Monitored:**

During the Drive Test.

- **Set Condition:**

If the Anti-Lock Brakes Module detects a fault with the Steering Angle Sensor, the Pressure Sensor, or the Dynamics Sensor.

Possible Causes
STEERING ANGLE SENSOR

PRESSURE SENSOR
DYNAMICS SENSOR
ANTI-LOCK BRAKES MODULE

Diagnostic Test**1. DIAGNOSE AND REPAIR ALL DTCs****Repair**

- Diagnose and repair all DTCs.

C1239-EMISSIONS ROLLS TEST ACTIVE

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

Theory of Operation

The functional effects are that the output signal for all wheel speeds mimic the wheel with the highest wheel speed.

This DTC sets when the Emissions Rolls Test is active.

Close out the Emissions Rolls Test through the TIPM.

C123A-ESP SYSTEM SENSORS CALIBRATION

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

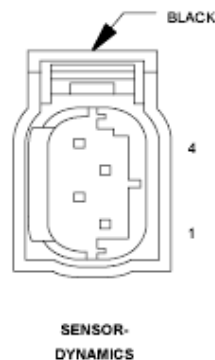
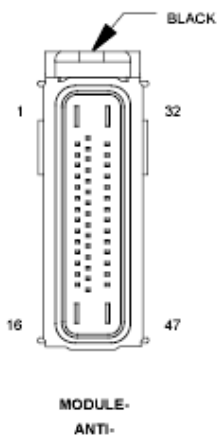
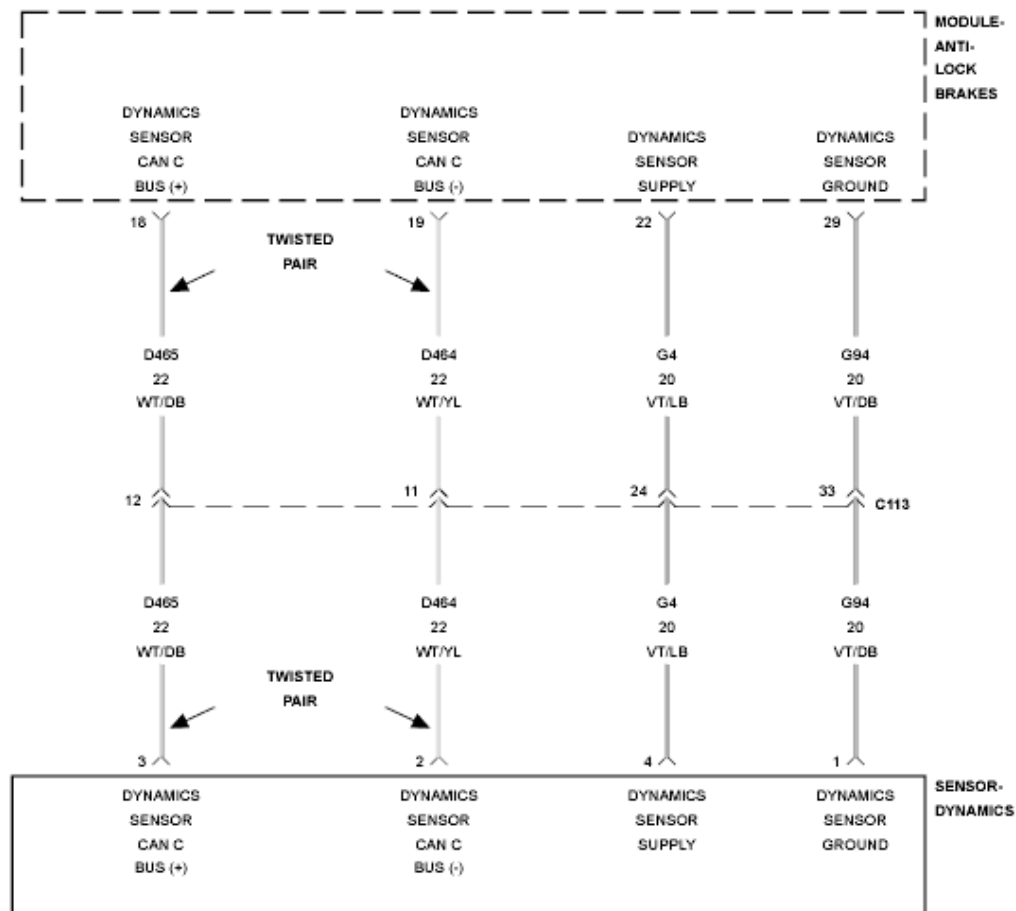


Fig. 59: Dynamics Sensor Supply/Ground Circuit Schematic
 Courtesy of CHRYSLER LLC

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

- **When Monitored:**

Once per ignition cycle.

- **Set Condition:**

If the calculated checksum does not match the stored checksum.

Possible Causes
ANTI-LOCK BRAKES MODULE

Diagnostic Test

1. INITIALIZE ANTI-LOCK BRAKES MODULE

1. Initialize ECU refer to ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**

Does this DTC reset?

Yes

- Replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**

No

- Test complete.

C123B-ESP SYSTEM CONTROL TOO LONG

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

When the Anti-Lock Brake Module indicates ESP control lasting longer the 10 seconds.

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

Possible Causes

HYDRAULIC/BRAKE ISSUE
DYNAMICS SENSOR
INTEGRATED CONTROL MODULE
STEERING ANGLE SENSOR
WHEEL ALIGNMENT

Diagnostic Test

1. CHECK FOR A DTC C123B-ESP SYSTEM CONTROL TOO LONG

NOTE: If other DTCs are set they must be repaired before continuing. To help in the service of the ESP System, it is recommend speaking to the customer to find out what type of environment they were driving in when the ESP concern took place, heavy rain, snow or ice. This should be considered normal operation and no repair is necessary. This DTC may set while driving under excessive driving conditions.

1. Turn the ignition on.
2. Perform ECU initialization with drive test. Refer to Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

NOTE: Drive test must be performed correctly for ECU to initialize.

3. Cycle the ignition switch from off to on.

Did the ECU initialization/drive test pass?

Yes

- Go to step 2

No

- Refer to associated drive test diagnostic procedure.
- Refer to the DTC list. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Diagnosis and Testing**

2. CHECK STEERING ANGLE SIGNAL

1. Turn steering wheel so wheels point in a straight ahead position.
2. With scan tool read Steering Angle Sensor Signal.

Is the Steering Angle reading within ± 6 degrees?

Yes

- Go to step 4

No

- Go to step 3

3. CHECK STEERING ANGLE INSTALLATION AND WHEEL ALIGNMENT

NOTE: **Proper Steering Angle Sensor installation is crucial for proper operation.**

1. Turn the ignition off.
2. Inspect the vehicle for damage causing tracking problems or steering wheel misalignment.
3. Inspect the steering column and intermediate shaft for damage.
4. Verify that the Steering Angle Sensor is properly installed.

Were any problems found?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Replace the Steering Angle Sensor in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

4. CHECK HYDRAULIC SYSTEM AND BRAKE SYSTEM COMPONENT INSTALLATION AND FUNCTION

1. Verify that the Anti-Lock Brakes Module and Hydraulic Control Unit are properly installed.
2. Verify that the hydraulic system is properly filled and bled.
3. Verify that the brake system components are installed and functioning properly.

Were any problems found?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 5

5. REPLACE THE INTEGRATED CONTROL MODULE AND VERIFY IF THE DTC IS STILL ACTIVE

1. Replace the Integrated Control Module in accordance with the Service Information.
2. Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.
3. Connect all previously disconnected components and connectors.
4. Turn the ignition on.
5. With the scan tool, erase ABS DTCs.
6. Cycle the ignition switch.

WARNING: Ensure brake capability is available before road testing.

7. Test drive the vehicle by turning the vehicle left or right in a curving manner at a velocity between 10 and 20 km/h (6 and 12 mph).
8. Park the vehicle.
9. With the scan tool, read ABS DTCs.

Does this DTC reset?

Yes

- Replace the Dynamics Sensor in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Test complete.

C123C-DYNAMICS SENSOR MOUNTING/INSTALLATION PERFORMANCE

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

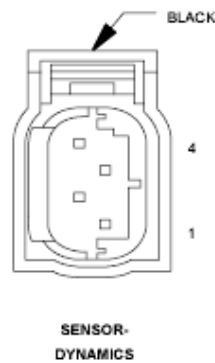
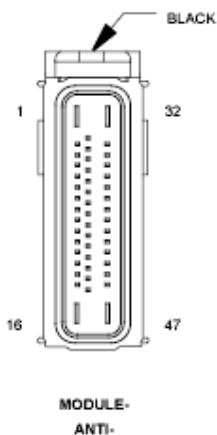
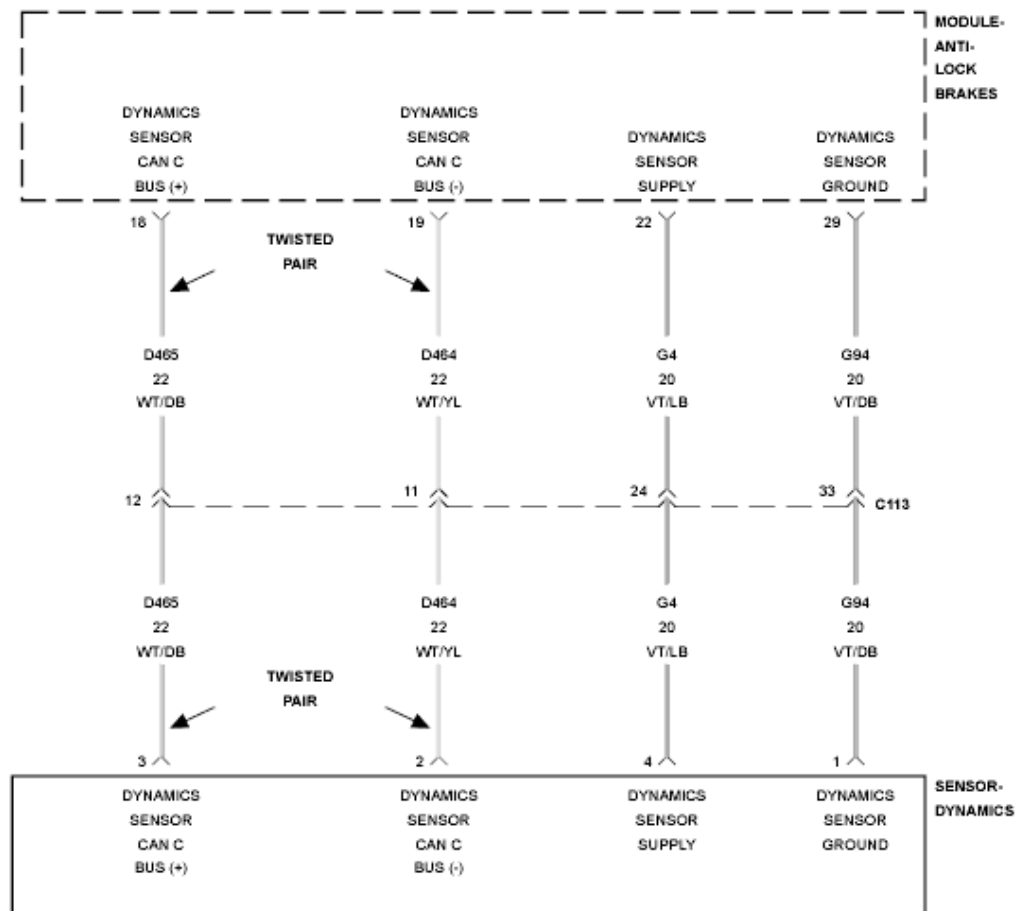


Fig. 60: Dynamics Sensor Supply/Ground Circuit Schematic
Courtesy of CHRYSLER LLC

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

When the Anti-Lock Brake Module indicates the Dynamics Sensor values are invalid.

Possible Causes
WIRING HARNESS, TERMINAL, CONNECTOR DAMAGE IMPROPERLY INSTALLED SENSOR CLUSTER (G94) DYNAMICS SENSOR GROUND CIRCUIT OPEN DYNAMICS SENSOR

Diagnostic Test

1. **CHECK FOR A DTC C123C-SENSOR CLUSTER MOUNTING/INSTALLATION PERFORMANCE**

NOTE: The Sensor Cluster is the same as the Dynamics Sensor.

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, read and record DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase DTCs.
5. Cycle the ignition switch from off to on.
6. With the scan tool, read and record DTCs.

Does the scan tool display: C123C-SENSOR CLUSTER MOUNTING/INSTALLATION PERFORMANCE?

Yes

- Go to step 2

No

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

2. CHECK THE WIRING HARNESS, TERMINALS, AND CONNECTORS

1. Turn ignition off.
2. Visually inspect the related wiring harness. Look for any bruised, chafed, pierced, or partially broken wires.
3. Visually inspect the related wiring harness connectors. Look for broken, bent, pushed out, or corroded terminals.

Were any problems found?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 3

3. CHECK THE DYNAMICS SENSOR INSTALLATION

NOTE: Dynamics Sensor installation and mounting bolt torque is crucial for proper operation.

1. Check the Dynamics Sensor for damaged, modified or bent mounting bracket.
2. Check the Dynamics Sensor mounting bolts for loose or over tightened mounting bolts.

Were any problems found?

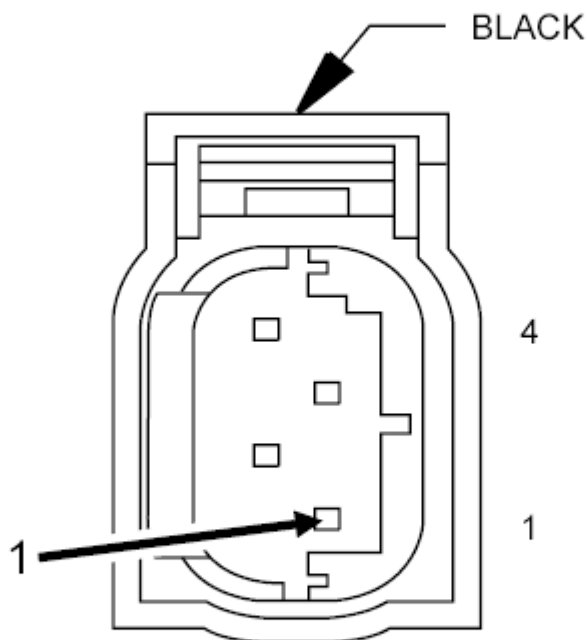
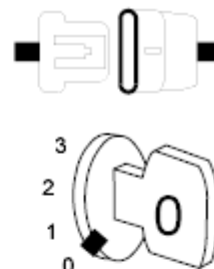
Yes

- Repair as needed.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 4

4. CHECK THE RESISTANCE BETWEEN THE (G94) DYNAMICS SENSOR GROUND CIRCUIT AND GROUND



SENSOR-
DYNAMICS

102682

Fig. 61: Checking Resistance Between Dynamics Sensor Ground Circuit & Ground
Courtesy of CHRYSLER LLC

1. Disconnect the Dynamics Sensor harness connector.
2. Measure the resistance between the (G94) Dynamics Sensor Ground circuit and ground.

Is the resistance below 5.0 ohm?

Yes

- Replace the Dynamics Sensor in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Repair the (G94) Dynamics Sensor Ground circuit for an open circuit.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

C123F-STEERING ANGLE SENSOR COMPARATIVE PERFORMANCE

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

• When Monitored:

With ignition on, but not if a checksum failure of the stored offset values is detected.

Or, a CAN time-out failure is detected.

Or, a failure is detected by the Steering Angle Sensor.

• Set Condition:

If the Anti-Lock Brakes Module detects that either the calculated steering wheel angle offset or the steering wheel angle signal measured output is out of range.

Possible Causes
VEHICLE DAMAGE
STEERING COLUMN / INTERMEDIATE SHAFT DAMAGE
STEERING WHEEL ALIGNMENT
STEERING ANGLE SENSOR LOOSE
CLOCKSPRING (SAS) IMPROPERLY INSTALLED (WRONG MOUNTING POSITION)
CLOCKSPRING (SAS)
ANTI-LOCK BRAKE MODULE

Diagnostic Test

1. PERFORM TEST DRIVE AND VERIFY DTC IS STILL ACTIVE

NOTE: If present, diagnose and repair DTC C1219-STEERING ANGLE SENSOR ERRATIC PERFORMANCE, C121A-STEERING ANGLE SENSOR NOT INITIALIZED, or C1240-STEERING ANGLE SENSOR OVERTRAVEL PERFORMANCE before diagnosing this DTC.

1. Turn the ignition on.
2. With the scan tool, erase ABS DTCs.
3. Cycle the ignition switch.

WARNING: To avoid possible serious or fatal injury, check brake capability is available before road testing.

4. Test drive the vehicle by turning the vehicle left or right in a curving manner at a velocity between 10 and 25 km/hr (6 and 15 m.p.h.).
5. Park the vehicle.
6. With the scan tool, read ABS DTCs.

Does this DTC reset?

Yes

- Go to step 2

No

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

2. CHECK STEERING ANGLE SENSOR OUTPUT

1. Start the engine.
2. Turn the steering wheel so wheels point in a straight ahead position.
3. With the scan tool, read the Steering Angle Sensor position.

Is the Steering Angle Sensor Position within 15° degrees?

Yes

- Go to step 5

No

- Go to step 3

3. INSPECT VEHICLE, STEERING COLUMN, AND INTERMEDIATE SHAFT FOR DAMAGE

NOTE: If possible, check vehicle repair history for collision damage.

1. Turn the ignition off.
2. Inspect the vehicle for damage causing tracking problems or steering wheel misalignment.

3. Inspect the steering column and intermediate shaft for damage.

Were any problems found?

Yes

- Repair as necessary and clear offsets by initializing ECU with wheels pointing straight ahead.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 4

4. CHECK CLOCKSPrING (SAS) INSTALLATION

WARNING: To avoid possible serious or fatal injury, on vehicles equipped with airbags, disable the supplemental restraint system before attempting any steering wheel, steering column, airbag, occupant classification system, seat belt tensioner, impact sensor, or instrument panel component diagnosis or service. Disconnect and isolate the battery negative (ground) cable, then wait two minutes for the system capacitor to discharge before performing further diagnosis or service. This is the only sure way to disable the supplemental restraint system. Failure to take the proper precautions could result in accidental airbag deployment.

NOTE: Proper Clockspring (SAS) installation is crucial for proper operation.

1. Verify that the Clockspring (SAS) is properly installed.

Is the Clockspring (SAS) properly installed?

Yes

- Go to step 5

No

- Repair as necessary and clear offsets by initializing ECU with wheels pointing straight ahead.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

5. RE-INITIALIZE THE ESP MODULE

1. Perform ECU initialization with drive test to clear offsets. Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

Is DTC C123F STEERING ANGLE SENSOR COMPARATIVE PERFORMANCE still active?

Yes

- Go to step 6

No

- Sensor was probably loose or calibrated with wheels not centered to vehicle. Test complete.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

6. CHECK STEERING ANGLE SENSOR OUTPUT WHILE ROTATING THE STEERING WHEEL

1. With the scan tool, read the Steering Angle Sensor position while rotating the steering wheel to the right and then to the left. The Steering Angle position should decrease when rotating the steering wheel to the right and increase when rotating the steering wheel to the left.

Did the steering angle change accordingly?

Yes

- Replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Replace the Clockspring (SAS) in accordance with the Service Information and clear offsets by initializing ECU with wheels pointing straight ahead.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

C1240-STEERING ANGLE SENSOR OVERTRAVEL PERFORMANCE

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

- **When Monitored:**

With ignition on, but not if a CAN time out failure is detected.

Or, if a fault is detected by the Steering Angle Sensor.

- **Set Condition:**

If the Anti-Lock Brakes Module detects that the absolute value of the measured steering wheel angle is

greater than 720 degrees.

Possible Causes
VEHICLE DAMAGE STEERING COLUMN / INTERMEDIATE SHAFT DAMAGE STEERING WHEEL ALIGNMENT STEERING ANGLE SENSOR LOOSE CLOCKSPRING IMPROPERLY INSTALLED (WRONG MOUNTING POSITION) CLOCKSPRING (SAS)

Diagnostic Test**1. PERFORM TEST DRIVE AND VERIFY DTC IS STILL ACTIVE**

1. Turn the ignition on.
2. With the scan tool, erase ABS DTCs.
3. Cycle the ignition switch.
4. Turn steering wheel from lock to lock.
5. With the scan tool, read ABS DTCs.

Does this DTC reset?

Yes

- Go to step 2

No

- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

2. CHECK STEERING ANGLE SENSOR OUTPUT

1. Start the engine.
2. Center the steering wheel.
3. With the scan tool, read the Steering Angle Sensor Position.

Is the Steering Angle Sensor Position within 15" ?

Yes

- Go to step 4

No

- Go to step 3

3. INSPECT VEHICLE, STEERING COLUMN, AND INTERMEDIATE SHAFT FOR DAMAGE

NOTE: If possible, check vehicle repair history for collision damage.

1. Turn the ignition off.
2. Inspect the vehicle for damage causing tracking problems or steering wheel misalignment.
3. Inspect the steering column and intermediate shaft for damage.
4. Center the steering wheel.
5. With the scan tool, read the Steering Angle Sensor Position.

Is the Steering Angle Sensor Position within 15" ?

Yes

- Repair as necessary.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 4

4. CHECK STEERING ANGLE CHANGE

1. Turn steering wheel so wheels point in a straight ahead position.
2. With scan tool check steering angle if reading travels to 720 degrees while rotating wheel from lock to lock.

NOTE: Sensor damage can occur if wheel is turned over 720 degrees.

3. Rotate steering wheel to the right and the degrees will decrease and rotate steering wheel to the left and the degrees will increase.

Did the steering angle change accordingly and display less than 720 degrees from lock to lock?

Yes

- Go to step 5

No

- Replace the Clockspring (SAS) in accordance with the Service Information and clear offsets by initializing ECU with wheels pointing straight ahead.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

5. CHECK CLOCKSPRING INSTALLATION

WARNING: To avoid possible or fatal injury, on vehicles equipped with airbags, disable the supplemental restraint system before attempting any steering wheel, steering column, airbag, occupant classification system, seat belt tensioner, impact sensor, or instrument panel component diagnosis or service. Disconnect and isolate the battery negative (ground) cable, then wait two minutes for the system capacitor to discharge before performing further diagnosis or service. This is the only sure way to disable the supplemental restraint system. Failure to take the proper precautions could result in accidental airbag deployment.

NOTE: Proper Clockspring (SAS) installation is crucial for proper operation.

1. Verify that the Clockspring is properly installed in accordance with the service information.

Is the Clockspring properly installed?

Yes

- Replace the Clockspring (SAS) and clear offsets by initializing ECU with wheels pointing straight ahead, in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Repair as necessary and clear offsets by initializing ECU with wheels pointing straight ahead.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

C1243-G SENSOR NOT INITIALIZED

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

- **When Monitored:**

Once after ignition on.

- **Set Condition:**

If the stored zero point calibration value of the longitudinal acceleration sensor is invalid.

Possible Causes

DYNAMICS SENSOR NOT CALIBRATED
DYNAMICS SENSOR
ANTI-LOCK BRAKES MODULE

Diagnostic Test**1. PERFORM ECU INITIALIZATION**

1. Turn the ignition on.
2. With the scan tool, erase ABS DTCs.
3. Cycle the ignition switch.

WARNING: To avoid possible serious or fatal injury, check brake capability is available before road testing.

4. Perform ECU initialization with drive test refer to ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

NOTE: The ECU Initialization process must include driving the vehicle into a 90° turn.

5. Park the vehicle.
 - Go to step 2

2. VERIFY IF DTC IS STILL ACTIVE

1. Cycle the ignition switch.

WARNING: To avoid possible serious or fatal injury, check brake capability is available before road testing.

2. Test drive the vehicle by turning the vehicle left or right in a curving manner at a velocity between 10 and 25 km/h (6 and 15 mph).
3. Park the vehicle.
4. With the scan tool, read ABS DTCs.

Does this DTC reset?

Yes

NOTE: Vehicles without a Dynamics Sensor replace Anti-Lock Brake Module.

- Replace the Dynamics Sensor or Anti-Lock Brake Module in accordance with the Service Information.

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- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

C2100-BATTERY VOLTAGE LOW

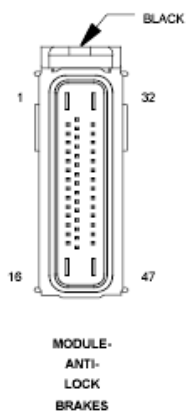
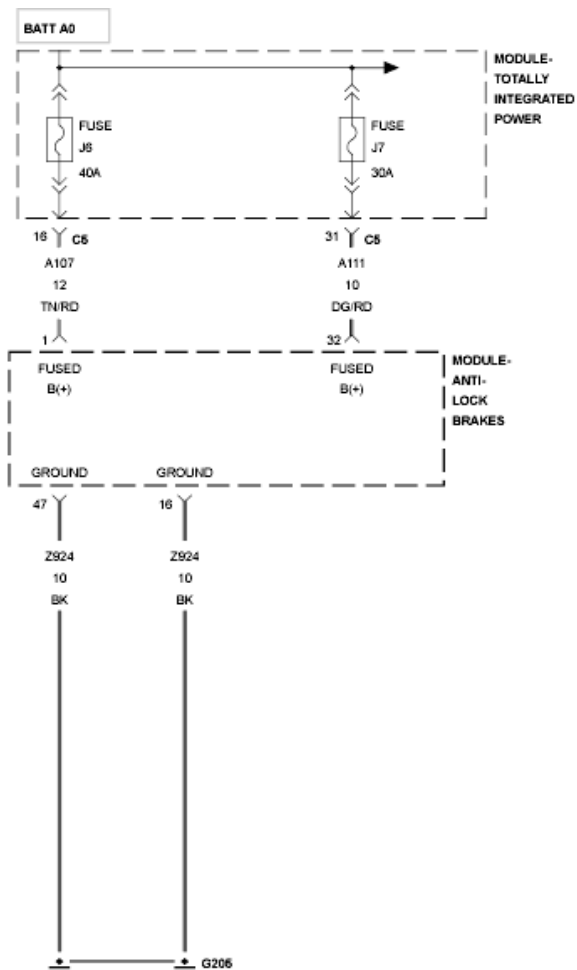


Fig. 62: Fused B+ Ground Circuit Schematic
Courtesy of CHRYSLER LLC

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

• **When Monitored:**

With the ignition on.

• **Set Condition:**

If the Anti-Lock Brakes Module detects system voltage is below 7.5 volts.

Possible Causes

ECM OR PCM DTCs PRESENT
VEHICLE BATTERY/CHARGING SYSTEM
ANTI-LOCK BRAKES MODULE

Diagnostic Test

1. DTCS IN THE PCM

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, read and record DTCs from the PCM.
3. With the scan tool, read and record Freeze Frame information.
4. With the scan tool, erase DTCs.
5. Start the engine.
6. With the scan tool, read and record DTCs.
7. With the scan tool read DTCs from the PCM.

Are any charging system codes present?

Yes

- Repair the charging system DTC in the PCM.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 2

2. CHARGING SYSTEM FAILURE

1. Start the engine.
2. Connect voltmeter to vehicle battery.

Is the vehicle battery voltage under 8.2 volts?

No

- Go to step 3

Yes

- Repair the charging system per service information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

3. CHARGING POWER SUPPLY VOLTAGE

1. With a scan tool read Power Supply Voltage.

Is Power Supply Voltage under 8.2 volts?

No

- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

Yes

- Replace the Anti-Lock Brakes Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

C2101-BATTERY VOLTAGE HIGH

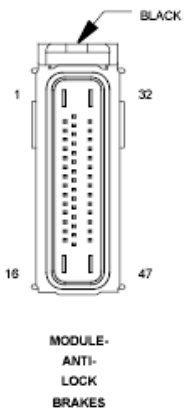
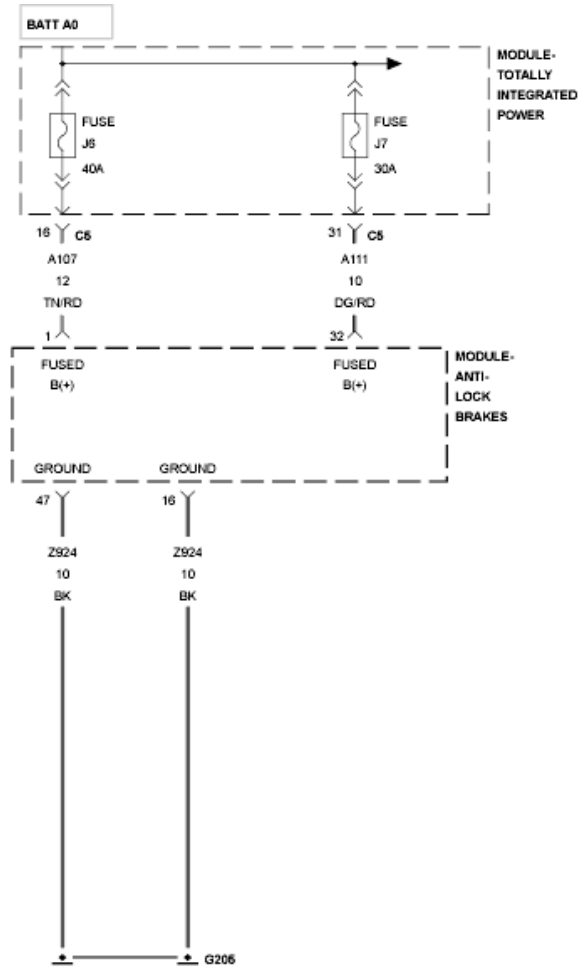


Fig. 63: Fused B+ Ground Circuit Schematic
Courtesy of CHRYSLER LLC

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

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- **When Monitored:**

With the ignition on.

- **Set Condition:**

If the Anti-Lock Brakes Module detects system voltage is above 17 volts.

Possible Causes
ECM/PCM DTCs PRESENT
VEHICLE BATTERY / CHARGING SYSTEM
ANTI-LOCK BRAKES MODULE

Diagnostic Test

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, read and record DTCs from the ECM/PCM.
3. With the scan tool, read and record Freeze Frame information.
4. With the scan tool, erase DTC's.
5. Start the engine.
6. With the scan tool, read and record DTCs.
7. With the scan tool read DTCs from the PCM.

Are any charging system codes present?

Yes

- Repair the charging system DTC in the ECM/PCM.
- Perform the POWERTRAIN VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure** .

No

- Go to step 1

1. CHARGING SYSTEM FAILURE

1. Start the engine.
2. Connect voltmeter to vehicle battery.

Is the vehicle battery voltage over 16.8 volts?

No

- Go to step 2

Yes

- Repair the charging system per service information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

2. CHARGING POWER SUPPLY VOLTAGE

1. With a scan tool read Power Supply Voltage.

Is Power Supply Voltage over 16.8 volts?

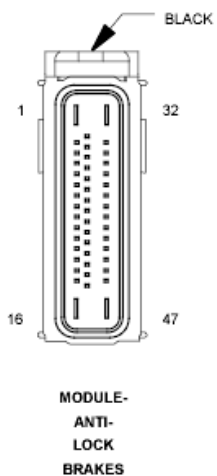
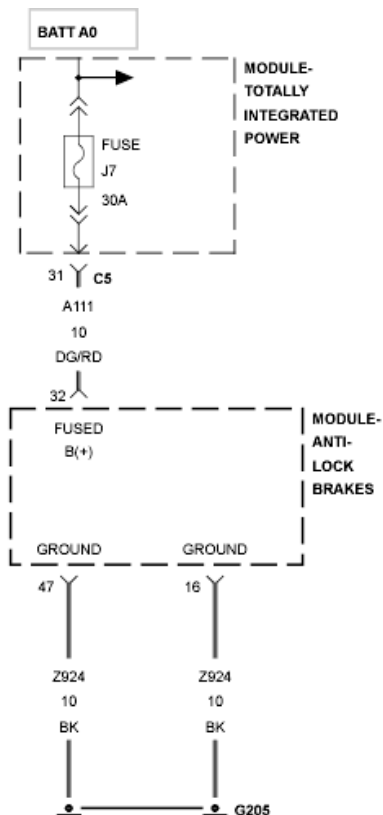
No

- Perform ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

Yes

- Replace the Anti-Lock Brakes Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

C2111-ANTI-LOCK BRAKE MODULE INTERNAL



81a10931

Fig. 64: Fused B+ Circuit Shorted To Ground, Voltage Or Open Circuit Schematic
Courtesy of CHRYSLER LLC

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

When the Anti-Lock Brake Module detects an internal fault, the DTC is set.

Possible Causes
WIRING HARNESS, TERMINAL, CONNECTOR DAMAGE
FUSED B+ CIRCUIT(S) SHORTED TO GROUND, VOLTAGE, OR OPEN
GROUND CIRCUIT(S) OPEN
ANTI-LOCK BRAKE MODULE

Diagnostic Test**1. CHECK FOR A DTC C2111-ANTI-LOCK BRAKE MODULE INTERNAL**

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, read and record DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase DTCs.
5. Cycle the ignition switch from off to on.
6. With the scan tool, read and record DTCs

Does the scan tool display: C2111-ANTI-LOCK BRAKE MODULE INTERNAL?

Yes

- Go to step 2

No

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

2. CHECK THE WIRING HARNESS, TERMINALS, AND CONNECTORS

1. Turn the ignition off.
2. Visually inspect the related wiring harness. Look for any bruised, chafed, pierced, or partially broken wires.
3. Visually inspect the related wiring harness connectors. Look for broken, bent, pushed out, or

corroded terminals.

Were any problems found?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 3

3. FUSED B+ CIRCUIT(S) OPEN OR HIGH RESISTANCE

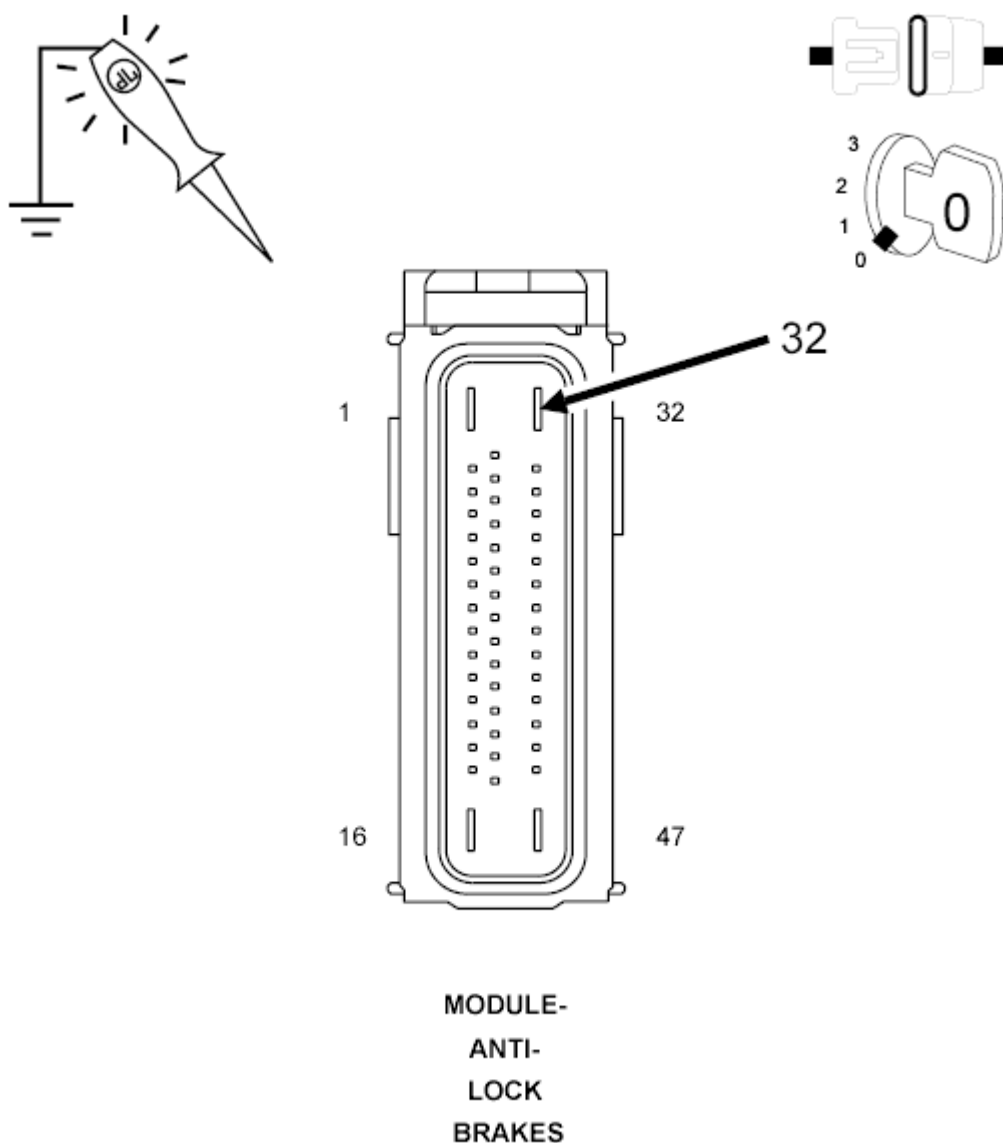


Fig. 65: Checking Anti-Lock Brake Module Harness Connector
Courtesy of CHRYSLER LLC

1. Disconnect the Anti-Lock Brake Module harness connector.
2. Using a 12-volt test light connected to ground, check the (A111) Fused B+ circuit.

NOTE: The test light should be illuminated and bright. Compare the brightness to that of a direct connection to the battery.

Is the test light illuminated and bright?

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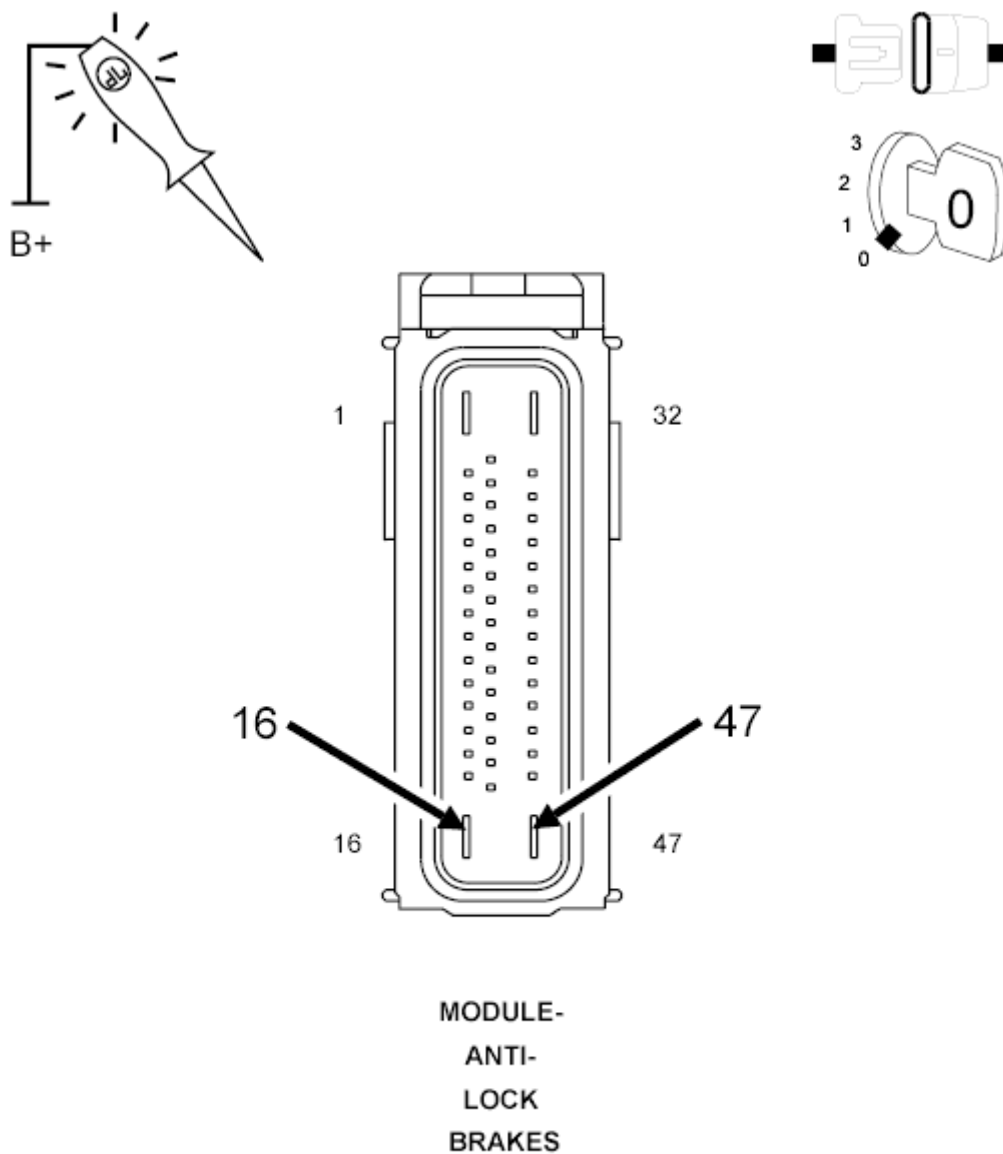
Yes

- Go to step 4

No

- Repair the Fused B+ circuit(s) for an open circuit or high resistance.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

4. GROUND CIRCUIT OPEN OR HIGH RESISTANCE



71901

Fig. 66: Checking Ground Circuit Open Or High Resistance
 Courtesy of CHRYSLER LLC

1. Using a 12-volt test light connected to 12-volts, check the (Z924) Ground circuits.

NOTE: The test light should be illuminated and bright. Compare the brightness to that of a direct connection to the battery.

Is the test light illuminated and bright?

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Yes

- Replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Repair the Ground circuit(s) for an open circuit or high resistance.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

C2114-DYNAMICS SENSOR SUPPLY VOLTAGE LOW

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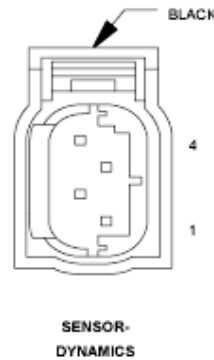
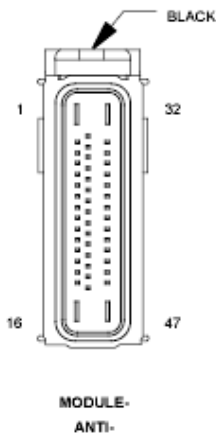
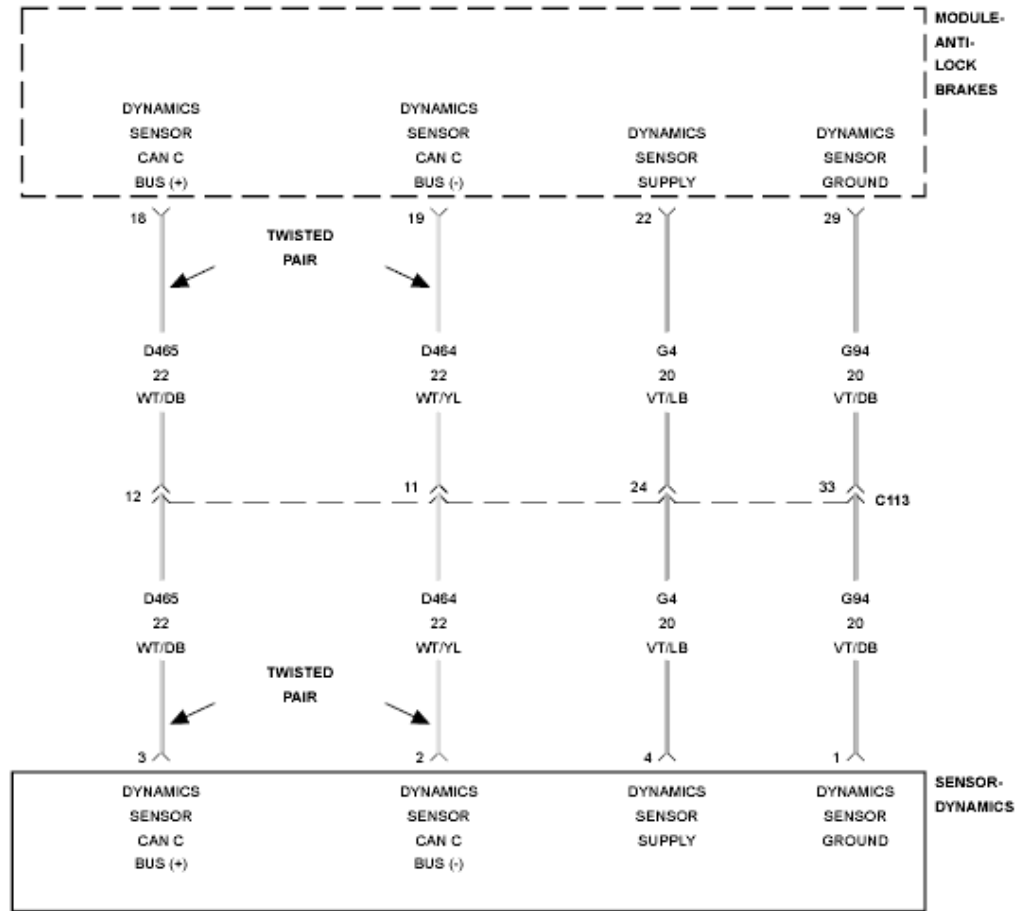


Fig. 67: Dynamics Sensor Supply/Ground Circuit Schematic
Courtesy of CHRYSLER LLC

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

If the Dynamics Sensor status changes from initialized to not initialized due to low voltage on the (G4) Dynamics Sensor Supply circuit.

Possible Causes
WIRING HARNESS, TERMINAL, CONNECTOR DAMAGE (G4) DYNAMICS SENSOR SUPPLY CIRCUIT HIGH RESISTANCE (G94) DYNAMICS SENSOR GROUND CIRCUIT HIGH RESISTANCE DYNAMICS SENSOR ANTI-LOCK BRAKES MODULE

Diagnostic Test

1. CHECK FOR A DTC C2114-DYNAMICS SENSOR SUPPLY VOLTAGE LOW

NOTE: The Sensor Cluster is the same as the Dynamics sensor.

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, read and record the DTCs.
3. With the scan tool, read and record the Environmental Data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase the DTCs.
5. Start the engine.

NOTE: Attempt to operate the vehicle under conditions similar to which the DTC was set. It may be necessary to test drive the vehicle within the DTC monitoring and set conditions, in order for this DTC to set.

6. With the scan tool, read and record the DTCs.

Does the scan tool display: C2114-DYNAMICS SENSOR SUPPLY VOLTAGE LOW?

Yes

- Go to step 2

No

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

2. CHECK THE WIRING HARNESS, TERMINALS, AND CONNECTORS

1. Check the Dynamics Sensor installation and torque of the mounting bolts.
2. Visually inspect the related wiring harness. Look for any bruised, chafed, pierced or partially broken wires.
3. Visually inspect the related wiring harness connectors. Look for broken, bent, pushed out or corroded terminals.

Were any problems found?

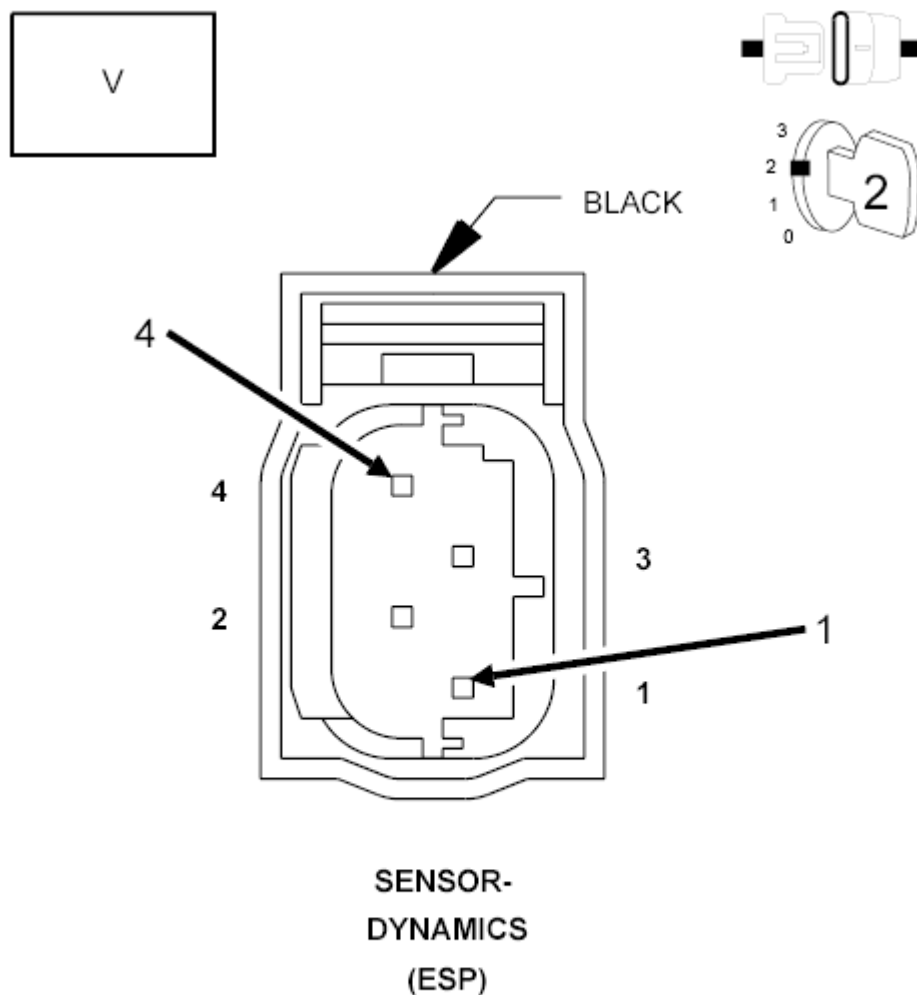
Yes

- Repair as necessary.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 3

3. CHECK THE VOLTAGE ON THE (G4) DYNAMICS SENSOR SUPPLY CIRCUIT



1034664

Fig. 68: Checking Voltage On Dynamics Sensor Supply Circuit

Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Dynamics Sensor harness connector.
3. Turn the ignition on.
4. Measure the voltage across the (G4) Dynamics Sensor Supply Circuit and the (G94) Dynamics Sensor Ground Circuit.

Is the voltage above 10 volts?

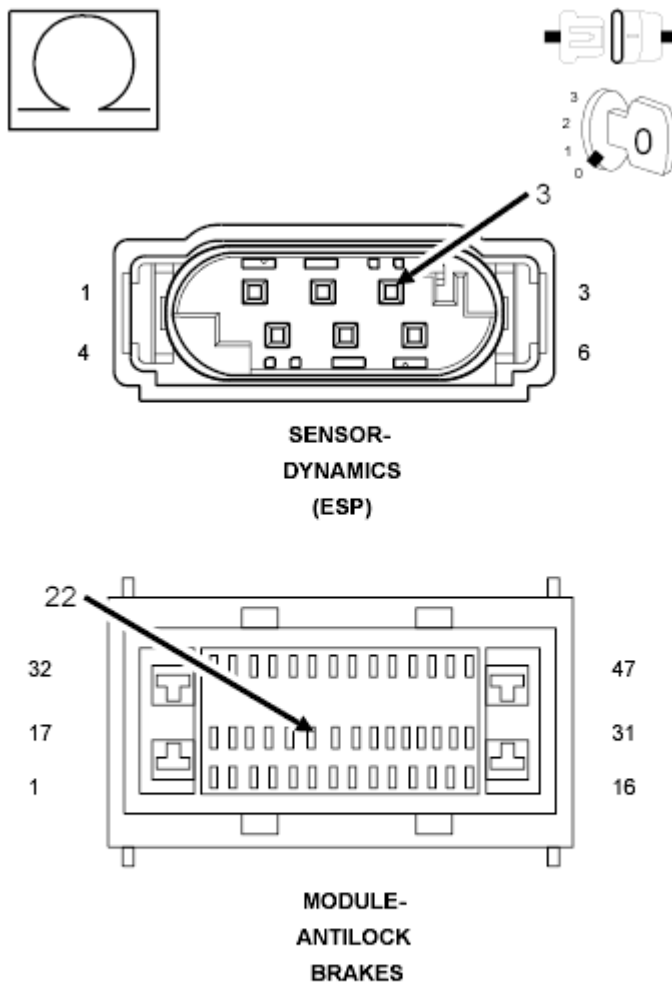
Yes

- Replace the Dynamics Sensor in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 4

4. CHECK (G4) DYNAMICS SENSOR SUPPLY CIRCUIT FOR HIGH RESISTANCE



2128241

Fig. 69: Checking Dynamics Sensor Supply Circuit For High Resistance
 Courtesy of CHRYSLER LLC

1. Turn the ignition off.

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2. Disconnect the Anti-Lock Brakes Module harness connector.
3. Measure the resistance of the (G4) Dynamics Sensor Supply circuit between the Dynamics Sensor harness connector and the Anti-Lock Brake Module harness connector.

Is the resistance below 5.0 Ohms?

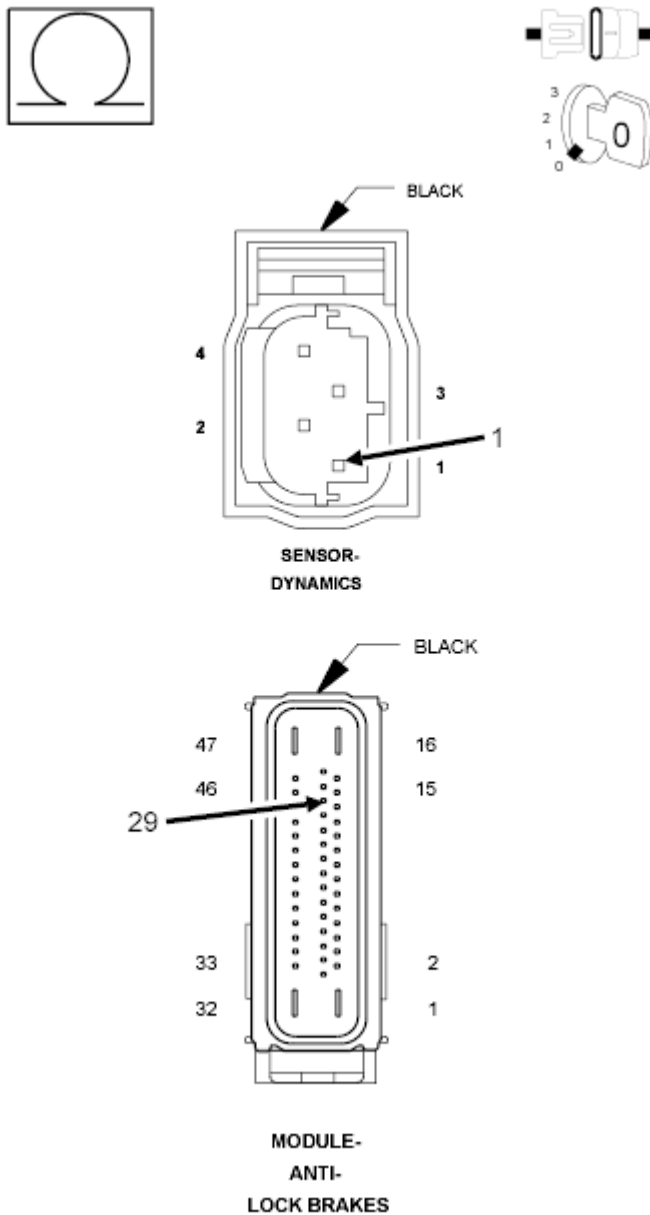
Yes

- Go to step 5

No

- Repair the (G4) Dynamics Sensor Supply circuit for high resistance.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

5. CHECK (G94) DYNAMICS SENSOR GROUND CIRCUIT FOR HIGH RESISTANCE



494767

Fig. 70: Checking Dynamics Sensor Ground Circuit For High Resistance
Courtesy of CHRYSLER LLC

1. Measure the resistance of the (G94) Dynamics Sensor Ground circuit between the Dynamics Sensor harness connector and the Anti-Lock Brake Module harness connector.

Is the resistance below 5.0 Ohms?

Yes

- Replace the Anti-Lock Brake Module in accordance with the Service Information.

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- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Repair the (G94) Dynamics Sensor Ground circuit for high resistance.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

C2115-DYNAMICS SENSOR SUPPLY VOLTAGE HIGH

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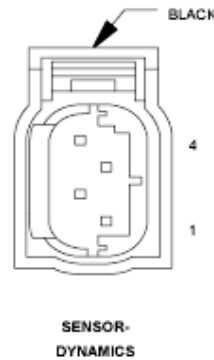
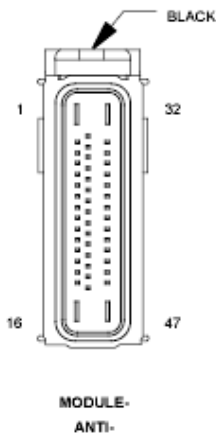
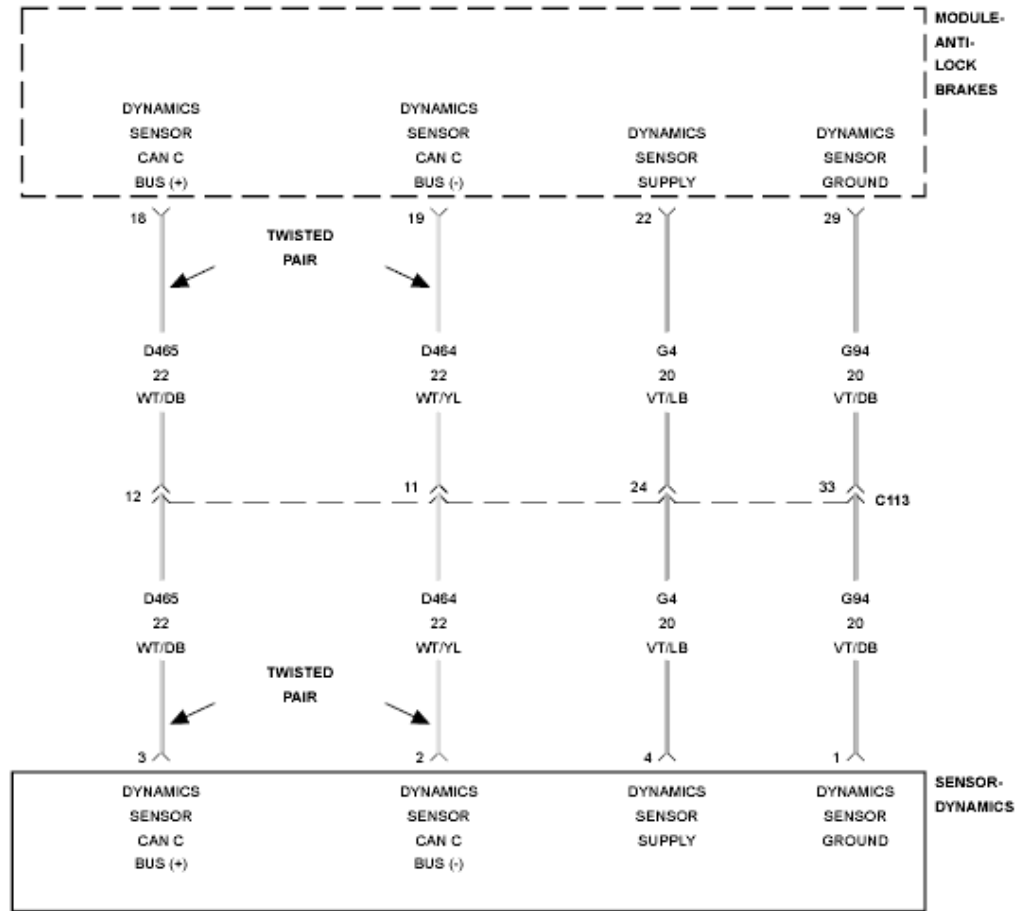


Fig. 71: Dynamics Sensor Supply/Ground Circuit Schematic
Courtesy of CHRYSLER LLC

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

When the Anti-Lock Brake Module indicates the operating voltage is out of specified range.

Possible Causes
WIRING HARNESS, TERMINAL, CONNECTOR DAMAGE CHARGING SYSTEM (G4) SENSOR CLUSTER SUPPLY CIRCUIT SHORTED TO GROUND OR VOLTAGE (G94) SENSOR CLUSTER GROUND CIRCUIT SHORTED TO VOLTAGE OR OPEN SENSOR CLUSTER ANTI-LOCK BRAKE MODULE

Diagnostic Test

1. CHECK FOR A DTC C2115-SENSOR CLUSTER SUPPLY VOLTAGE HIGH

NOTE: The Sensor Cluster is the same as the Dynamics sensor.

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, read and record DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase DTCs.
5. Cycle the ignition from off to on.
6. With the scan tool, read and record DTCs.

Does the scan tool display: C2115-SENSOR CLUSTER SUPPLY VOLTAGE HIGH?

Yes

- Go to step 2

No

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

2. CHECK THE WIRING HARNESS, TERMINALS, AND CONNECTORS

1. Turn ignition off.
2. Check all related wiring for bruised, chafed, pierced, or partially broken wires.
3. Check all related connectors for broken, bent, pushed out, or corroded terminals.

Were any problems found?

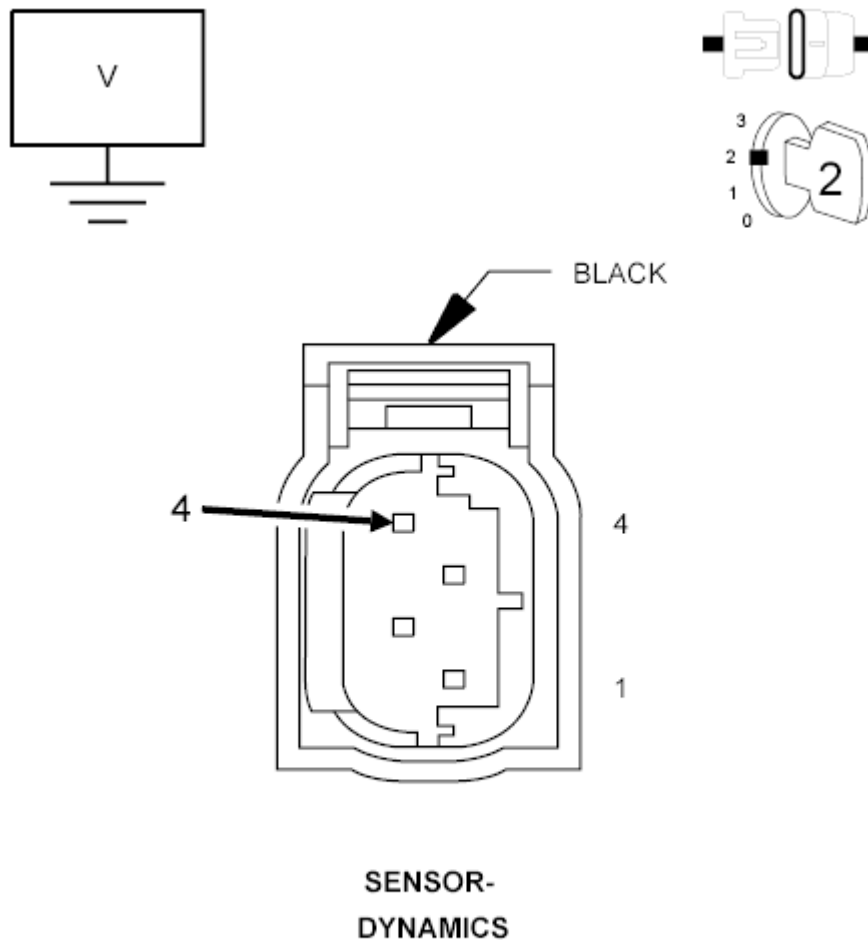
Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 3

3. CHECK THE VOLTAGE ON THE (G4) SENSOR CLUSTER SUPPLY CIRCUIT



102696

Fig. 72: Checking Voltage On Sensor Cluster Supply Circuit
Courtesy of CHRYSLER LLC

WARNING: When the engine is operating, do not stand in direct line with the fan. Do not put your hands near the pulleys, belts or fan. Do not wear loose clothing. Failure to follow these instructions may result in possible serious or fatal injury.

1. Disconnect the Sensor Cluster harness connector.
2. Start the engine.
3. Raise engine speed above 1800 RPM.
4. Measure the voltage of the (G4) Sensor Cluster Supply Circuit.

Is the voltage above 17 volts?

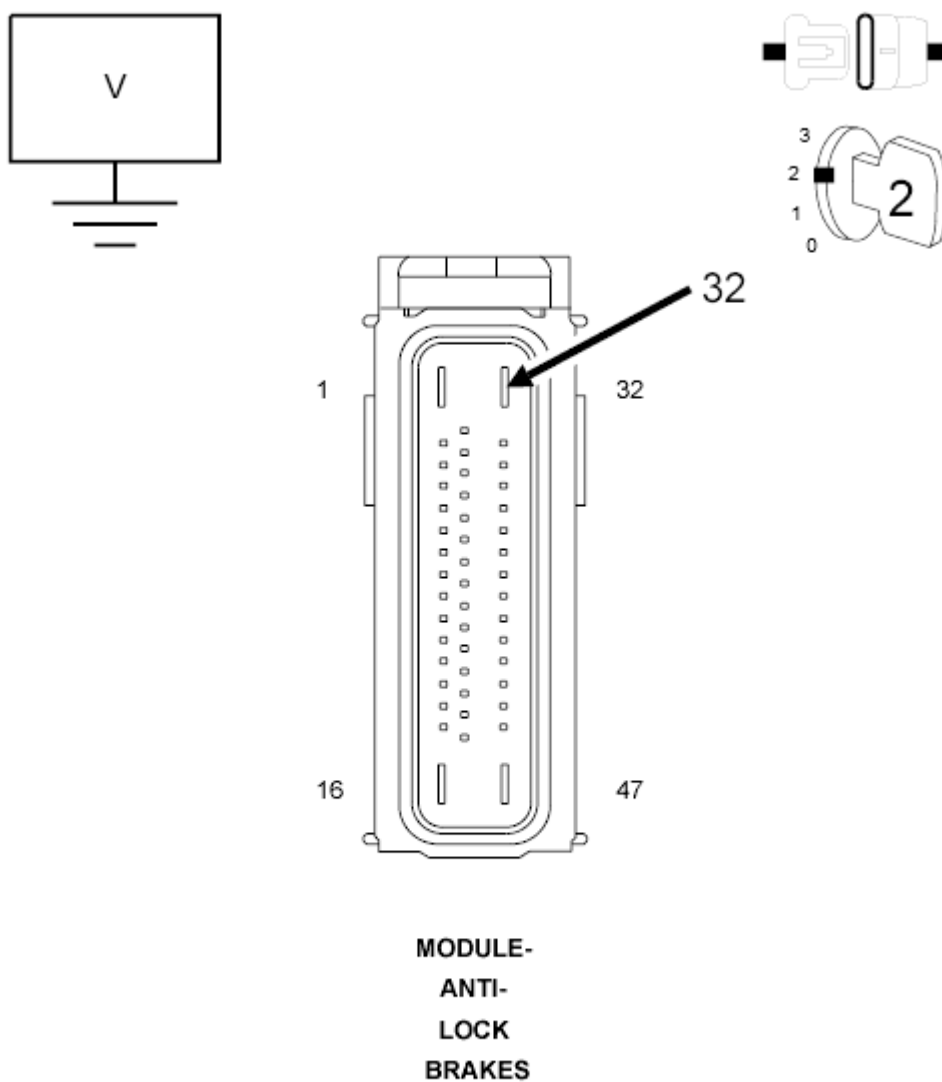
Yes

- Go to step 4

No

- Go to step 7

4. CHECK THE VOLTAGE ON THE FUSED B(+) CIRCUITS



71885

Fig. 73: Checking Voltage On Fused B(+) Circuits
 Courtesy of CHRYSLER LLC

WARNING: When the engine is operating, do not stand in direct line with the fan. Do not put your hands near the pulleys, belts or fan. Do not wear loose clothing. Failure to follow these instructions may result in possible serious or fatal injury.

1. Turn the ignition off.
2. Disconnect the Anti-Lock Brake Module harness connector.
3. Start the engine.
4. Raise engine speed above 1800 RPM.
5. Measure the voltage of the (A107) and the (A200) Fused B(+) circuits.

Is the voltage above 17 volts?

Yes

- Refer to appropriate Service Information for Charging System testing and repair.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 5

5. (G4) SENSOR CLUSTER SUPPLY CIRCUIT SHORT TO GROUND

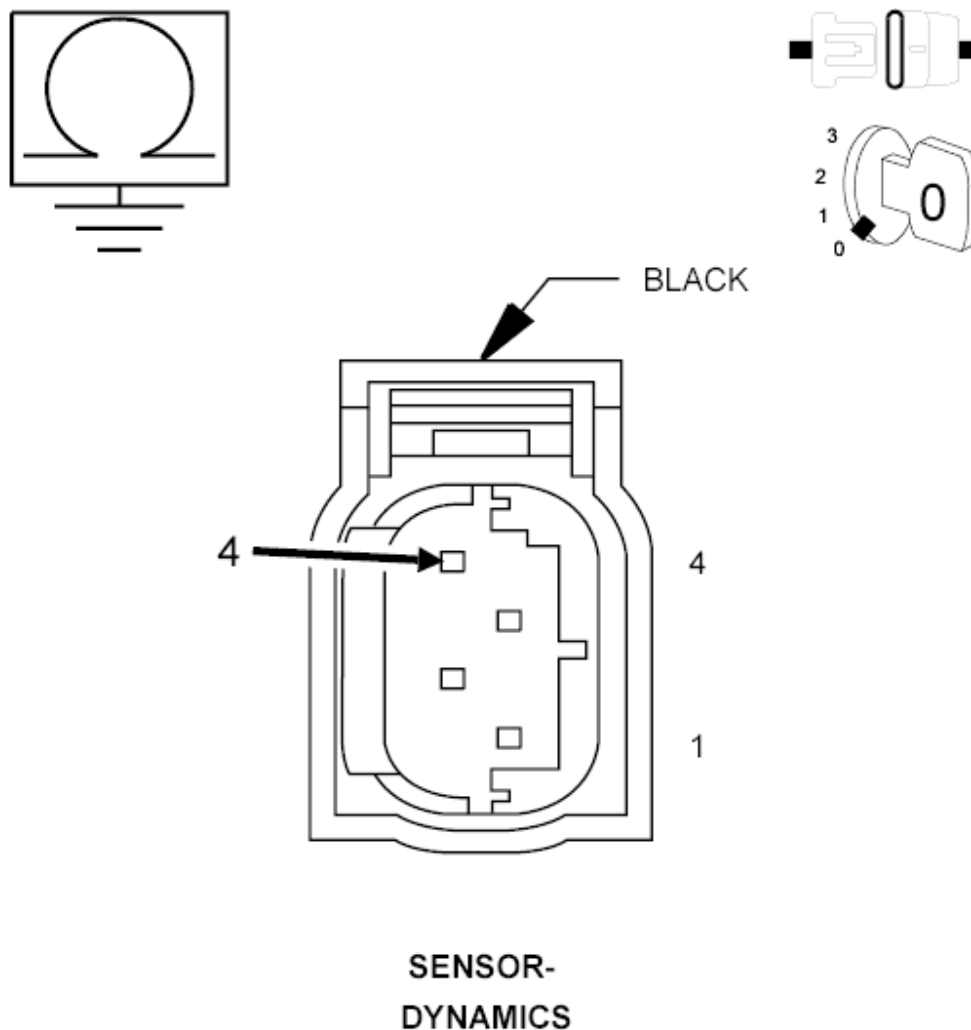


Fig. 74: Checking Sensor Cluster Supply Circuit Short To Ground
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Measure the resistance between ground and the (G4) Sensor Cluster Supply circuit.

Is the resistance below 5.0 ohms?

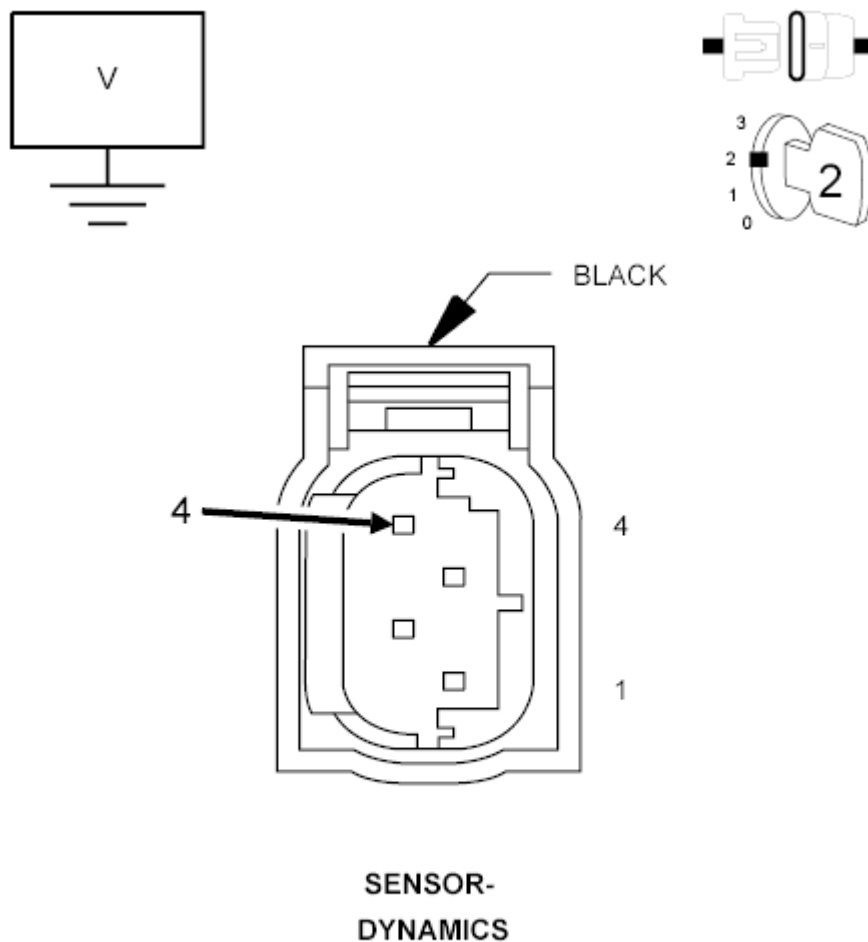
Yes

- Repair the (G4) Sensor Cluster Supply circuit for a short to ground.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 6

6. (G4) SENSOR CLUSTER SUPPLY CIRCUIT SHORT TO VOLTAGE



102696

Fig. 75: Checking Voltage On Sensor Cluster Supply Circuit
Courtesy of CHRYSLER LLC

1. Turn the ignition on.
2. Measure the voltage of the (G4) Sensor Cluster Supply circuit.

Is there any voltage present?

Yes

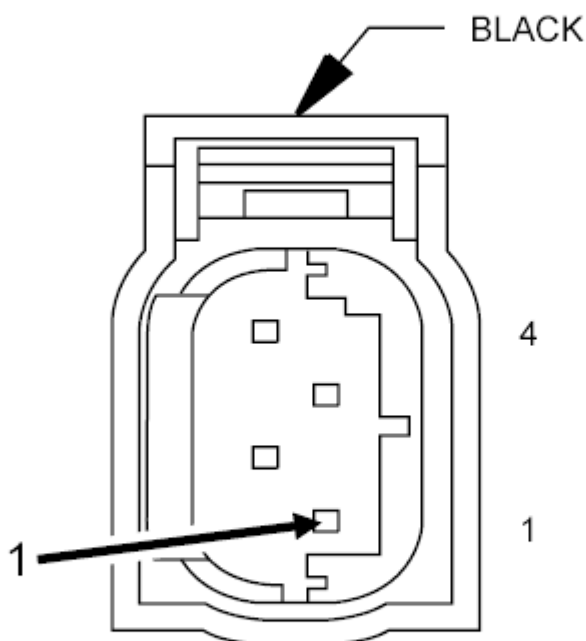
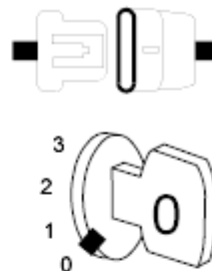
- Repair the (G4) Sensor Cluster Supply circuit for a short to voltage.

- Perform ABS VERIFICATION TEST. See DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.

No

- Go to step 7

7. SENSOR CLUSTER



SENSOR-
DYNAMICS

102682

Fig. 76: Checking Resistance Between Dynamics Sensor Ground Circuit & Ground
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. If necessary, disconnect the Sensor Cluster harness connector.
3. If necessary, connect the Anti-Lock Brake Module harness connector.
4. Measure the resistance between the (G94) Sensor Cluster Ground Circuit at the Sensor Cluster harness connector and ground.

Is the resistance below 5.0 ohms?

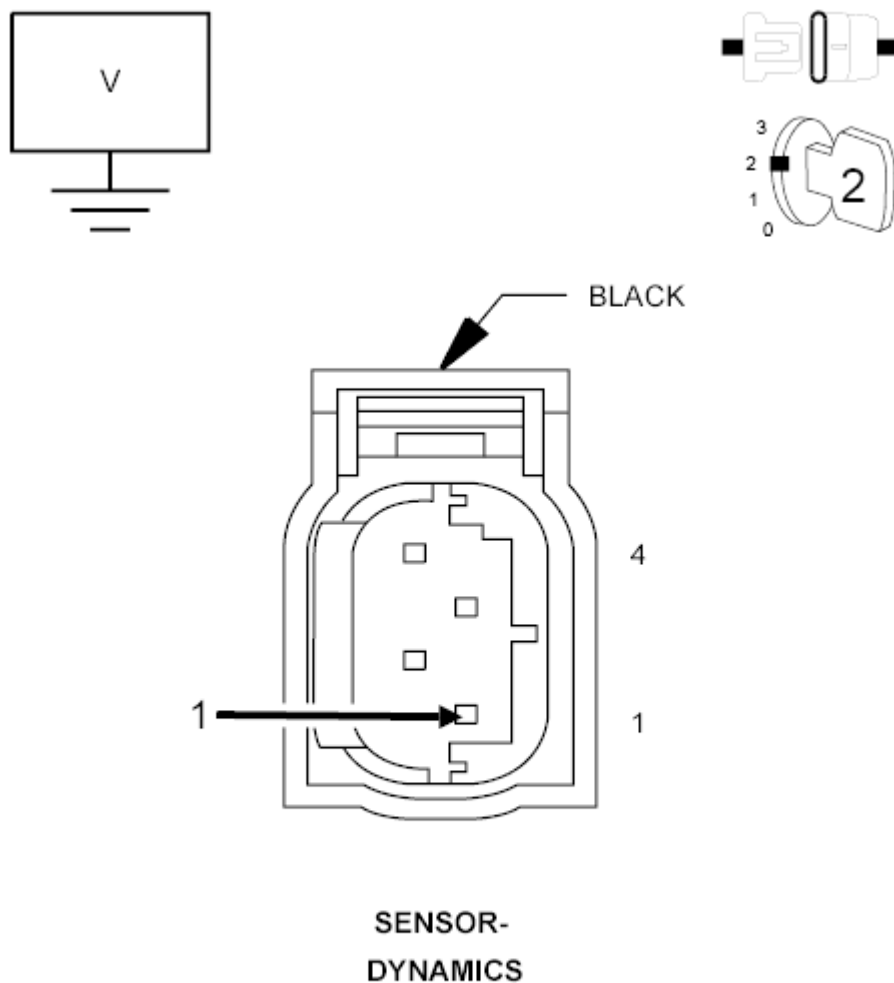
Yes

- Replace the Sensor Cluster in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 8

8. (G94) SENSOR CLUSTER GROUND CIRCUIT SHORT TO VOLTAGE



102700

Fig. 77: Checking Sensor Cluster Ground Circuit Short To Voltage
 Courtesy of CHRYSLER LLC

1. Turn the ignition on.
2. Measure the voltage of the (G94) Sensor Cluster Ground circuit.

Is there any voltage present?

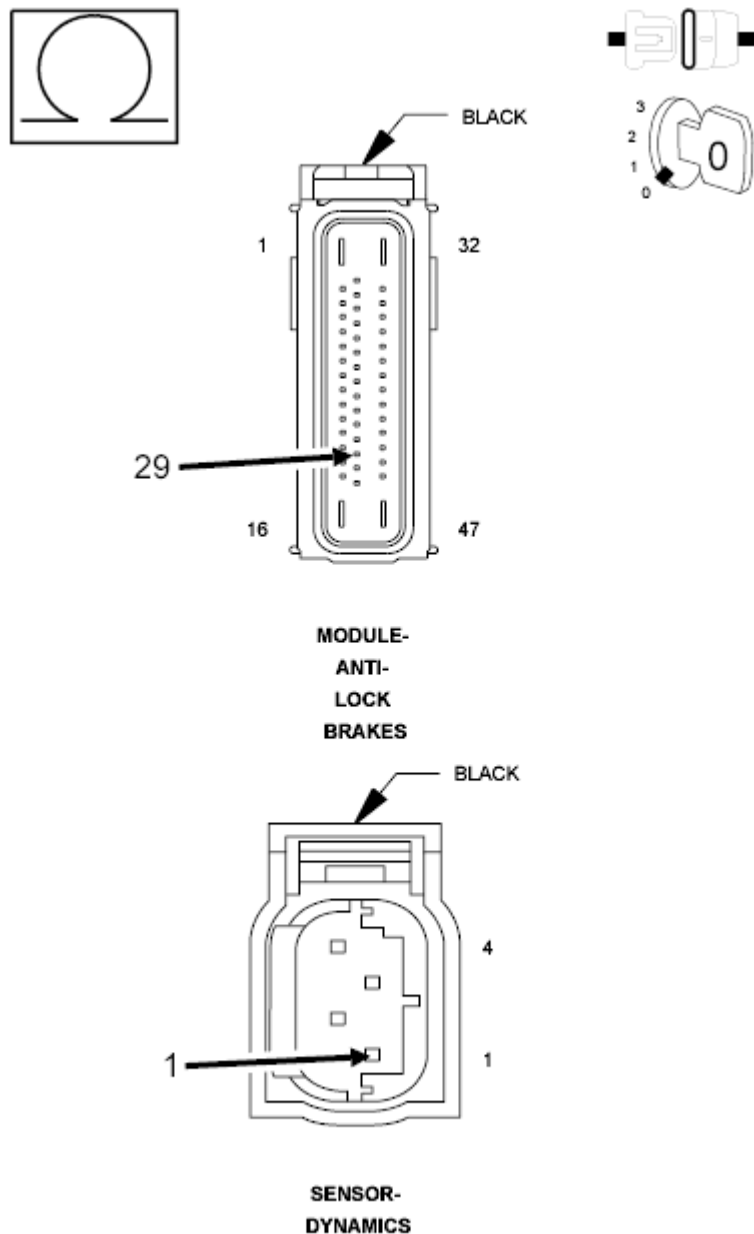
Yes

- Repair the (G94) Sensor Cluster Ground circuit for a short to voltage.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 9

9. (G94) SENSOR CLUSTER GROUND CIRCUIT OPEN



102702

Fig. 78: Checking Sensor Cluster Ground Circuit Open
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Measure the resistance of the (G94) Sensor Cluster Ground circuit

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2009 BRAKES ABS - Electrical Diagnostics - Journey

Is the resistance below 5.0 ohms?

Yes

- Replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Repair the (G94) Sensor Cluster Ground circuit for an open.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

C2116-ABS PUMP MOTOR SUPPLY LOW VOLTAGE

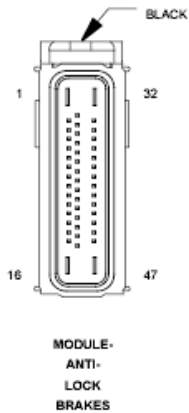
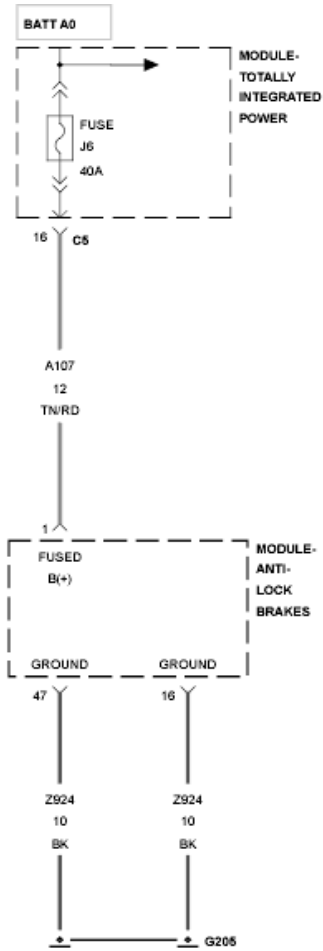


Fig. 79: ABS Pump Motor Fuse & Fused B(+) Circuit Schematic
 Courtesy of CHRYSLER LLC

For complete wiring diagrams, refer to SYSTEM WIRING DIAGRAMS .

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- **When Monitored:**

With the ignition on and the ABS pump motor deactivated.

- **Set Condition:**

When the Anti-Lock Brake Module indicates the ABS Pump Motor supply voltage is below 6.0 volts, the circuit fails the diagnostic test.

Possible Causes
WIRING HARNESS, TERMINAL, CONNECTOR DAMAGE
ABS PUMP MOTOR FUSE OPEN
(A107) FUSED B(+) CIRCUIT SHORTED TO GROUND OR OPEN
(Z924) GROUND CIRCUIT(S) OPEN OR HIGH RESISTANCE
ANTI-LOCK BRAKE MODULE

Diagnostic Test

1. CHECK FOR A DTC C2116-ABS PUMP MOTOR SUPPLY LOW VOLTAGE

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, read and record DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase DTCs.

CAUTION: Make sure braking capability is available before road testing.

5. Drive the vehicle over 40 Km/h (25 mph).
6. Park the vehicle and cycle the ignition switch from off to on.
7. With the scan tool, read and record DTCs

Does the scan tool display: C2116-ABS PUMP MOTOR SUPPLY LOW VOLTAGE?

Yes

- Go to step 2

No

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

2. CHECK ABS PUMP OPERATION WITH SCAN TOOL

1. Cycle ignition switch off to on.
2. With the scan tool, actuate the ABS Pump Motor.

Did the ABS Pump Motor operate?

Yes

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 3

3. CHECK THE ABS PUMP MOTOR FUSE FOR AN OPEN

1. Turn the ignition off.
2. Remove and inspect the ABS Pump Motor fuse.

Is the ABS Pump Motor fuse open?

Yes

- Go to step 4

No

- Go to step 5

4. CHECK THE (A107) FUSED B(+) FOR A SHORT TO GROUND

1. Turn the ignition off.
2. Check the (A107) Fused B(+) circuit in the wiring harness for a short to ground.

Is the (A107) Fused B(+) circuit in the wiring harness OK?

Yes

- Go to step 5

No

- Repair the (A107) Fused B(+) circuit as necessary. Replace the fuse.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

5. CHECK THE WIRING HARNESS, TERMINALS, AND CONNECTORS

NOTE: Check all related wiring for bruised, chafed, pierced, or partially broken wires. Check all related connectors for broken, bent, pushed out, or corroded terminals.

1. Inspect the Anti-Lock Brake Module harness connector and (A107) Fused B(+) circuit in the wiring harness.

Were any problems found?

Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 6

6. (A107) FUSED B(+) CIRCUIT OPEN

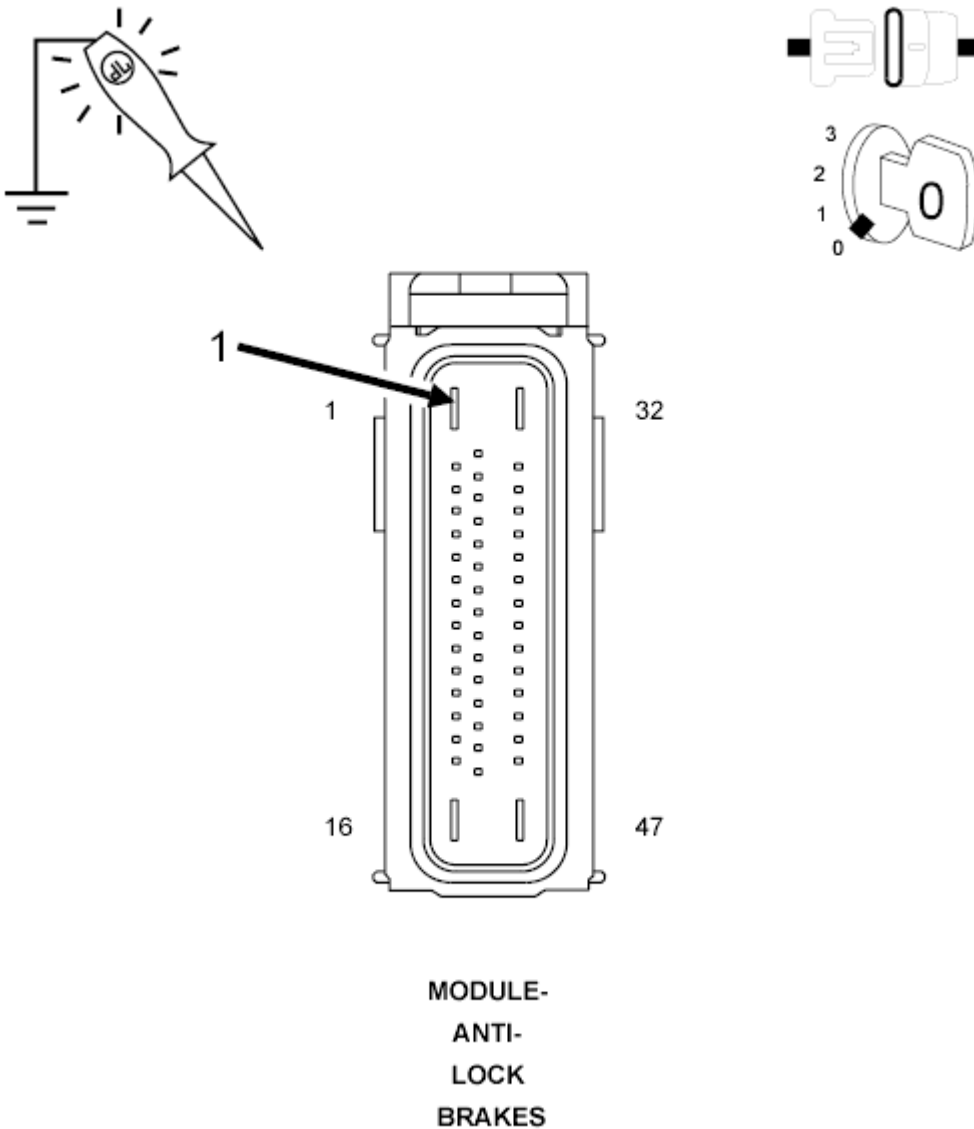


Fig. 80: Checking Anti-Lock Brake Module Harness Connector
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Anti-Lock Brake Module harness connector.
3. Using a 12-volt test light connected to ground, check the (A107) Fused B(+) circuit in the Anti-Lock Brake Module harness connector.

NOTE: The test light should be illuminated and bright. Compare the brightness to that of a direct connection to the battery.

Is the test light illuminated and bright?

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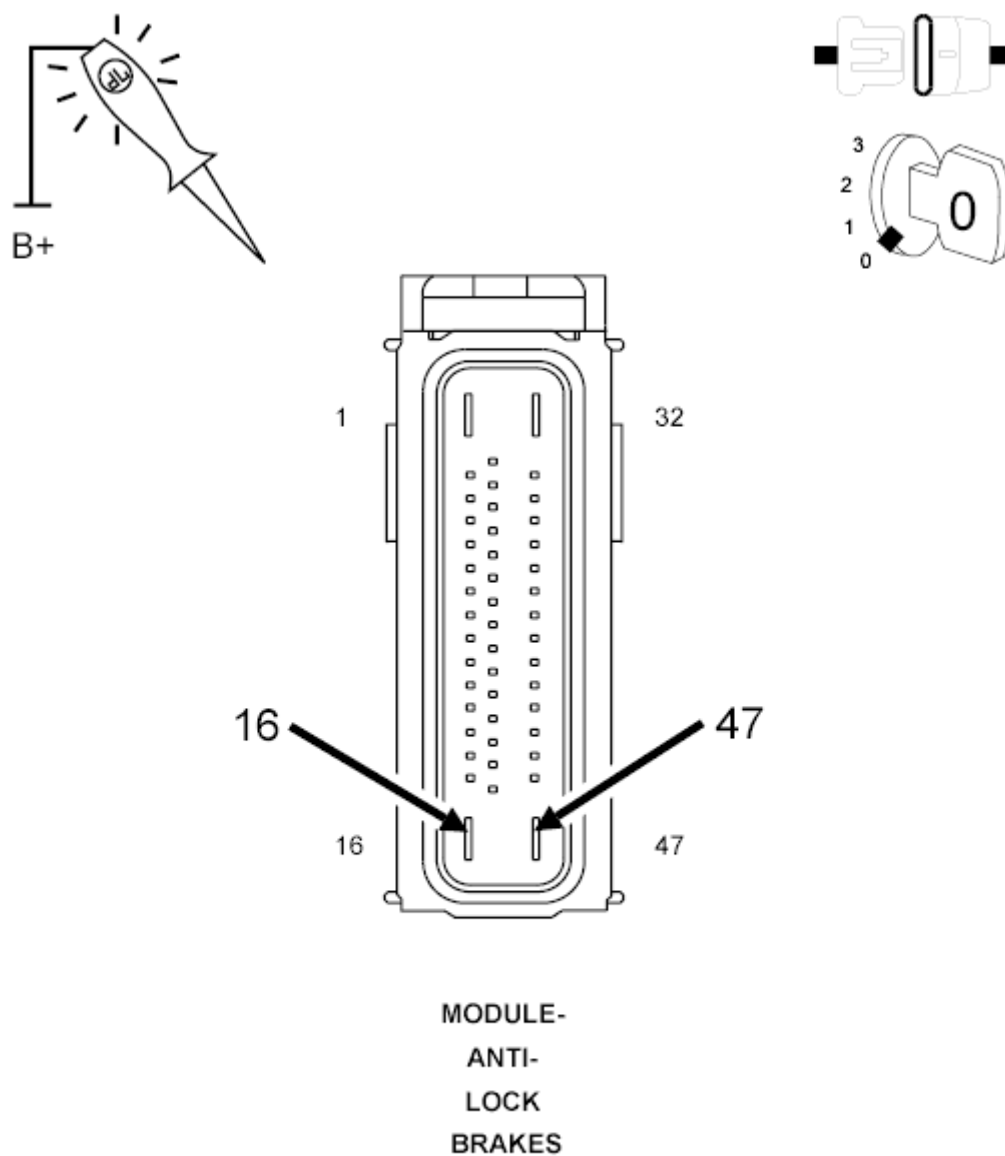
Yes

- Go to step 7

No

- Repair the (A107) Fused B(+) circuit for an open circuit or high resistance.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

7. GROUND CIRCUIT(S) OPEN OR HIGH RESISTANCE



71901

Fig. 81: Checking Ground Circuit Open Or High Resistance
Courtesy of CHRYSLER LLC

1. Using a 12-volt test light connected to 12-volts, check the (Z924) Ground circuits.

NOTE: The test light should be illuminated and bright. Compare the brightness to that of a direct connection to the battery.

Is the test light illuminated and bright?

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Yes

- Replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Repair the Ground circuit(s) for an open circuit or high resistance.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

C2202-ORIGINAL VIN MISMATCH/MISSING

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

• When Monitored:

At power up, VIN is read off the CAN bus.

• Set Condition:

The VIN stored in the ABM does not match the VIN read off of the CAN bus.

Possible Causes
ABM MOVED FROM DIFFERENT VEHICLE
WRONG VIN PROGRAMMED INTO VEHICLE

Diagnostic Test

1. CHECK FOR A DTC C2202-ORIGINAL VIN MISMATCH/MISSING

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, read and record DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the DTC was set.
4. Perform ECU initialization with drive test. Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.
5. Start the engine.
6. With the scan tool, read and record DTCs.

Does the scan tool display: C2202-ORIGINAL VIN MISMATCH/MISSING?

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2009 BRAKES ABS - Electrical Diagnostics - Journey

Yes

- Go to step 2

No

- ABM has learned new VIN.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

2. WRONG VIN PROGRAMMED INTO VEHICLE

Is the VIN stored in the ABM and PCM the same?

Yes

- Replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Reprogram the VIN per service information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

C2204-DYNAMICS SENSOR INTERNAL

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

- **When Monitored:**

Continuously, with ignition on, until vehicle speed exceeds 12.4 mph (20 km/h) for the first time, but not if the sensor voltage is out of range.

- **Set Condition:**

If the Anti-Lock Brake Module detects that the Yaw or Lateral Sensor signal is out of range.

Possible Causes
DYNAMICS SENSOR INSTALLATION
DYNAMICS SENSOR

Diagnostic Test

1. VERIFY DTC IS ACTIVE

NOTE: If present, diagnose and repair DTC C123C-DYNAMICS SENSOR MOUNTING/INSTALLATION PERFORMANCE before diagnosing this DTC.

1. Turn the ignition on.
2. With the scan tool, read and record the ABS DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase the ABS DTCs.
5. Cycle the ignition switch.

WARNING: Make sure brake capability is available before road testing.

NOTE: Attempt to operate the vehicle under conditions similar to which the DTC was set. It may be necessary to test drive the vehicle within the DTC monitoring and set conditions in order for this DTC to set.

6. Test drive the vehicle by turning the vehicle left or right in a curving manner at a velocity between 6 and 12 mph (10 and 20 km/h).
7. Park the vehicle.
8. With the scan tool, read the ABS DTCs.

Does this DTC reset?

Yes

- Replace the Dynamics Sensor in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Perform the ABS INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

C2205-STEERING ANGLE SENSOR INTERNAL

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

- **When Monitored:**

With ignition on, but not if supply voltage faults are detected.

Set Condition:

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2009 BRAKES ABS - Electrical Diagnostics - Journey

If the Anti-Lock Brake Module detects that the Steering Angle Sensor sends an internal failure message.

Possible Causes
CLOCKSPRING (SAS)

Diagnostic Test

1. CHECK FOR A DTC C2205-STEERING ANGLE SENSOR INTERNAL

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, read and record DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase DTCs.

WARNING: Ensure brake capability is available before road testing.

5. Start the vehicle and turn the wheel from lock to lock.
6. Test drive the vehicle by turning the vehicle left or right in a curving manner at a velocity between 10 and 25 km/h (6 and 15 mph).
7. Park the vehicle.
8. With the scan tool, read and record DTCs.

Does the scan tool display: C2205-STEERING ANGLE SENSOR INTERNAL?

Yes

- Replace the Clockspring (SAS) in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Perform the ABS-INTERMITTENT CONDITION diagnostic procedure. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

C2206-VEHICLE CONFIGURATION MISMATCH

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

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2009 BRAKES ABS - Electrical Diagnostics - Journey

- **When Monitored:**

With the ignition on.

- **Set Condition:**

When the Anti-Lock Brake Module detects the signal from the gateway module relevant for vehicle characteristic is missing for a period greater than the specified fault duration.

Possible Causes
VEHICLE CONFIGURATION MISMATCH

Diagnostic Test

1. CHECK FOR A DTC C2206-VEHICLE CONFIGURATION MISMATCH

NOTE: This DTC must be active for the results of this test to be valid. Diagnose and repair any communication DTCs in the Front Control Module (FCM) before continuing with this test.

NOTE: Diagnose and repair any system under voltage or over voltage DTCs before continuing with this test.

1. Turn the ignition on.
2. With the scan tool, read the DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase the DTCs.
5. Cycle the ignition switch off then on.
6. With the scan tool, read the DTCs.

Does the scan tool display: C2206-VEHICLE CONFIGURATION MISMATCH?

Yes

- With the scan tool select FCM under ECU selection then Misc Functions and Restore Vehicle Configuration.

No

- Perform the ABS INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

U0100-LOST COMMUNICATION WITH ECM/PCM

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

- **When Monitored:**

With the ignition on.

Battery voltage between 10 and 16 volts.

IOD fuse installed.

TIPM is configured correctly.

- **Set Condition:**

Bus messages not received from the Engine Control Module/Powertrain Control Module (ECM/PCM) for approximately 2 to 5 seconds.

Possible Causes
(D64) CAN C BUS (-) CIRCUIT SHORTED TO VOLTAGE (D65) CAN C BUS (+) CIRCUIT SHORTED TO GROUND DTCS RELATED TO BATTERY VOLTAGE, IGNITION, OR VIN MESSAGES TIPM NOT CONFIGURED CORRECTLY ECM/PCM POWER AND GROUND ECM/PCM MODULE THAT SET THIS DTC

Diagnostic Test

1. VERIFY DTC IS ACTIVE

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

1. With the scan tool, read active DTCs.

Is this DTC active?

Yes

- Perform the appropriate diagnostic procedure. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Diagnosis and Testing** .

No

- Perform the appropriate Stored Lost Communication test procedure. Refer to **Non-DTC**

Diagnostics/Communication - Diagnosis and Testing .**U0101-LOST COMMUNICATION WITH TCM**

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

- **When Monitored:**

With the ignition on.

Battery voltage between 10 and 16 volts.

IOD fuse installed.

TIPM is configured correctly.

- **Set Condition:**

Bus messages not received from the Transmission Control Module (TCM) for approximately 2 to 5 seconds.

Possible Causes
(D64) CAN C BUS (-) CIRCUIT SHORTED TO VOLTAGE
(D65) CAN C BUS (+) CIRCUIT SHORTED TO GROUND
DTCS RELATED TO BATTERY VOLTAGE, IGNITION, OR VIN MESSAGES
TIPM NOT CONFIGURED CORRECTLY
TCM POWER AND GROUND
TCM
ANTI-LOCK BRAKE MODULE

Diagnostic Test**1. VERIFY DTC IS ACTIVE**

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

1. With the scan tool, read active DTCs.

Is this DTC active?

Yes

- Go to step 2

No

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

2. CHECK FOR ANY OF THE FOLLOWING ACTIVE DTCS

1. With the scan tool, read all active DTCs from all modules.

NOTE: Check for TIPM configuration, CAN C hardware electrical, VIN Missing/Mismatch, battery or ignition related DTCs.

Does the scan tool display any active DTCs to the conditions listed above?

Yes

- Diagnose and repair the DTC. Check the Index for a complete list of the symptoms.

No

- Go to step 3

3. VERIFY THAT THE TCM IS ACTIVE ON THE BUS

1. Turn the ignition on.
2. With the scan tool, select Network Diagnostics.
3. Verify that the TCM is active on the bus.

Is the TCM active on the bus?

Yes

- Go to step 4

No

- Refer to the No Response test procedure. Refer to **Non-DTC Diagnostics/Communication - Diagnosis and Testing** .

4. CHECK FOR ADDITIONAL COMMUNICATION RELATED DTCS

1. With the scan tool, select Network Diagnostics.

Is there more than one module with active DTCs "Logged Against" the TCM?

Yes

- Replace/update the Transmission Control Module in accordance with the service information.
- Perform the TRANSMISSION VERIFICATION TEST. Refer to **DTC-Based**

Diagnostics/MODULE, Transmission Control (TCM) - Standard Procedure .

No

- Go to step 5

5. CLEAR DTC IN MODULE SETTING FAULT

1. With the scan tool, select the module setting the DTC against the TCM.
2. Clear active DTCs.

Is this DTC still active?

Yes

- Replace/update the module that set this DTC in accordance with the service information.
- Perform the appropriate VERIFICATION TEST.

No

- Go to step 6

6. CYCLE IGNITION

1. Cycle the ignition from RUN to OFF three times ending with the key in the RUN position.

Does this DTC become active?

Yes

- Go to step 7

No

- The condition is not present at this time. Using the **SYSTEM WIRING DIAGRAMS** 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.
- Perform the appropriate VERIFICATION TEST.

7. CHECK FOR ADDITIONAL LOST COMMUNICATION FAULTS

1. With the scan tool, select Network Diagnostics.

Does the TIPM and other CAN C BUS modules show Lost Communication with the remaining CAN C BUS modules?

Yes

- Go to step 8

No

- Replace/update the module that set this DTC in accordance with the service information.
- Perform the appropriate VERIFICATION TEST.

8. (D64) CAN C BUS (-) CIRCUIT SHORTED TO VOLTAGE

1. Measure the voltage between the (D64) CAN C Bus (-) circuit and ground.

Is the voltage above 5 volts?

Yes

- Repair the (D64) CAN C Bus (-) circuit for a short to voltage.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

No

- Go to step 9

9. (D65) CAN C BUS (+) CIRCUIT SHORTED TO GROUND

1. Turn the ignition off.
2. Measure the resistance between ground and the (D65) CAN C Bus (+) circuit.

Is the resistance below 10K Ohms?

Yes

- Repair the (D65) CAN C Bus (+) circuit for a short to ground.
- Perform the BODY VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Standard Procedure** .

No

- Replace the Anti-Lock Brake Module in accordance with the service information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

U0125-LOST COMMUNICATION WITH DYNAMICS SENSOR

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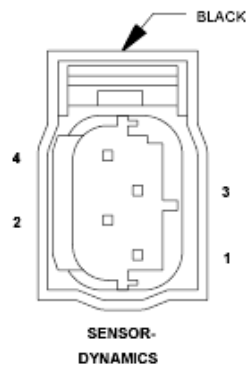
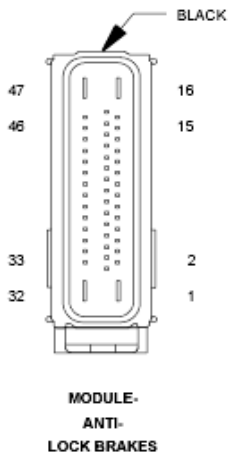
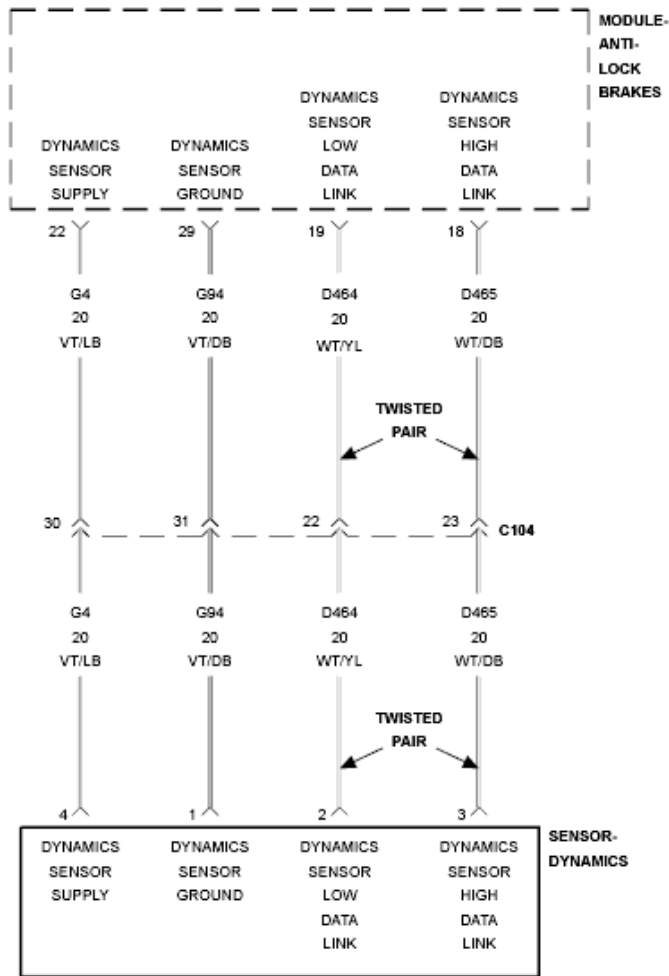


Fig. 82: Dynamics Sensor Data Link Voltage Low Circuit Schematic
Courtesy of CHRYSLER LLC

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

If the Anti-Lock Brake Module fails to receive bus messages from the Dynamics Sensor.

Possible Causes
WIRING HARNESS, TERMINAL, CONNECTOR DAMAGE (G4) DYNAMICS SENSOR SUPPLY CIRCUIT SHORTED TO VOLTAGE, GROUND, OR OPEN (G94) DYNAMICS SENSOR GROUND CIRCUIT SHORTED TO VOLTAGE, GROUND, OR OPEN (D465) DYNAMICS SENSOR HIGH DATA LINK CIRCUIT SHORTED TO GROUND, SHORTED TO VOLTAGE, OR OPEN (D464) DYNAMICS SENSOR LOW DATA LINK CIRCUIT SHORTED TO GROUND, SHORTED TO VOLTAGE, OR OPEN DYNAMICS SENSOR ANTI-LOCK BRAKE MODULE

Diagnostic Test

1. VERIFY DTC IS ACTIVE

NOTE: If present, diagnose and repair DTC C2114-DYNAMICS SENSOR SUPPLY VOLTAGE LOW or DTC C2115-DYNAMICS SENSOR SUPPLY VOLTAGE HIGH before proceeding.

1. Turn the ignition on.
2. With the scan tool, read and record the ABS DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase the ABS DTCs.
5. Start the engine.

NOTE: Attempt to operate the vehicle under conditions similar to which the DTC was set. It may be necessary to test drive the vehicle within the DTC monitoring and set conditions in order for this DTC to set.

6. With the scan tool, read the ABS DTCs.

Does this DTC reset?

Yes

- Go to step 2

No

- The condition that caused the symptom is currently not present. Inspect the related wiring for a possible intermittent condition. Look for any chafed, pierced, pinched, or partially broken wires.
- Perform the ABS INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

2. INSPECT RELATED WIRING HARNESS, TERMINALS, AND CONNECTORS

1. Visually inspect the related wiring harness. Look for any pinched, chafed, pierced, and partially broken wires.
2. Visually inspect the related wiring harness connectors. Look for broken, bent, pushed out, and corroded terminals.

Were any problems found?

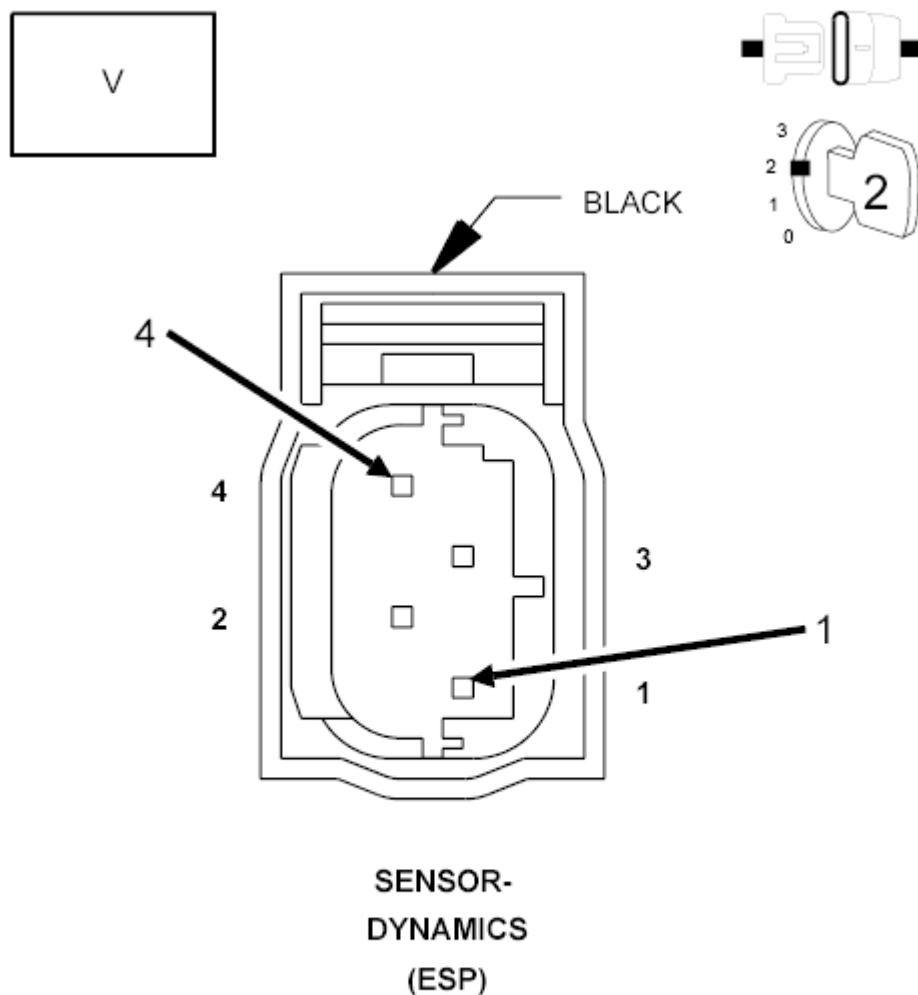
Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 3

3. CHECK THE VOLTAGE ON THE (G4) DYNAMICS SENSOR SUPPLY CIRCUIT



1034664

Fig. 83: Checking Voltage On Dynamics Sensor Supply Circuit

Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Dynamics Sensor harness connector.
3. Turn the ignition on.
4. Measure the voltage across (G4) Dynamics Sensor Supply Circuit and (G94) Dynamics Sensor Ground Circuit.

Is the voltage above 10 volts?

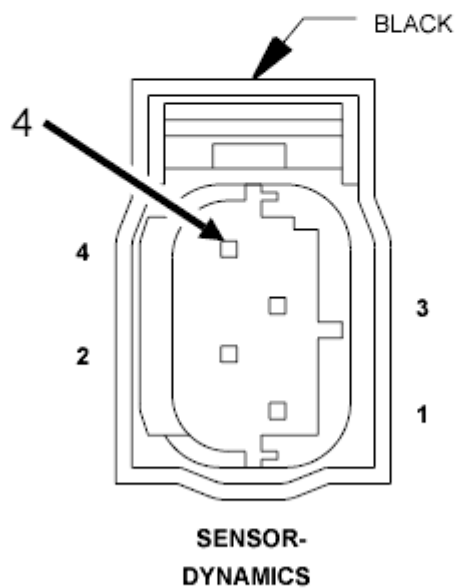
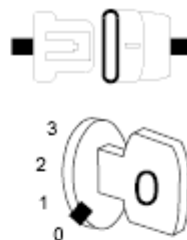
Yes

- Go to step 10

No

- Go to step 4

4. (G4) DYNAMICS SENSOR SUPPLY CIRCUIT SHORT TO GROUND



494564

Fig. 84: Checking Dynamics Sensor Supply Circuit Short To Ground
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Anti-Lock Brake Module harness connector.

3. Measure the resistance between ground and the (G4) Dynamics Sensor Supply circuit.

Is the resistance below 5.0 Ohms?

Yes

- Repair the (G4) Dynamics Sensor Supply circuit for a short to ground.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 5

5. **(G4) DYNAMICS SENSOR SUPPLY CIRCUIT SHORT TO VOLTAGE**

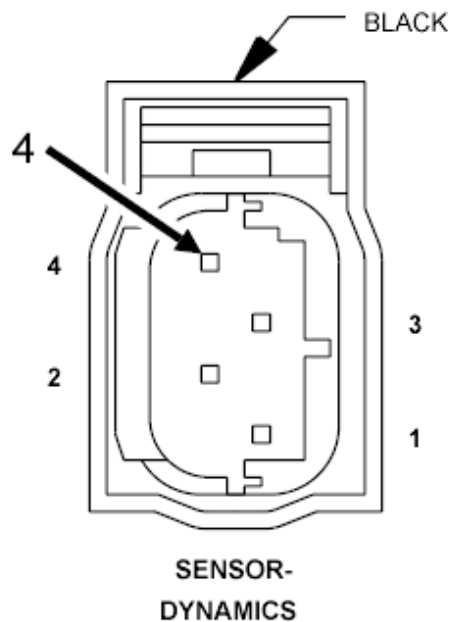
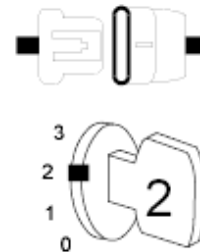
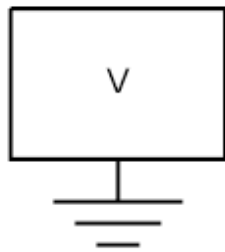


Fig. 85: Checking Dynamics Sensor Supply Circuit Short To Voltage
Courtesy of CHRYSLER LLC

1. Turn the ignition on.
2. Measure the voltage of the (G4) Dynamics Sensor Supply circuit.

Is there any voltage present?

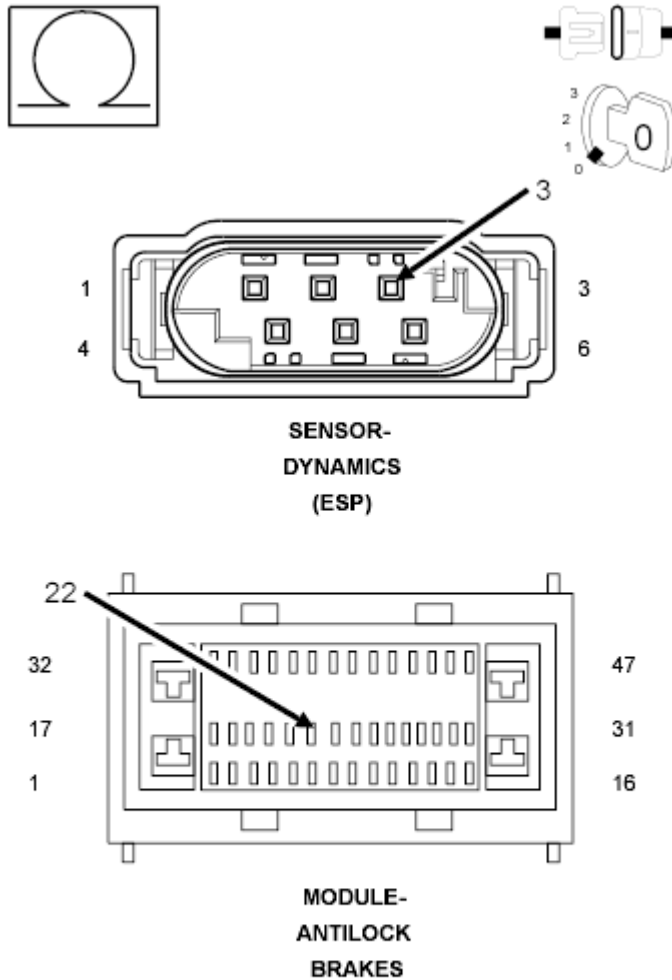
Yes

- Repair the (G4) Dynamics Sensor Supply circuit for a short to voltage.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 6

6. (G4) DYNAMICS SENSOR SUPPLY CIRCUIT OPEN



2128241

Fig. 86: Checking Dynamics Sensor Supply Circuit For High Resistance
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Measure the resistance of the (G4) Dynamics Sensor Supply circuit.

Is the resistance below 5.0 Ohms?

Yes

- Go to step 7

No

- Repair the (G4) Dynamics Sensor Supply circuit for an open.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

7. CHECK THE RESISTANCE BETWEEN THE (G94) DYNAMICS SENSOR GROUND CIRCUIT AND GROUND

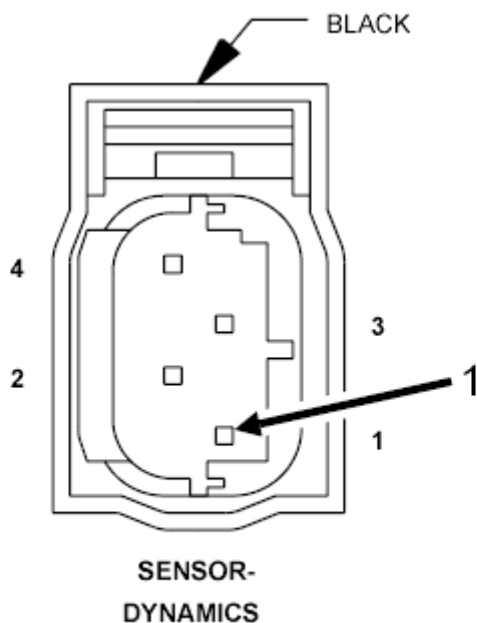
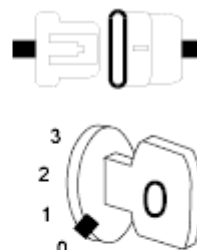


Fig. 87: Checking Resistance Between Dynamics Sensor Ground Circuit & Ground
 Courtesy of CHRYSLER LLC

1. Disconnect the Dynamics Sensor harness connector.

2. Measure the resistance between the (G94) Dynamics Sensor Ground Circuit and Ground.

Is the resistance below 5.0 Ohms?

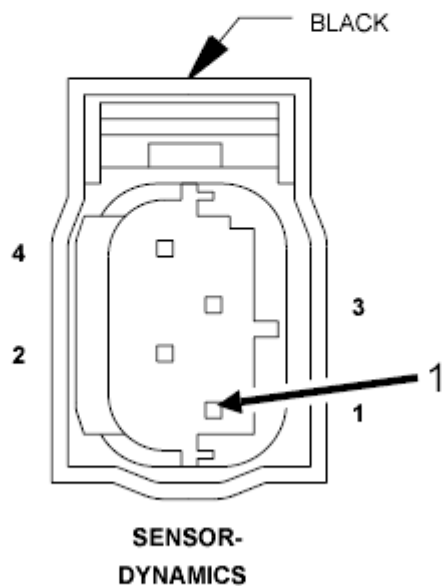
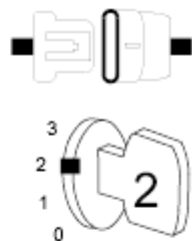
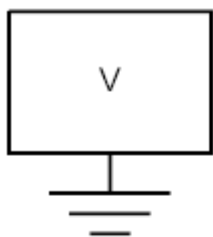
Yes

- Replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 8

8. (G94) DYNAMICS SENSOR GROUND CIRCUIT SHORT TO VOLTAGE



494744

Fig. 88: Checking Dynamics Sensor Ground Circuit Short To Voltage
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Anti-Lock Brake Module harness connector.
3. Turn the ignition on.
4. Measure the voltage of the (G94) Dynamics Sensor Ground circuit.

Is there any voltage present?

Yes

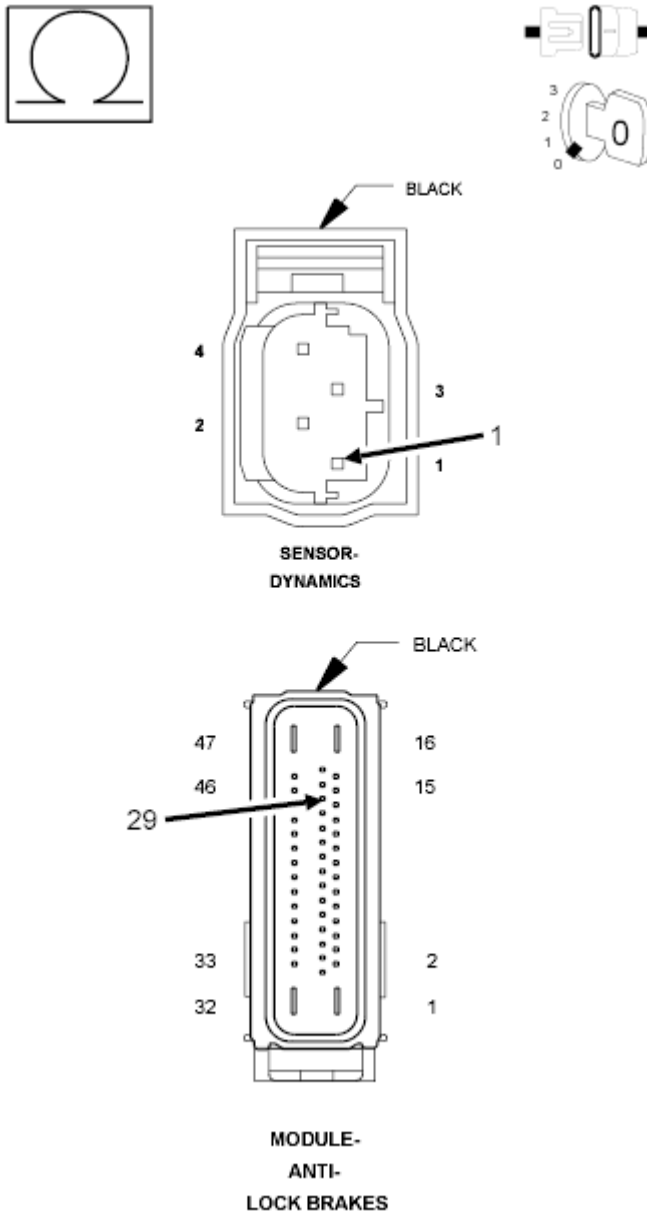
- Repair the (G94) Dynamics Sensor Ground circuit for a short to voltage.

- Perform ABS VERIFICATION TEST. See DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.

No

- Go to step 9

9. (G94) DYNAMICS SENSOR GROUND CIRCUIT OPEN



494767

Fig. 89: Checking Dynamics Sensor Ground Circuit For High Resistance
 Courtesy of CHRYSLER LLC

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

1. Turn the ignition off.
2. Measure the resistance of the (G94) Dynamics Sensor Return circuit between the Dynamics Sensor and the Anti-Lock Brake Module.

Is the resistance below 5.0 Ohms?

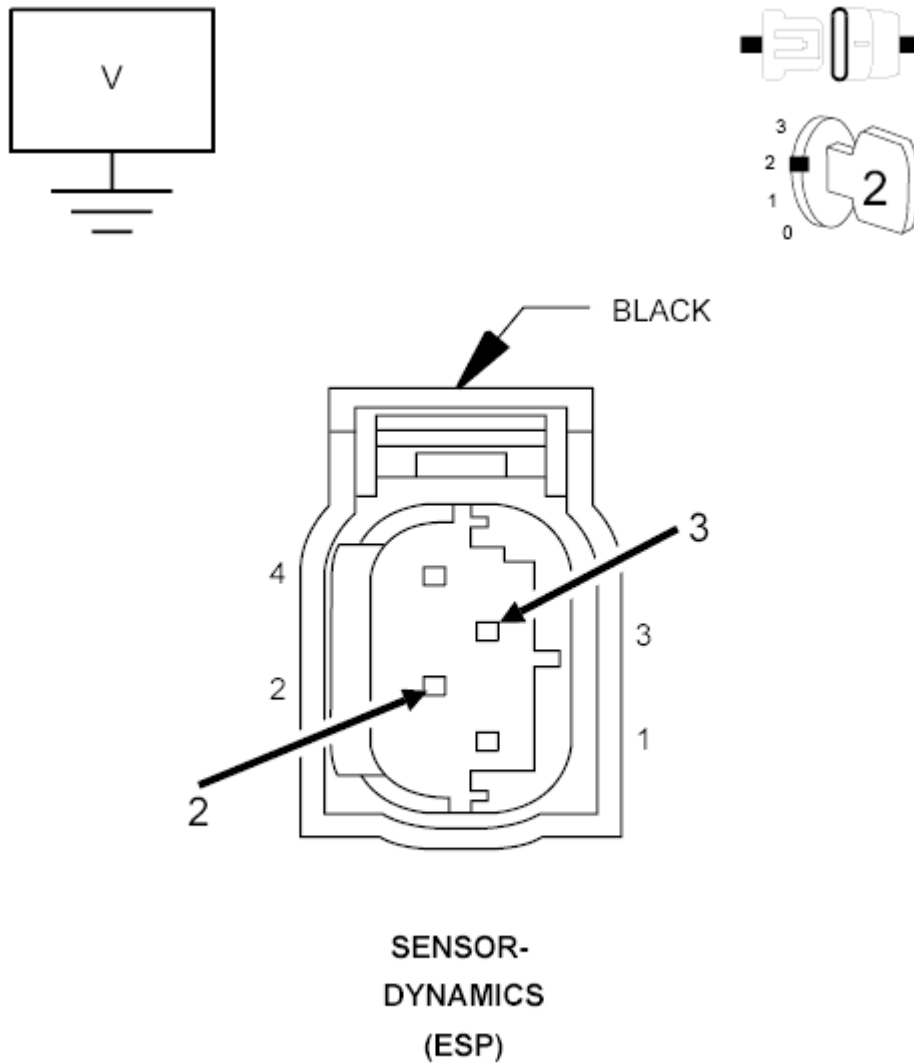
Yes

- Replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Repair the (G94) Dynamics Sensor Ground circuit for an open.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

10. CHECK THE DATA LINK OUTPUT



1074564

Fig. 90: Checking Data Link Output

Courtesy of CHRYSLER LLC

1. Measure the voltage of the Data Links Circuits the (D465) DYNAMICS SENSOR HIGH DATA LINK CIRCUIT will measure a minimum of 3 volts and the (D464) DYNAMICS SENSOR LOW DATA LINK CIRCUIT will measure a minimum of 2 volts

Is the voltage within specifications?

Yes

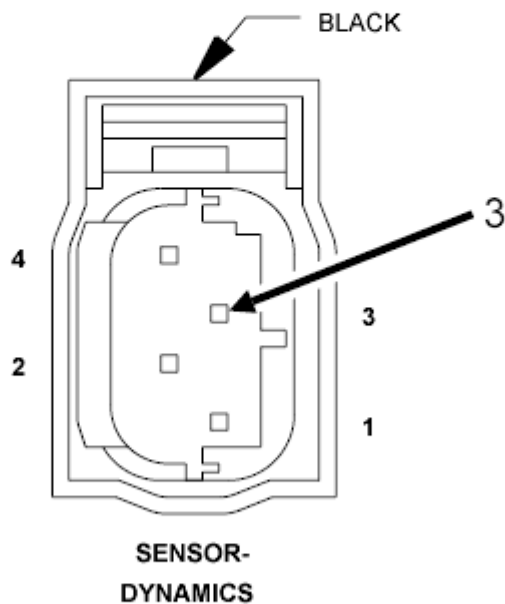
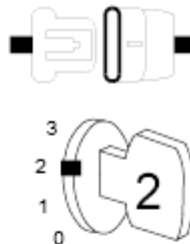
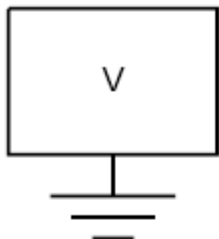
- Replace the Dynamic Sensor in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock**

Brake (ABS) - Standard Procedure.

No

- Go to step 11

11. CHECK THE (D465) DYNAMICS SENSOR HIGH DATA LINK CIRCUIT FOR A SHORT TO VOLTAGE



494035

Fig. 91: Checking Dynamics Sensor High Data Link Circuit For A Short To Voltage
Courtesy of CHRYSLER LLC

1. Disconnect the Anti-Lock Brakes Module harness connector.

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

2. Disconnect the Dynamics Sensor harness connector.
3. Turn the ignition on.
4. Measure the voltage of the (D465) Dynamics Sensor High Data Link circuit.

Is there any voltage present?

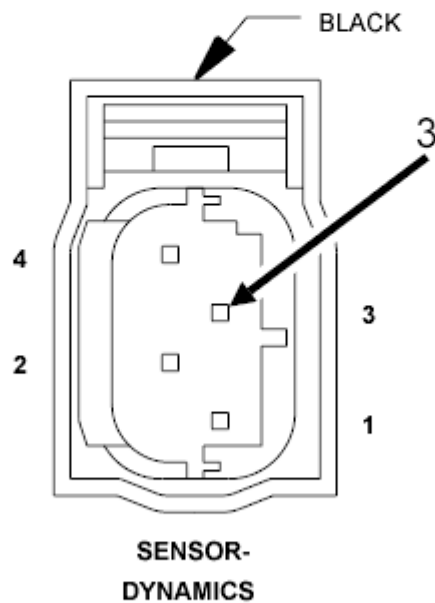
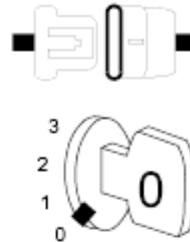
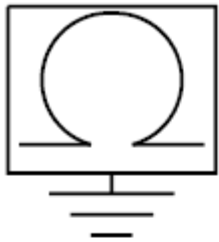
Yes

- Repair the (D465) Dynamics Sensor High Data Link circuit for a short to voltage.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 12

12. **CHECK THE (D465) DYNAMICS SENSOR HIGH DATA LINK CIRCUIT FOR A SHORT TO GROUND**



494046

Fig. 92: Checking Dynamics Sensor High Data Link Circuit For A Short To Ground
 Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Measure the resistance of the (D465) Dynamics Sensor High Data Link circuit between ground and the Dynamics Sensor harness connector.

Is the resistance below 5.0 Ohms?

Yes

- Repair the (D465) Dynamics Sensor High Data Link circuit for a short to ground.

- Perform ABS VERIFICATION TEST. See DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.

No

- Go to step 13

13. CHECK THE (D465) DYNAMICS SENSOR HIGH DATA LINK CIRCUIT FOR AN OPEN

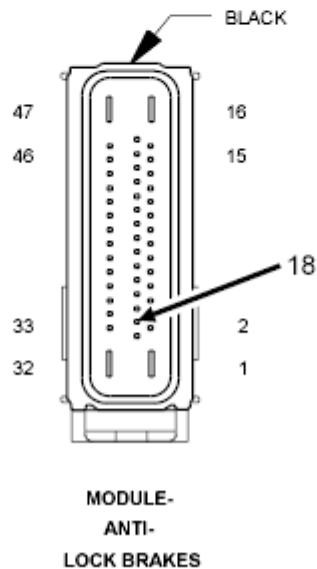
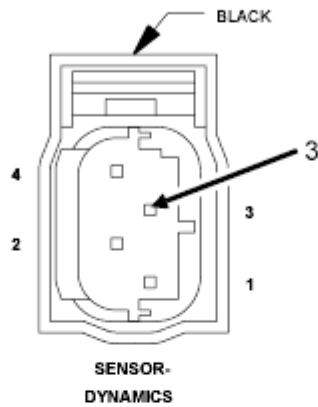
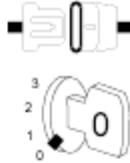


Fig. 93: Checking Dynamics Sensor High Data Link Circuit For An Open
Courtesy of CHRYSLER LLC

1. Measure the resistance of the (D465) Dynamics Sensor High Data Link circuit between the Dynamics Sensor harness connector and the Anti-Lock Brakes Module harness connector.

Is the resistance below 5.0 Ohms?

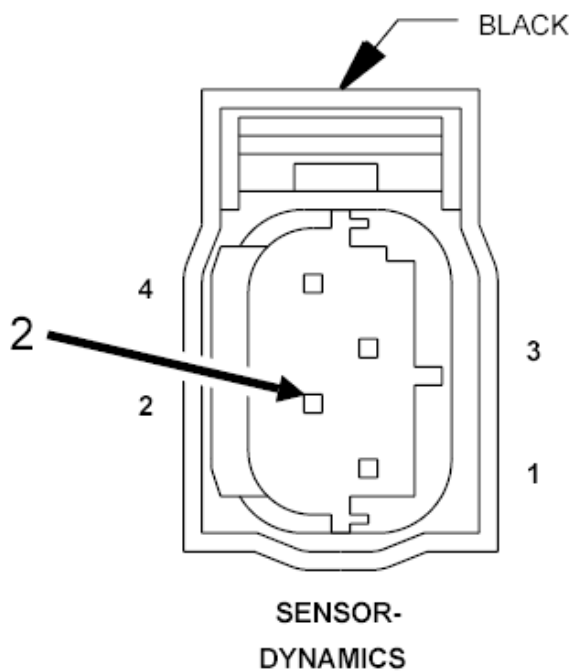
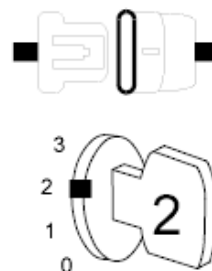
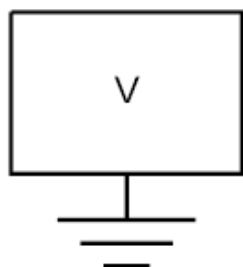
Yes

- Go to step 14

No

- Repair the (D465) Dynamics Sensor High Data Link circuit for an open.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

14. **CHECK THE (D464) DYNAMICS SENSOR LOW DATA LINK CIRCUIT FOR A SHORT TO VOLTAGE**



494073

Fig. 94: Checking Dynamics Sensor Low Data Link Circuit For A Short To Voltage
Courtesy of CHRYSLER LLC

1. Turn the ignition on.
2. Measure the voltage of the (D464) Dynamics Sensor Low Data Link circuit.

Is there any voltage present?

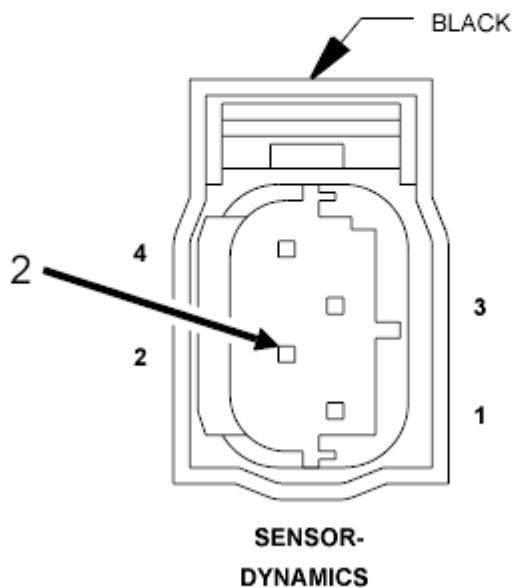
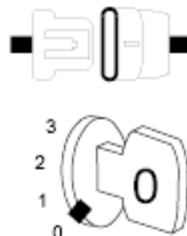
Yes

- Repair the (D464) Dynamics Sensor Low Data Link circuit for a short to voltage.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 15

15. **CHECK THE (D464) DYNAMICS SENSOR LOW DATA LINK CIRCUIT FOR A SHORT TO GROUND**



494084

Fig. 95: Checking Dynamics Sensor Low Data Link Circuit For A Short To Ground
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Measure the resistance of the (D464) Dynamics Sensor Low Data Link circuit between ground and the Dynamics Sensor harness connector.

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

Is the resistance below 5.0 Ohms?

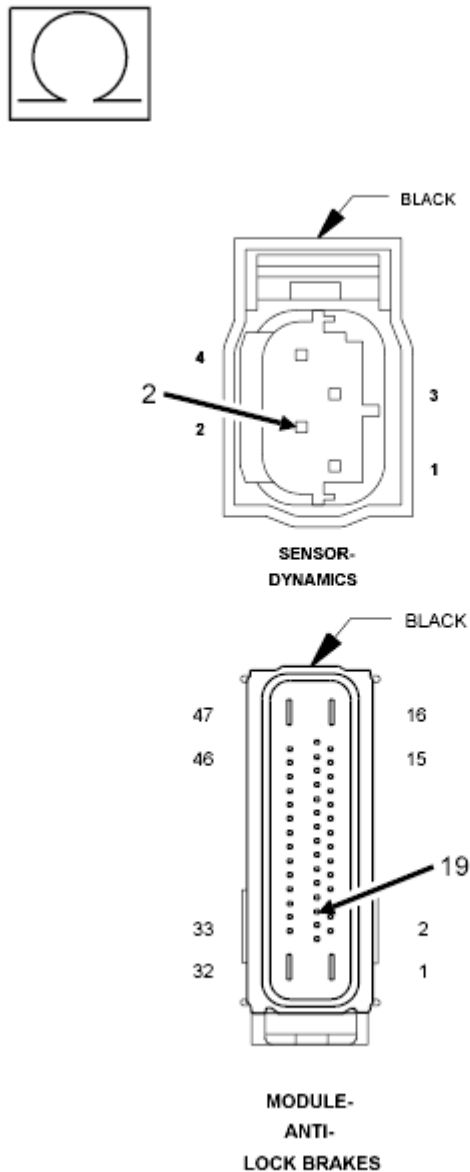
Yes

- Repair the (D464) Dynamics Sensor Low Data Link circuit for a short to ground.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 16

16. **CHECK THE (D464) DYNAMICS SENSOR LOW DATA LINK CIRCUIT FOR AN OPEN**



494095

Fig. 96: Checking Dynamics Sensor Low Data Link Circuit For An Open
 Courtesy of CHRYSLER LLC

1. Measure the resistance of the (D464) Dynamics Sensor Low Data Link circuit between the Dynamics Sensor harness connector and the Anti-Lock Brake Module harness connector.

Is the resistance below 5.0 Ohms?

Yes

- Replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock**

Brake (ABS) - Standard Procedure.

No

- Repair the (D464) Dynamics Sensor Low Data Link circuit for an open.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

U0126-LOST COMMUNICATION WITH STEERING ANGLE SENSOR

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

- With the ignition on
- Battery voltage between 10 and 16 volts
- Ignition Off Draw (IOD) fuse installed
- **Set Condition:**

If the Anti-Lock Brake Module fails to receive bus messages from the Steering Angle Sensor for approximately 100 ms.

Possible Causes

DTCs RELATED TO BATTERY VOLTAGE, IGNITION, OR VIN MESSAGES
CAN C BUS CIRCUITS OPEN OR SHORTED
STEERING ANGLE SENSOR POWER AND GROUND
CLOCKSPRING (SAS)

Diagnostic Test

1. VERIFY DTC IS ACTIVE

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

1. Turn the ignition on.
2. With the scan tool, read and record ABS DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase ABS DTCs.
5. Cycle the ignition switch.
6. With the scan tool, read ABS DTCs.

Does this DTC reset?

Yes

- Go to step 2

No

- The condition that caused the symptom is currently not present. Inspect the related wiring for a possible intermittent condition. Look for any chafed, pierced, pinched, or partially broken wires.
- Perform the ABS INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

2. CHECK FOR ANY OF THE FOLLOWING ACTIVE DTCs

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

1. With the scan tool, read all active DTCs from all CAN C Bus modules.

NOTE: Check for CAN C hardware electrical, VIN Missing/Mismatch, battery or ignition related DTCs.

Does the scan tool display any active DTCs related to the conditions listed above?

Yes

- Diagnose and repair the DTC(s). Refer to **DIAGNOSTIC CODE INDEX**.

No

- Go to step 3

3. **CHECK THE VOLTAGE ON THE (F943) FUSED IGNITION SWITCH OUTPUT CIRCUIT**

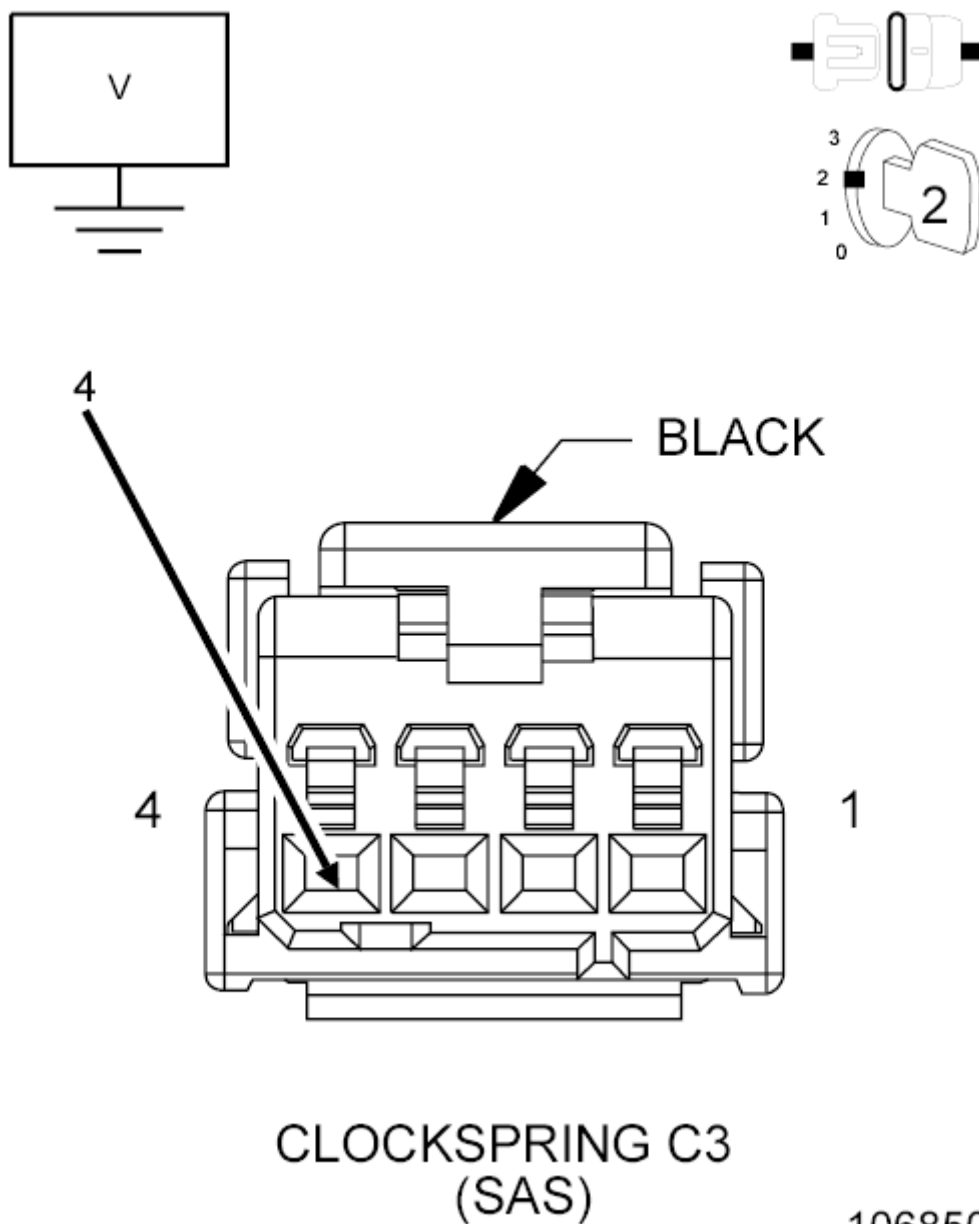


Fig. 98: Checking Clockspring Circuit
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Clockspring C3 (SAS) harness connector.
3. Turn the ignition on.
4. Measure the voltage of the (F943) Fused Ignition Switch Output circuit.

Is the voltage above 10 volts?

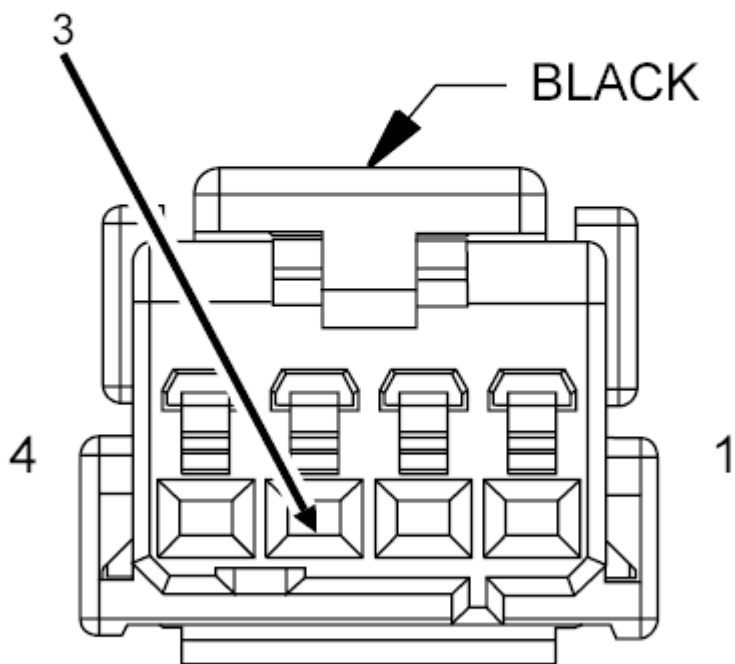
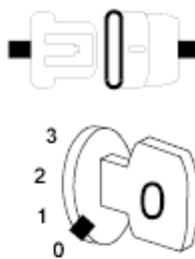
Yes

- Go to step 4

No

- Repair the (F943) Fused Ignition Switch Output circuit for an open.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

4. CHECK THE RESISTANCE OF THE (Z926) GROUND CIRCUIT



**CLOCKSPRING C3
(SAS)**

1068517

Fig. 99: Checking Clockspring Circuit
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Measure the resistance between the (Z926) Ground circuit and ground.

Is the resistance below 5.0 Ohms?

Yes

- Go to step 5

No

- Repair the (Z926) Ground circuit for an open.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

5. VERIFY THAT THE STEERING ANGLE SENSOR IS ACTIVE ON THE BUS

1. With the scan tool, select ECU View.
2. Verify that the Steering Angle Sensor is active on the bus.

Is the Steering Angle Sensor active on the bus?

Yes

- Replace the Clockspring (SAS) in accordance with the service information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

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

U0141-LOST COMMUNICATION WITH FRONT CONTROL MODULE (TIPM)

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

- **When Monitored:**
 - With the ignition on
 - Battery voltage between 10 and 16 volts
 - IOD fuse installed
 - TIPM is configured correctly
- **Set Condition:**

Bus messages not received from the TIPM for approximately 2 to 5 seconds.

Possible Causes

DTCS RELATED TO BATTERY VOLTAGE, IGNITION, OR VIN MESSAGES
TIPM NOT CONFIGURED CORRECTLY
TOTALLY INTEGRATED POWER MODULE
TOTALLY INTEGRATED POWER MODULE POWER AND GROUND
ANTI-LOCK BRAKE MODULE

Diagnostic Test**1. VERIFY DTC IS ACTIVE**

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

1. With the scan tool, read active DTCs.

Is this DTC active?

Yes

- Go to step 2

No

- Perform the appropriate Stored Lost Communication test procedure. Refer to **Non-DTC Diagnostics/Communication - Diagnosis and Testing** .

2. CHECK FOR ANY OF THE FOLLOWING ACTIVE DTCS

1. With the scan tool, read all active DTCs from all modules.

NOTE: Check for TIPM configuration, CAN B or C hardware electrical, VIN Missing/Mismatch, battery or ignition related DTCs.

Does the scan tool display any active DTCs to the conditions listed above?

Yes

- Perform the appropriate diagnostic procedure. Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Diagnosis and Testing** .

No

- Go to step 3

3. VERIFY THAT THE TIPM IS ACTIVE ON THE BUS

1. Turn the ignition on.
2. With the scan tool, select Network Diagnostics.
3. Verify that the TIPM is active on the bus.

Is the TIPM active on the bus?

Yes

- Go to step 4

No

- For No Response diagnostic procedures. Refer to **Non-DTC Diagnostics/Communication - Diagnosis and Testing** .

4. CHECK FOR ADDITIONAL COMMUNICATION RELATED DTCS

1. With the scan tool, select Network Diagnostics.

Is there more than one module with active DTCs Logged Against the TIPM?

Yes

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

No

- Replace the Anti-Lock Brake Module in accordance with the service information
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

U0401-IMPLAUSIBLE DATA RECEIVED FROM ECM/PCM

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

- **When Monitored:**

Continuously with the ignition on, one valid CAN message received at least once, and no U0002-CAN C Bus Off Performance DTC present.

- **Set Condition:**

When the Anti-Lock Brake Module detects an incorrect CAN message from the Powertrain Control

Module (PCM) or Engine Control Module (ECM).

Possible Causes
ABM CAN BUS DTCS ENGINE DTCS ANTI-LOCK BRAKE MODULE

Diagnostic Test**1. CHECK FOR DTC U0401-IMPLAUSIBLE DATA RECEIVED FROM ECM/PCM**

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, record and erase DTCs.
3. Cycle the ignition switch from off to on.
4. With the scan tool, read DTCs.

Does the scan tool display: U0401-IMPLAUSIBLE DATA RECEIVED FROM ECM/PCM?

Yes

- Go to step 2

No

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

2. CHECK IF TIPM CAN BUS DTCS ARE PRESENT

1. With the scan tool, read TIPM DTCs.

Are there any TIPM CAN BUS DTCs present?

Yes

- Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Diagnosis and Testing** and perform the appropriate diagnostic procedures.

No

- Go to step 3

3. POWERTRAIN CONTROL MODULE (PCM) or ENGINE CONTROL MODULE (ECM) DTCS ARE PRESENT

1. With the scan tool, read PCM or ECM DTCs.

Are there any PCM or ECM DTCs present?

Yes

- Refer to **DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Diagnosis and Testing** for diesel engine applications or **DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Diagnosis and Testing** for gas engine applications and perform the appropriate diagnostic procedure.

No

- Using the schematics as a guide, check the Anti-Lock Brake 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 the Anti-Lock Brake Module in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

U0402-IMPLAUSIBLE DATA RECEIVED FROM TCM

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

- **When Monitored:**

Continuously with the ignition on, one valid CAN message received at least once, and no U0002-CAN C Bus Off Performance DTC present.

- **Set Condition:**

When the Anti-Lock Brake Module detects an incorrect CAN message from the Transmission Control Module (TCM).

Possible Causes
TIPM CAN BUS DTCS
TRANSMISSION DTCS
ANTI-LOCK BRAKE MODULE

Diagnostic Test

1. CHECK IF TIPM CAN BUS DTCS ARE PRESENT

1. With the scan tool, read TIPM DTCS.

Are there any TIPM CAN BUS DTCS present?

Yes

- Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Diagnosis and Testing** .

No

- Go to step 2

2. CHECK IF TRANSMISSION DTCS ARE PRESENT

1. With the scan tool, read Transmission DTCS.

Are there any Transmission DTCS present?

Yes

- Refer to **DTC-Based Diagnostics/MODULE, Transmission Control (TCM) - Diagnosis and Testing** .

No

- Using the schematics as a guide, check the Anti-Lock Brake 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 the Anti-Lock Brake Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

U0429-IMPLAUSIBLE DATA RECEIVED FROM SCM

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

- **When Monitored:**

Continuously with the ignition on, one valid CAN message received at least once, and no U0002-CAN C Bus Off Performance DTC present.

- **Set Condition:**

When the Anti-Lock Brake Module detects an incorrect CAN message from the Clockspring (steering angle sensor or SAS) for approximately 200 mSec.

Possible Causes
CLOCKSPRING (SAS)
ANTI-LOCK BRAKE MODULE

Diagnostic Test

1. CHECK IF STEERING ANGLE SENSOR DTCS ARE PRESENT

1. With the scan tool, read Steering Angle Sensor DTCs.

Are there any Steering Angle Sensor DTCs present?

Yes

- Perform the appropriate diagnostic procedure. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Diagnosis and Testing.**

No

- Replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

U1003-ESP CAN C BUS PERFORMANCE

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

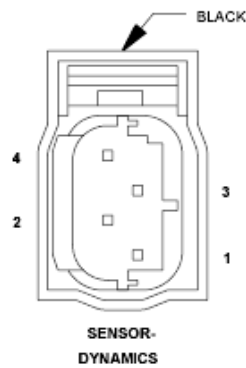
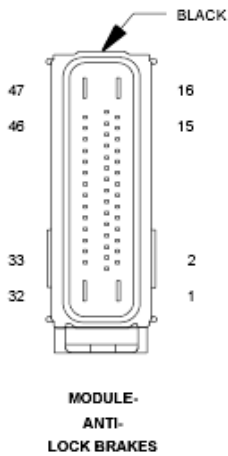
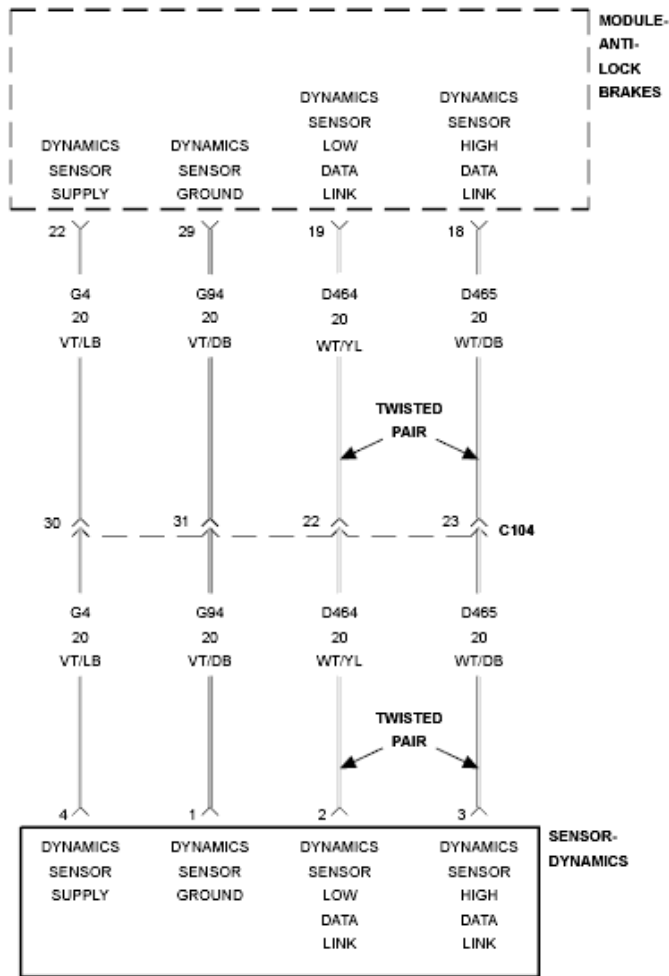


Fig. 100: Dynamics Sensor Data Link Voltage Low Circuit Schematic
Courtesy of CHRYSLER LLC

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

If the Anti-Lock Brake Module detects too many CAN Bus off events on the Dynamics Sensor Data Link circuits.

Possible Causes
WIRING HARNESS, TERMINAL, CONNECTOR DAMAGE
(D465) DYNAMICS SENSOR HIGH DATA LINK CIRCUIT SHORTED TO GROUND, VOLTAGE, OR OPEN
(D464) DYNAMICS SENSOR LOW DATA LINK CIRCUIT SHORTED TO GROUND, VOLTAGE, OR OPEN
DYNAMICS SENSOR
ANTI-LOCK BRAKE MODULE

Diagnostic Test

1. CHECK FOR A DTC U1003-ESP CAN C BUS PERFORMANCE

NOTE: This DTC must be active for the results of this test to be valid.

NOTE: If present, diagnose and repair DTC U0125-LOST COMMUNICATION WITH DYNAMICS SENSOR before diagnosing this DTC.

1. Turn the ignition on.
2. With the scan tool, read and record the DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase the DTCs.
5. Start the engine.

NOTE: Attempt to operate the vehicle under conditions similar to which the DTC was set. It may be necessary to test drive the vehicle within the DTC monitoring and set conditions in order for this DTC to set.

6. With the scan tool, read and record the DTCs

Does the scan tool display: U1003-ESP CAN C BUS PERFORMANCE?

Yes

- Go to step 2

No

- Perform ABS INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

2. CHECK THE WIRING HARNESS, TERMINALS, AND CONNECTORS

NOTE: **The Sensor Cluster is the same as the Dynamics sensor.**

1. Check the Dynamics Sensor installation and torque of the mounting bolts.
2. Visually inspect the related wiring harness. Look for any bruised, chafed, pierced, or partially broken wires.
3. Visually inspect the related wiring harness connectors. Look for broken, bent, pushed out, or corroded terminals.

Were any problems found?

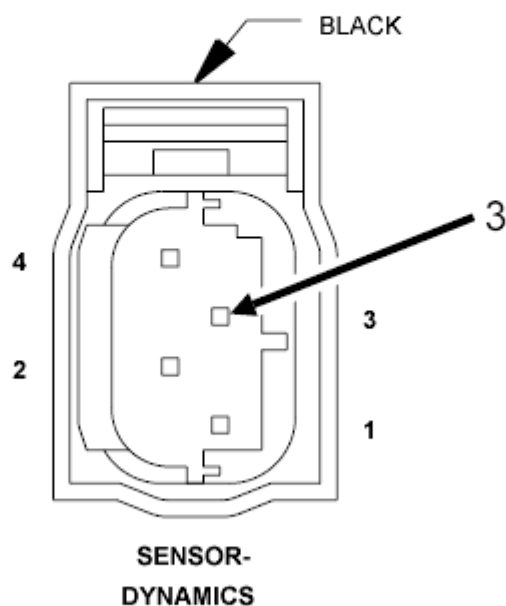
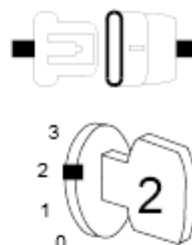
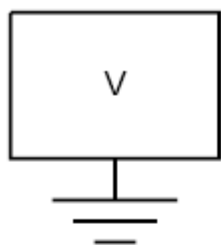
Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 3

3. CHECK THE (D465) DYNAMICS SENSOR HIGH DATA LINK CIRCUIT FOR A SHORT TO VOLTAGE



494035

Fig. 101: Checking Dynamics Sensor High Data Link Circuit For A Short To Voltage
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Anti-Lock Brake Module harness connector.
3. Disconnect the Dynamics Sensor harness connector.
4. Turn the ignition on.
5. Measure the voltage of the (D465) Dynamics Sensor High Data Link circuit.

Is there any voltage present?

Yes

- Repair the (D465) Dynamics Sensor High Data link circuit for a short to voltage.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 4

4. **CHECK THE (D465) DYNAMICS SENSOR HIGH DATA LINK CIRCUIT FOR A SHORT TO GROUND**

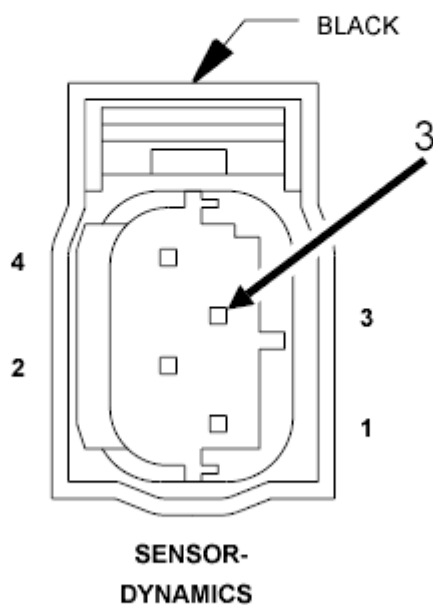
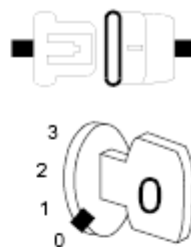


Fig. 102: Checking Dynamics Sensor High Data Link Circuit For A Short To Ground
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Anti-Lock Brake Module harness connector.
3. Disconnect the Dynamics Sensor harness connector.
4. Measure the resistance between ground and the (D465) Dynamics Sensor High Data Link circuit.

Is the resistance below 5.0 Ohms?

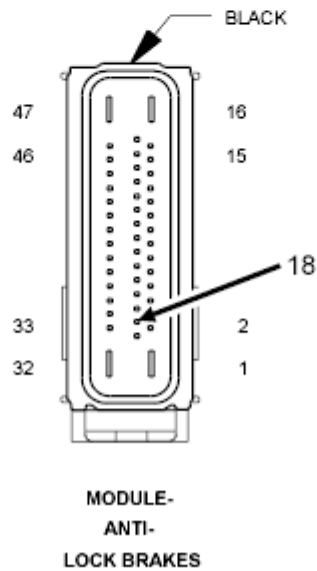
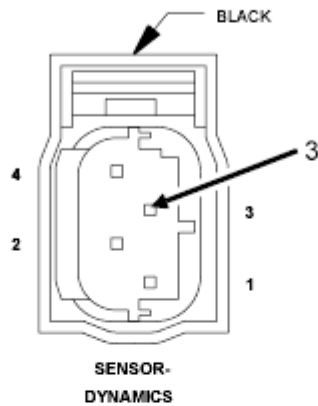
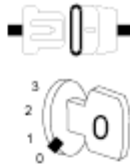
Yes

- Repair the (D465) Dynamics Sensor High Data link circuit for a short to ground.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 5

5. CHECK THE (D465) DYNAMICS SENSOR HIGH DATA LINK CIRCUIT FOR AN OPEN



494062

Fig. 103: Checking Dynamics Sensor High Data Link Circuit For An Open
Courtesy of CHRYSLER LLC

1. Measure the resistance of the (D465) Dynamics Sensor High Data Link circuit.

Is the resistance below 5.0 Ohms?

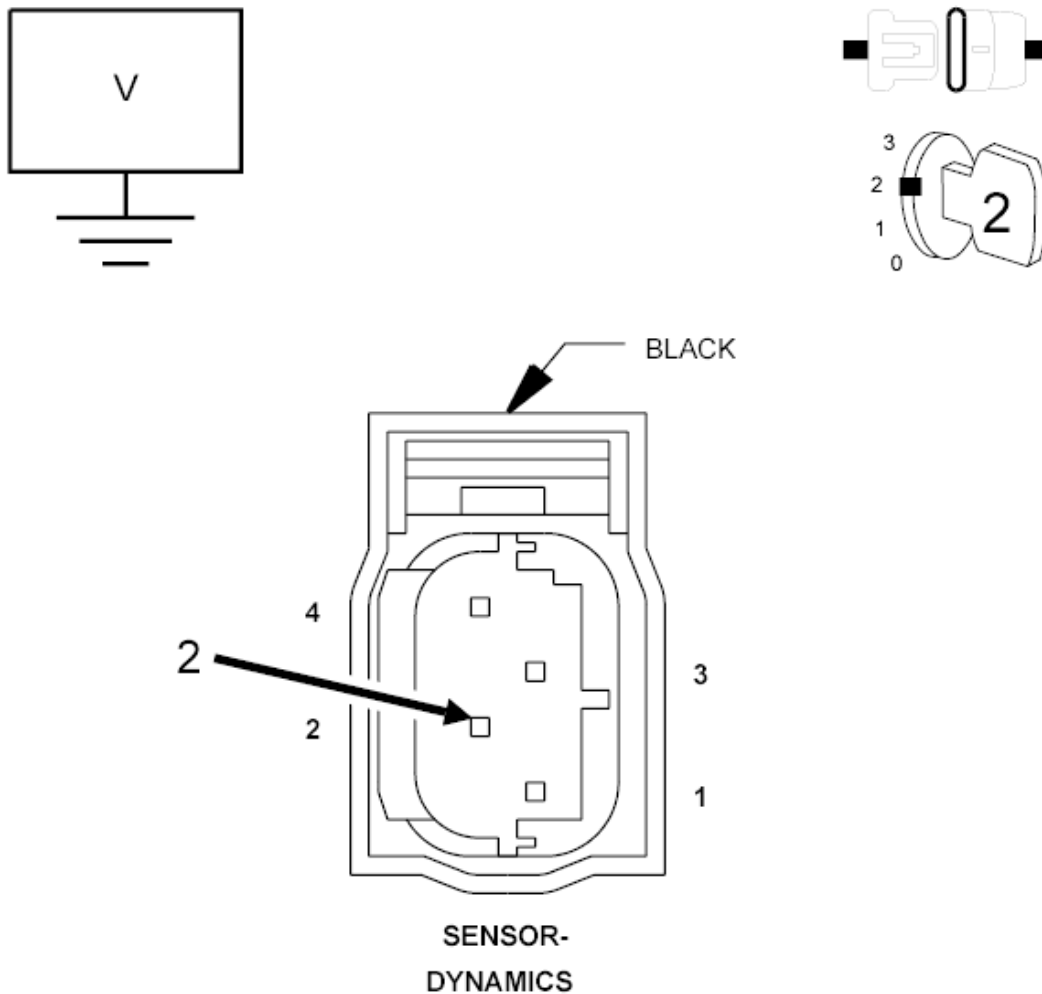
Yes

- Go to step 6

No

- Repair the (D465) Dynamics Sensor High Data link circuit for an open.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

6. **CHECK THE (D464) DYNAMICS SENSOR LOW DATA LINK CIRCUIT FOR A SHORT TO VOLTAGE**



494073

Fig. 104: Checking Dynamics Sensor Low Data Link Circuit For A Short To Voltage
 Courtesy of CHRYSLER LLC

1. Turn the ignition on.

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2. Measure the voltage of the (D464) Dynamics Sensor Low Data Link circuit.

Is there any voltage present?

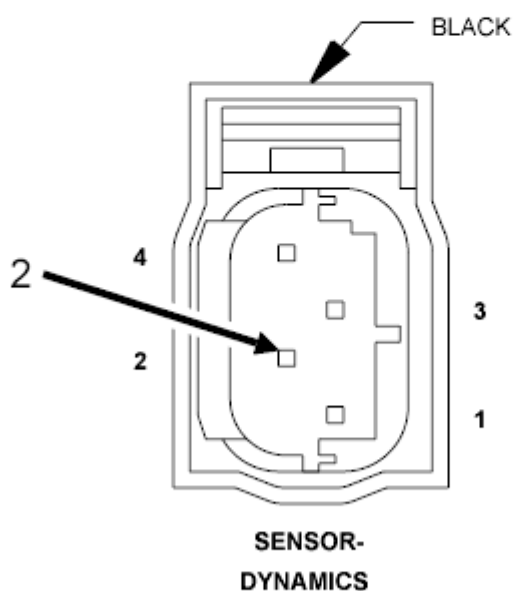
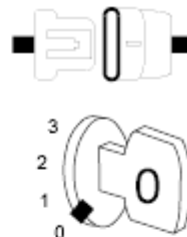
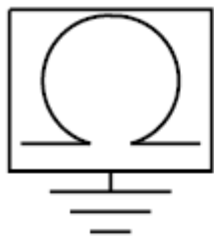
Yes

- Repair the (D464) Dynamics Sensor Low Data link circuit for a short to voltage.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 7

7. **CHECK THE (D464) DYNAMICS SENSOR LOW DATA LINK CIRCUIT FOR A SHORT TO GROUND**



494084

Fig. 105: Checking Dynamics Sensor Low Data Link Circuit For A Short To Ground
 Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Measure the resistance between ground and the (D464) Dynamics Sensor Low Data Link circuit.

Is the resistance below 5.0 Ohms?

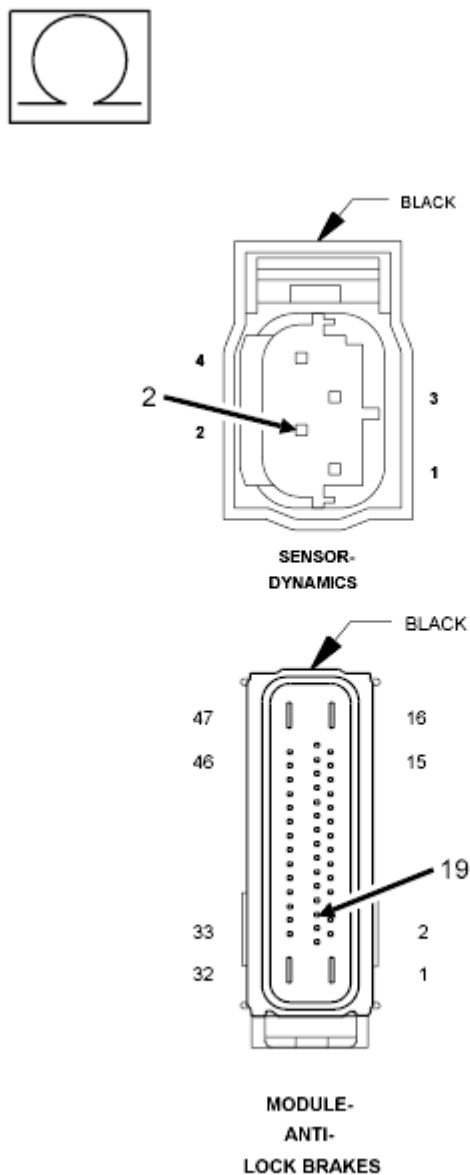
Yes

- Repair the (D464) Dynamics Sensor Low Data link circuit for a short to ground.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 8

8. CHECK THE (D464) DYNAMICS SENSOR LOW DATA LINK CIRCUIT FOR AN OPEN



494095

Fig. 106: Checking Dynamics Sensor Low Data Link Circuit For An Open
Courtesy of CHRYSLER LLC

1. Measure the resistance of the (D464) Dynamics Sensor Low Data link circuit.

Is the resistance below 5.0 Ohms?

Yes

- Go to step 9

No

- Repair the (D464) Dynamics Sensor Low Data link circuit for an open.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

9. REPLACE DYNAMICS SENSOR & VERIFY IF DTC IS STILL ACTIVE

1. Replace the Dynamics Sensor in accordance with the Service Information. Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**
2. Test drive the vehicle by turning the vehicle left or right in a curving manner at a velocity between 6 and 15 mph (10 and 25 km/h).
3. Park the vehicle. With the scan tool, read ABS DTCs.

Does this DTC reset?

Yes

- Replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Test complete.

U1004-CAN C BUS TRANSMIT PERFORMANCE

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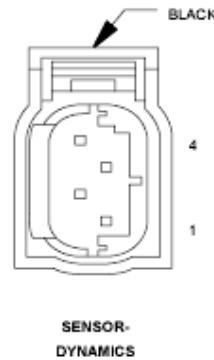
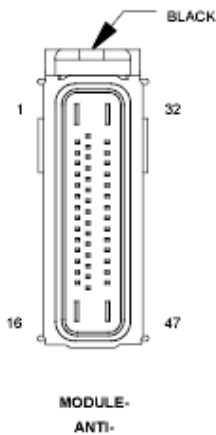
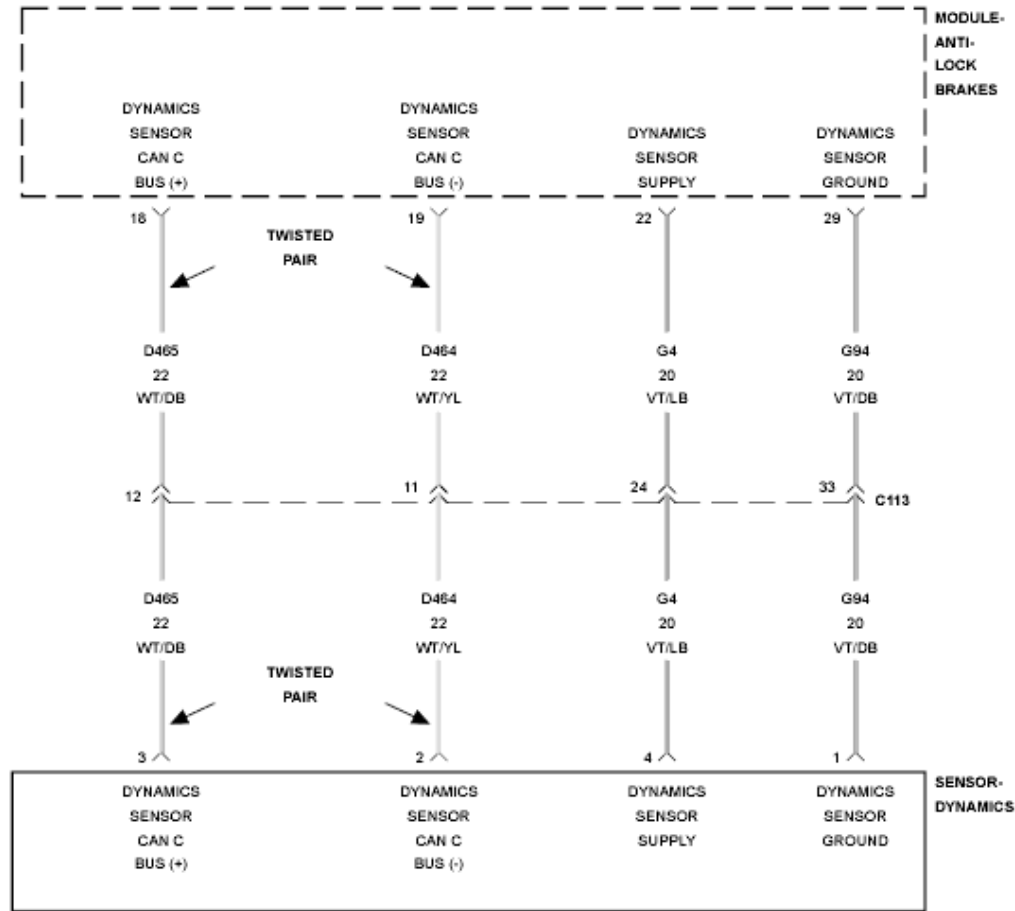


Fig. 107: Dynamics Sensor Supply/Ground Circuit Schematic
Courtesy of CHRYSLER LLC

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

When the Anti-Lock Brake Module detects invalid CAN message from the Dynamics Sensor.

Possible Causes
WIRING HARNESS, TERMINAL, CONNECTOR DAMAGE
(D465) DYNAMICS SENSOR HIGH DATA LINK CIRCUIT SHORTED TO GROUND, VOLTAGE, OR OPEN
(D464) DYNAMICS SENSOR LOW DATA LINK CIRCUIT SHORTED TO GROUND, VOLTAGE, OR OPEN
DYNAMICS SENSOR

Diagnostic Test

1. CHECK FOR A DTC U1004-CAN C BUS TRANSMIT PERFORMANCE

NOTE: This DTC must be active for the results of this test to be valid.

1. Turn the ignition on.
2. With the scan tool, read and record DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase DTCs.
5. Cycle the ignition switch from off to on.
6. With the scan tool, read and record DTCs

Does the scan tool display: U1004-CAN C BUS TRANSMIT PERFORMANCE?

Yes

- Go to step 2

No

- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based**

Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**2. CHECK THE WIRING HARNESS, TERMINALS, AND CONNECTORS**

1. Check the Dynamic Sensor installation and torque of the mounting bolts.
2. Visually inspect the related wiring harness. Look for any bruised, chafed, pierced, or partially broken wires.
3. Visually inspect the related wiring harness connectors. Look for broken, bent, pushed out, or corroded terminals.

Were any problems found?

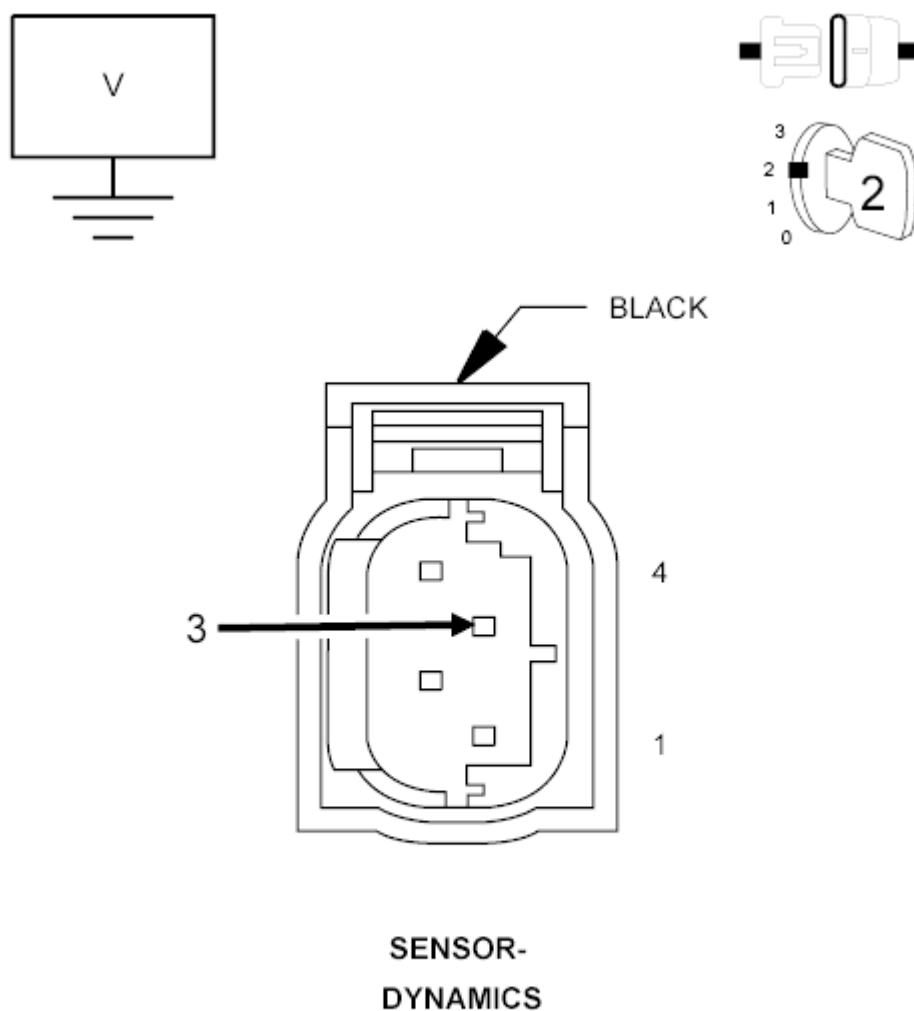
Yes

- Repair as necessary.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.**

No

- Go to step 3

3. CHECK THE (D465) DYNAMICS SENSOR HIGH DATA LINK CIRCUIT FOR A SHORT TO VOLTAGE



102754

Fig. 108: Checking Dynamics Sensor High Data Link Circuit For A Short To Voltage
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Disconnect the Dynamics Sensor harness connector.
3. Disconnect the Anti-Lock Brake Module harness connector.
4. Turn the ignition on.
5. Measure the voltage of the (D465) Dynamics Sensor High Data Link circuit.

Is there any voltage present?

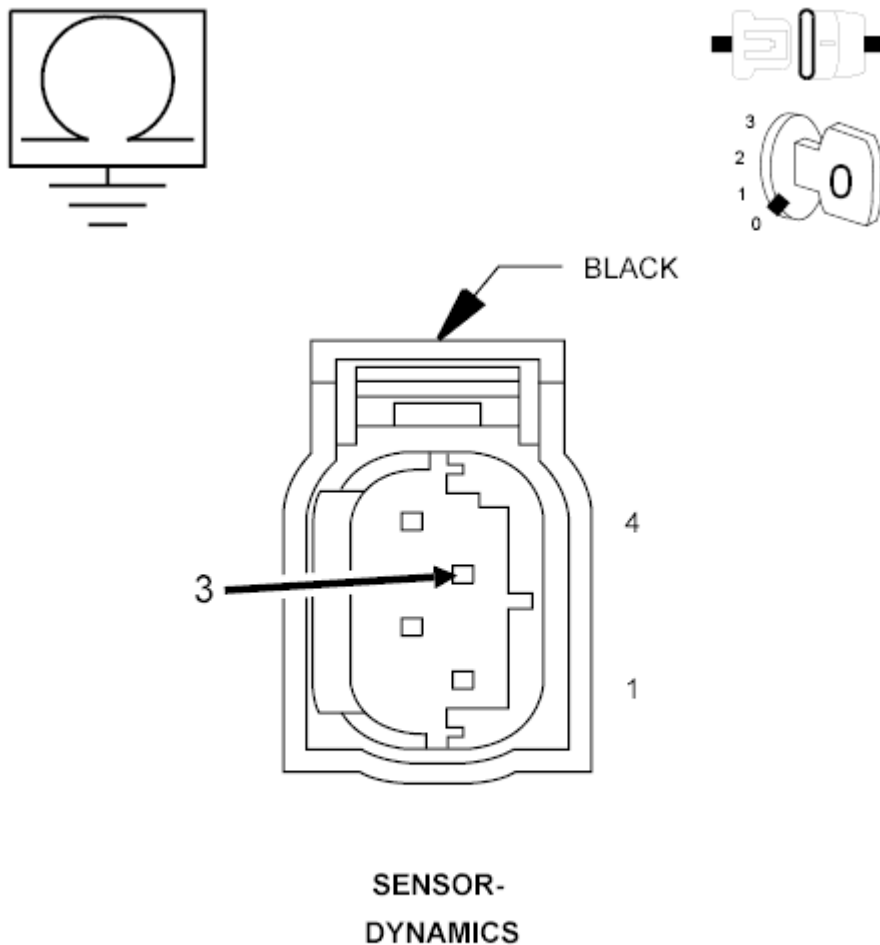
Yes

- Repair the (D465) Dynamics Sensor High Data Link circuit for a short to voltage.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 4

4. (D465) DYNAMICS SENSOR HIGH DATA LINK CIRCUIT SHORT TO GROUND



102756

Fig. 109: Checking Dynamics Sensor High Data Link Circuit Short To Ground
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Measure the resistance between ground and the (D465) Dynamics Sensor High Data Link circuit.

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Is the resistance below 5.0 ohms?

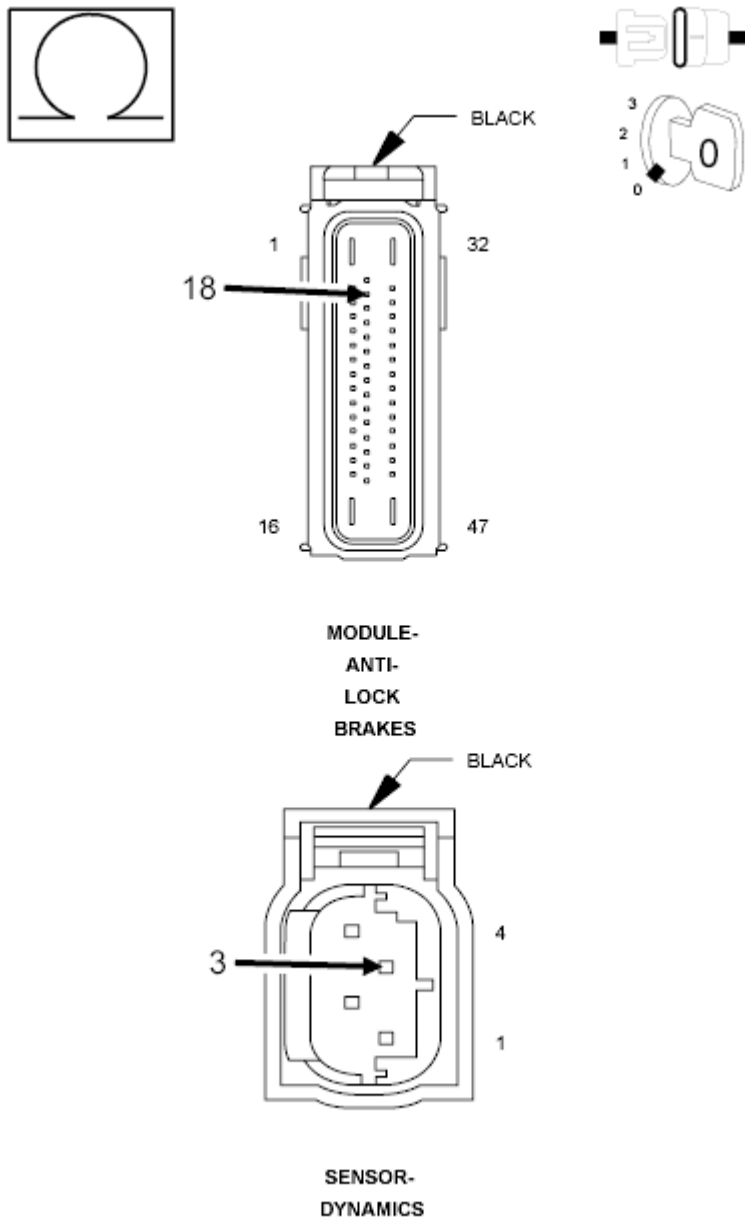
Yes

- Repair the (D465) Dynamics Sensor High Data Link circuit for a short to ground.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 5

5. CHECK THE (D465) DYNAMICS SENSOR HIGH DATA LINK CIRCUIT FOR AN OPEN



102758

Fig. 110: Checking Dynamics Sensor High Data Link Circuit For An Open
Courtesy of CHRYSLER LLC

1. Measure the resistance of the (D465) Dynamics Sensor High Data Link circuit.

Is the resistance below 5.0 ohms?

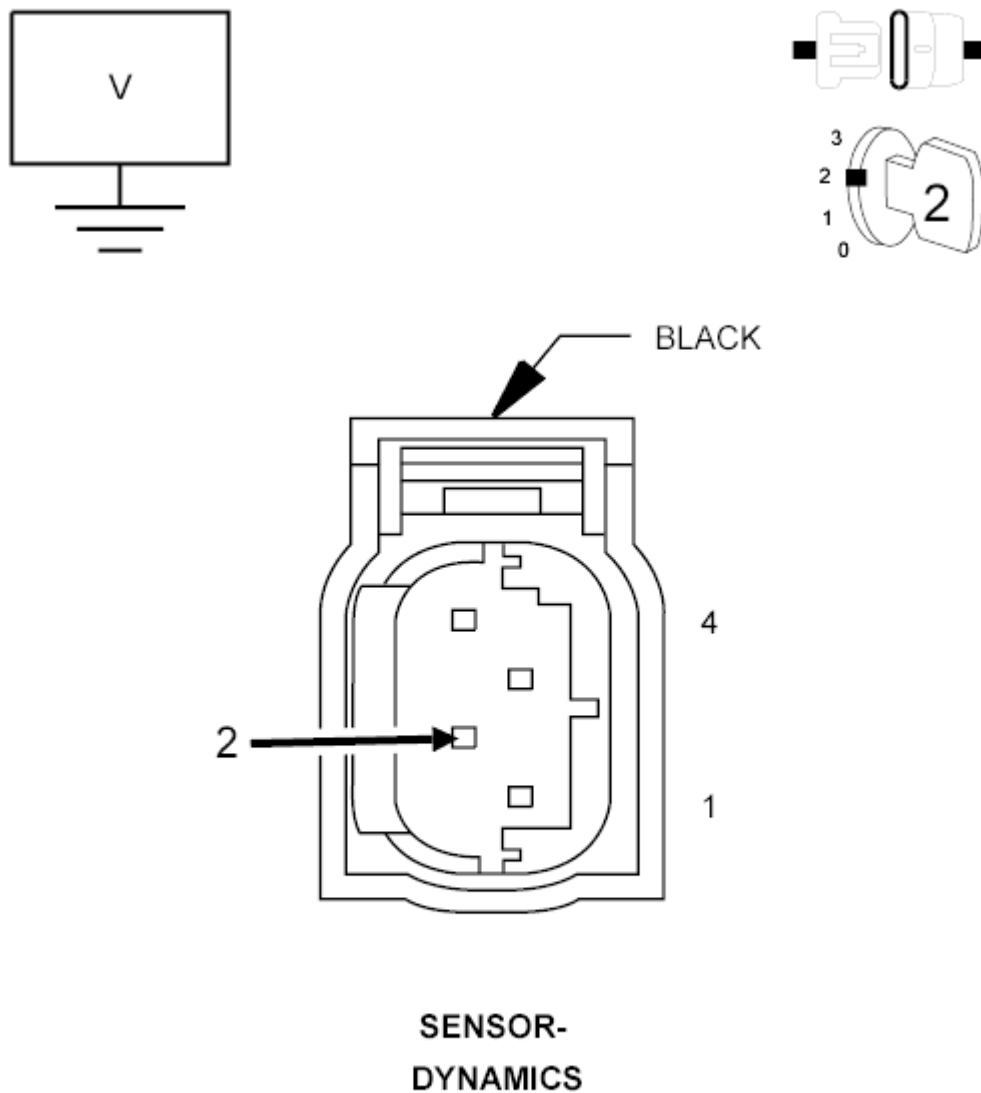
Yes

- Go to step 6

No

- Repair the (D465) Dynamics Sensor High Data Link circuit for an open.
- Perform ABS VERIFICATION TEST. See DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure.

6. CHECK THE (D464) DYNAMICS SENSOR LOW DATA LINK CIRCUIT FOR A SHORT TO VOLTAGE



102760

Fig. 111: Checking Dynamics Sensor Low Data Link Circuit For A Short To Voltage
 Courtesy of CHRYSLER LLC

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1. Turn the ignition on.
2. Measure the voltage of the (D464) Dynamics Sensor Low Data Link circuit.

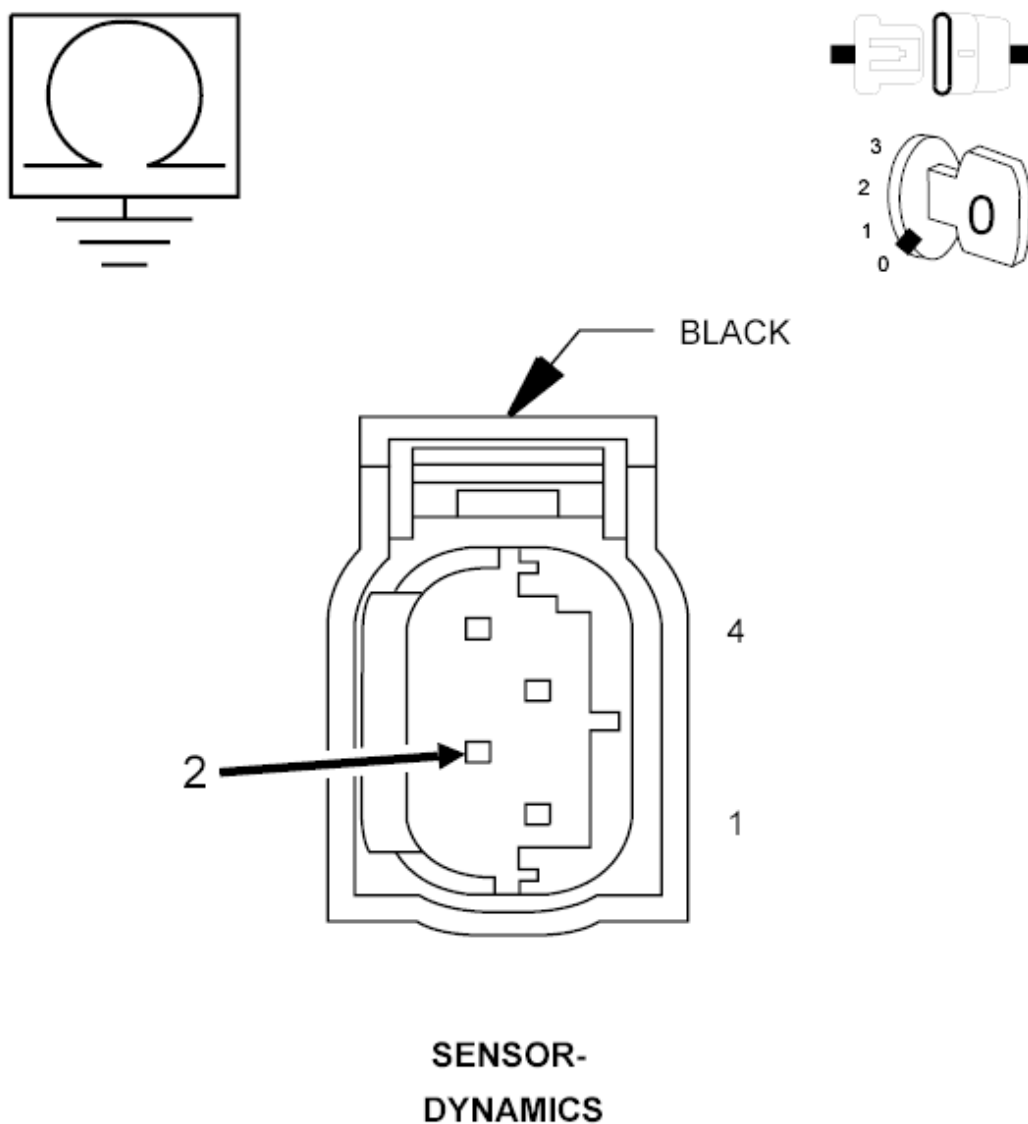
Is there any voltage present?

Yes

- Repair the (D464) Dynamics Sensor Low Data Link circuit for a short to voltage.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 7
7. **CHECK THE (D464) DYNAMICS SENSOR LOW DATA LINK CIRCUIT FOR A SHORT TO GROUND**



102762

Fig. 112: Checking Dynamics Sensor Low Data Link Circuit For A Short To Ground
Courtesy of CHRYSLER LLC

1. Turn the ignition off.
2. Measure the resistance between ground and the (D464) Dynamics Sensor Low Data Link circuit.

Is the resistance below 5.0 ohms?

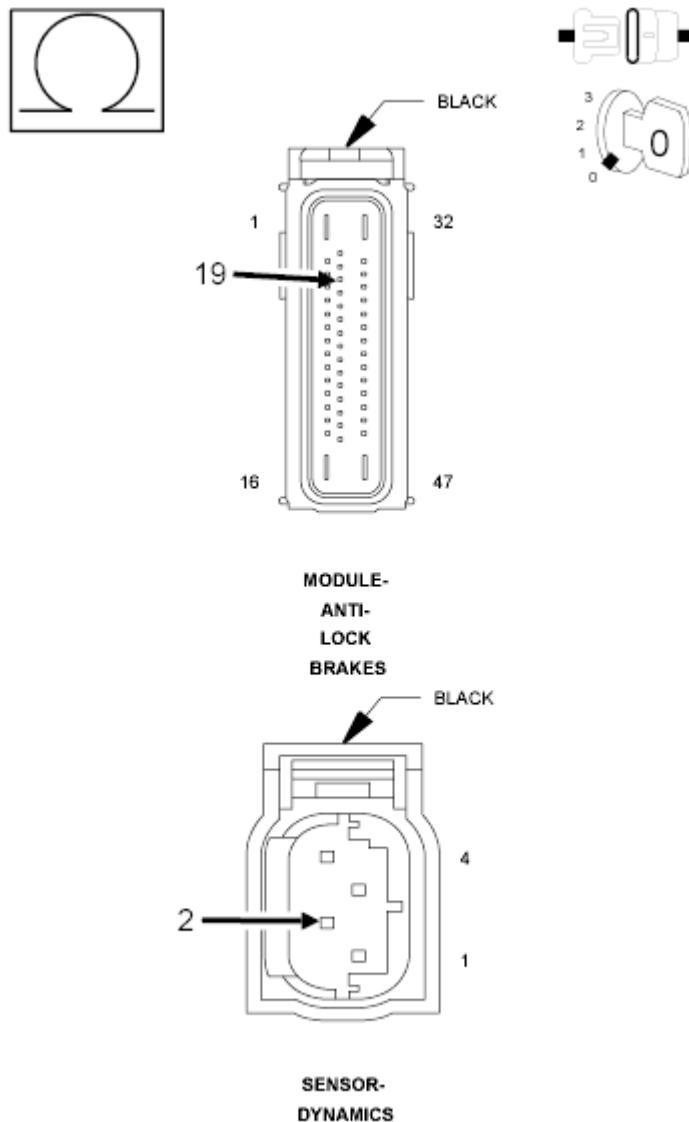
Yes

- Repair the (D464) Dynamics Sensor Low Data Link circuit for a short to ground.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Go to step 8

8. CHECK THE (D464) DYNAMICS SENSOR LOW DATA LINK CIRCUIT FOR AN OPEN



102764

Fig. 113: Checking Dynamics Sensor Low Data Link Circuit For An Open
 Courtesy of CHRYSLER LLC

1. Measure the resistance of the (D464) Dynamics Sensor Low Data Link circuit.

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Is the resistance below 5.0 ohms?

Yes

- Replace the Dynamics Sensor in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Repair the (D464) Dynamics Sensor High Data Link circuit for an open.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

U1104-CAN C BUS CRC PERFORMANCE

2009 Dodge Journey R/T

2009 BRAKES ABS - Electrical Diagnostics - Journey

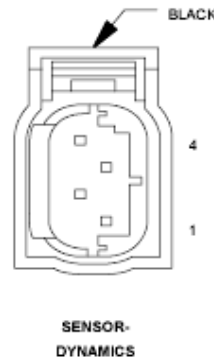
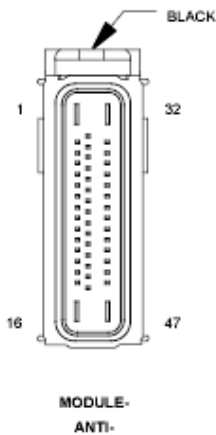
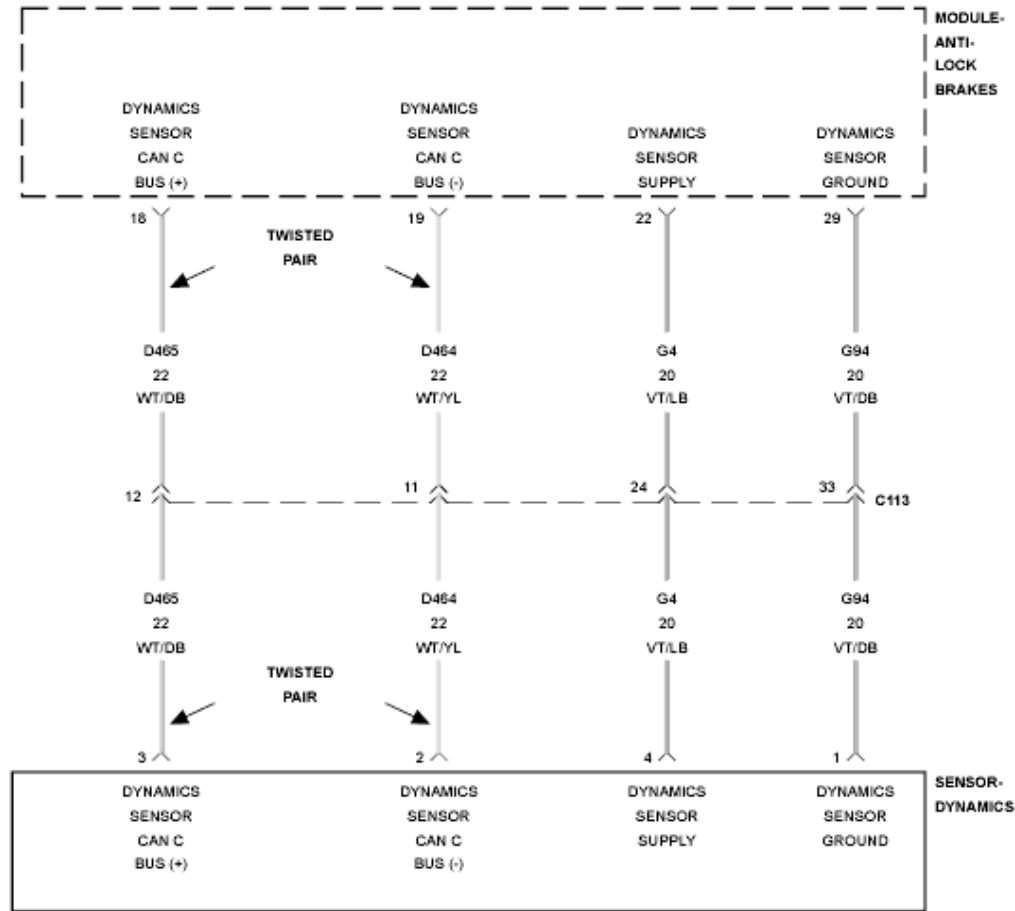


Fig. 114: Dynamics Sensor Supply/Ground Circuit Schematic
 Courtesy of CHRYSLER LLC

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

- **When Monitored:**

With the ignition on.

- **Set Condition:**

If the Anti-Lock Brake Module detects an invalid CAN message from the Dynamics Sensor.

Possible Causes
DYNAMICS SENSOR

Diagnostic Test

1. VERIFY DTC IS ACTIVE

1. Turn the ignition on.
2. With the scan tool, read and record ABS DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase ABS DTCs.
5. Cycle the ignition switch.
6. With the scan tool, read ABS DTCs.

Does this DTC reset?

Yes

- Replace the Dynamics Sensor in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- The condition that caused the symptom is currently not present. Inspect the related wiring for a possible intermittent condition. Look for any chafed, pierced, pinched, or partially broken wires.
- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

U140E-IMPLAUSIBLE VEHICLE CONFIGURATION DATA RECEIVED

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

- **When Monitored:**

Once per ignition cycle, but not during cranking.

Or, if low supply voltage faults are detected.

- **Set Condition:**

If the Anti-Lock Brake Module either fails to receive vehicle configuration data from the Engine Control Module (ECM), Powertrain Control Module (PCM), Totally Integrated Power Module (TIPM), or the configuration data it receives from the ECM, PCM, and TIPM is invalid.

Possible Causes
WIRING HARNESS, TERMINAL, CONNECTOR DAMAGE
DTCS RELATED TO BATTERY VOLTAGE, IGNITION, OR VIN MESSAGES
CAN C BUS CIRCUITS OPEN OR SHORTED
ECM OR PCM DTCs PRESENT
ECM OR PCM NOT PROGRAMMED OR PROGRAMMED WITH INCORRECT VIN
TIPM NOT PROGRAMMED OR PROGRAMMED WITH INCORRECT INFORMATION
ECM OR PCM
TOTALLY INTEGRATED POWER MODULE (TIPM)
ANTI-LOCK BRAKE MODULE

Diagnostic Test

1. VERIFY DTC IS ACTIVE

NOTE: This DTC must be active for the results of this test to be valid. If DTC C2206-VEHICLE CONFIGURATION MISMATCH is present it must be repaired before continuing.

1. Turn the ignition on.
2. With the scan tool, read and record ABS DTCs.
3. With the scan tool, read and record Environmental Data to help identify the conditions in which the DTC was set.
4. With the scan tool, erase ABS DTCs.
5. Cycle the ignition switch.
6. With the scan tool, read ABS DTCs.

Does this DTC reset?

Yes

- Go to step 2

No

- The condition that caused the symptom is currently not present. Inspect the related wiring for a possible intermittent condition. Look for any chafed, pierced, pinched, or partially broken wires.
- Perform the ABS-INTERMITTENT CONDITION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

2. CHECK FOR ANY OF THE FOLLOWING ACTIVE DTCs

1. With the scan tool, read all active DTCs from all CAN C Bus modules.

NOTE: Check for CAN C hardware electrical, VIN Missing/Mismatch, battery or ignition related DTCs.

Does the scan tool display any active DTCs related to the conditions listed above?

Yes

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

No

- Go to step 3

3. VERIFY CORRECT TIPM CONFIGURATION

1. With the scan tool, verify that the TIPM part number is correct for the vehicle and programmed correctly by selecting TIPM from ECU view then Misc Functions and Restore Vehicle Configuration

Is the correct TIPM installed in the vehicle?

No

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

Yes

- Go to step 4

4. CHECK IF ECM OR PCM DTCs ARE PRESENT

1. With the scan tool, read ECM or PCM DTCs.

Are any DTCs present?

Yes

- Refer to **DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Diagnosis and Testing** for diesel engine applications or **DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Diagnosis and Testing** for gas engine applications and perform the appropriate diagnostic procedure.

No

- Go to step 5

5. VERIFY CORRECT ECM OR PCM IS INSTALLED IN THE VEHICLE

1. With the scan tool, verify that the ECM or PCM part number is correct for the vehicle.

Is the correct ECM or PCM installed in the vehicle?

No

- Replace and program the ECM or PCM in accordance with the Service Information.
- Perform appropriate VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure** or **DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure** .

Yes

- Go to step 6

6. VERIFY ECM OR PCM IS PROGRAMMED WITH CORRECT VIN

1. With the scan tool, verify that the ECM or PCM is programmed with the correct VIN.

Is the ECM or PCM programmed with the correct VIN?

No

- Using the scan tool, perform ECM/PCM Replaced to update the VIN in the ECM/PCM.
- Perform appropriate VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure** or **DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure** .

Yes

- Go to step 7

7. CHECK FOR ADDITIONAL COMMUNICATION RELATED DTCs

1. With the scan tool, select Network View and select Advanced.

Is there more than one module with active DTCs Logged Against the ECM or PCM?

Yes

- Replace/update the ECM or PCM in accordance with the service information.
- Perform appropriate VERIFICATION TEST. Refer to **DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure** or **DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure** .

No

- Using the schematics as a guide, check the Anti-Lock Brake Module pins, terminals, and connectors for corrosion, damage, and terminal push out. Pay particular attention to all Communication circuits. If no problems are found, replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

U1501-IMPLAUSIBLE MESSAGE DATA LENGTH RECEIVED FROM PCM

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

- **When Monitored:**

Continuously with the ignition on.

- **Set Condition:**

When the Anti-Lock Brake Module detects an incorrect CAN message from the Powertrain Control Module (PCM) Engine Control Module (ECM).

Possible Causes
TIPM CAN BUS DTCS
ENGINE DTCS
ANTI-LOCK BRAKE MODULE

Diagnostic Test

1. CHECK IF TIPM CAN BUS DTCs ARE PRESENT

1. With the scan tool, read TIPM DTCs.

Are there any TIPM CAN BUS DTCs present?

Yes

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

No

- Go to step 2

2. POWERTRAIN CONTROL MODULE (PCM) or ENGINE CONTROL MODULE (ECM) DTCS ARE PRESENT

1. With the scan tool, read PCM or ECM DTCS.

Are there any PCM or ECM DTCS present?

Yes

- Refer to **DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Diagnosis and Testing** for diesel engine applications or **DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Diagnosis and Testing** for gas engine applications and perform the appropriate diagnostic procedure.

No

- Replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform the ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

U1502-IMPLAUSIBLE MESSAGE DATA LENGTH RECEIVED FROM TCM

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

- **When Monitored:**

Continuously with the ignition on.

- **Set Condition:**

When the Anti-Lock Brake Module detects an incorrect CAN message from the Transmission Control Module (TCM).

Possible Causes
TIPM CAN BUS DTCS
TRANSMISSION DTCS
ANTI-LOCK BRAKE MODULE

Diagnostic Test

1. CHECK IF TIPM CAN BUS DTCS ARE PRESENT

1. With the scan tool, read TIPM DTCs.

Are there any TIPM CAN BUS DTCs present?

Yes

- Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Diagnosis and Testing** .

No

- Go to step 2

2. CHECK IF TRANSMISSION DTCS ARE PRESENT

1. With the scan tool, read Transmission DTCs.

Are there any Transmission DTCs present?

Yes

- Refer to **DTC-Based Diagnostics/MODULE, Transmission Control (TCM) - Diagnosis and Testing** .

No

- Using the schematics as a guide, check the Anti-Lock Brake 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 the Anti-Lock Brake Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

U1503-IMPLAUSIBLE MESSAGE DATA LENGTH RECEIVED FROM TIPM

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

- **When Monitored:**

Continuously with the ignition on.

- **Set Condition:**

When the Anti-Lock Brake Module detects an incorrect CAN message from the Totally Integrated Power Module (TIPM).

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Possible Causes

TIPM CAN BUS DTCs
ANTI-LOCK BRAKE MODULE

Diagnostic Test

1. CHECK IF TIPM CAN BUS DTCs ARE PRESENT

1. With the scan tool, read TIPM DTCs.

Are there any TIPM CAN BUS DTCs present?

Yes

- Refer to **DTC-Based Diagnostics/MODULE, Totally Integrated Power (TIPM) - Diagnosis and Testing** .

No

- Replace the Anti-Lock Brake Module in accordance with the Service Information.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

STANDARD PROCEDURE

ABS INTERMITTENT CONDITION TEST

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

Diagnostic Test

1. PERFORM ABS INTERMITTENT CONDITION TEST

NOTE: If the conditions that set the DTC are not present at this time, the following list may help in identifying an intermittent condition.

WARNING: When the engine is operating, do not stand in direct line with the fan. Do not put your hands near the pulleys, belts or fan. Do not wear loose clothing. Failure to follow these instructions may result in possible serious or fatal injury.

1. Refer to any Technical Service Bulletins (TSBs) that may apply.
2. Review the scan tool Environmental Data information. If possible, try to duplicate the conditions under which the DTC set.
3. Turn the ignition off.

4. Visually inspect the related wire harness. Disconnect all the related harness connectors. Look for any chafed, pierced, pinched, partially broken wires and broken, bent, pushed out, or corroded terminals.
5. Wiggle the wires while checking for shorts and open circuits.
6. Perform a voltage drop test on the related circuits between the suspected faulty component and the Anti-Lock Brake Module.
7. Inspect and clean all PCM, ABS, engine, and chassis grounds that are related to the most current DTC.
8. If numerous trouble codes were set, use a wire schematic and look for any common ground or supply circuits
9. For any Relay DTCs, actuate the Relay with the scan tool and wiggle the related wire harness to try to interrupt the actuation.
10. Use the scan tool to perform a System Test if one applies to the failing component.
11. A co-pilot, data recorder, and/or lab scope should be used to help diagnose intermittent conditions.

Were any problems found during the above inspections?

Yes

- Perform the necessary repairs.
- Perform ABS VERIFICATION TEST. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Standard Procedure**.

No

- Test Complete.

ABS VERIFICATION TEST

Diagnostic Test

1. Perform ABS Verification Test

WARNING: Ensure braking capability is available before road testing.

NOTE: If the ABM (Anti-Lock Brake Module), SAS (Steering Angle Sensor), Dynamics Sensor was replaced, or if any mounting problems with SAS or Dynamics Sensor, ABM must be initialized using the scan tool. If not initialized, the ABS indicator will flash continuously with no DTCs. To initialize the ABM and clear offsets have wheels pointing straight ahead and follow the directions on the scan tool. The drive test requires a 90° turn. If the Dynamics Sensor was replaced, test drive the vehicle by turning the vehicle left or right in a curving manner at a velocity between 6

and 15 mph (10 and 25 km/h).

1. Turn the ignition off.
2. Connect all previously disconnected components and connectors.
3. Ensure all accessories are turned off and the battery is fully charged.
4. Ensure that the ignition is on, with the scan tool, erase all Diagnostic Trouble Codes from All modules. Start the engine and allow it to run for two minutes and fully operate the system that was malfunctioning.
5. Turn the ignition off and wait five seconds. Turn the ignition on and using the scan tool, read DTCs from all modules.
6. If any Diagnostic Trouble Codes are present, return to DTC list and perform the appropriate diagnostic procedure.

NOTE: For Sensor Signal and Pump Motor faults, the ABM must sense all 4 wheels at 7.5 mph (12 km/h) before it will extinguish the ABS indicator.

7. If there are no DTCs present after turning ignition on, road test the vehicle for at least five minutes. Perform several anti-lock braking stops.
8. Again, with the scan tool read DTCs. If any DTCs are present, refer to **DIAGNOSTIC CODE INDEX** for the diagnostic test procedure and perform the appropriate diagnostic procedure.
9. If there are no Diagnostic Trouble Codes (DTCs) present, and the customer's concern can no longer be duplicated, the repair is complete.

Are any DTCs present or is the original concern still present?

Yes

- Repair is not complete, perform the appropriate diagnostic procedure. See **DTC-Based Diagnostics/MODULE, Antilock Brake (ABS) - Diagnosis and Testing**.

No

- Repair is complete.