

		module.
C0037:12 C003A:12	Left Rear Wheel Speed Sensor: Circuit Short to Battery Right Rear Wheel Speed Sensor: Circuit Short to Battery	These Diagnostic Trouble Codes (DTCs) set in continuous memory and on-demand if there is a short to battery voltage in the sensor signal return circuit. A short to battery voltage may be due to the sensor signal return circuit and the sensor voltage supply circuit shorted together. These Diagnostic Trouble Codes (DTCs) also set if the sensor has an internal short to battery voltage.
C0037:14 C003A:14	Left Rear Wheel Speed Sensor: Circuit Short to Ground or Open Right Rear Wheel Speed Sensor: Circuit Short to Ground or Open	These Diagnostic Trouble Codes (DTCs) set in continuous memory and on-demand if there is a short to ground or an open in the sensor signal return circuit or if the sensor has an internal short to ground or an internal open.
C0038:11 C003B:11	Left Rear Wheel Speed Sensor Supply: Circuit Short to Ground Right Rear Wheel Speed Sensor Supply: Circuit Short to Ground	These Diagnostic Trouble Codes (DTCs) set in continuous memory if there is a short to ground in the sensor signal voltage supply circuit.

Possible Causes

- Wiring, terminals or connectors
- Wheel speed sensor
- ABS module

Visual Inspection and Diagnostic Pre-checks

- Make sure the wheel speed sensor harness is routed correctly and is undamaged.
- Make sure the wheel speed sensor electrical connector is free from any corrosion or other contaminants.

DIAGNOSIS AND TESTING > ANTI-LOCK BRAKE SYSTEM (ABS) AND STABILITY CONTROL > PINPOINT TESTS > PINPOINT TEST J : WHEEL SPEED SENSOR ELECTRICAL FAULTS - REAR > PINPOINT TEST J : WHEEL SPEED SENSOR ELECTRICAL FAULTS - REAR



NOTE: Use the correct probe adapter(s) when making measurements. Failure to use the

correct probe adapter(s) may cause damage to the connector.

J1 CHECK FOR FAULT REPEATABILITY

Ignition ON.

Using a diagnostic scan tool, clear all ABS module Diagnostic Trouble Codes (DTCs).

Ignition OFF.

Ignition ON.

Test drive the vehicle under normal driving conditions above 60 km/h (37 mph) for a minimum of 2 minutes.

Using a diagnostic scan tool, carry out the ABS module self-test.

Is DTC C0037:01, C0037:12, C0037:14, C0038:11, C003A:01, C003A:12, C003A:14 or C003B:11 present?

Yes	If DTC C0037:01, C0037:12, C003A:01 or C003A:12 is present, GO to J2 If DTC C0037:14 or C003A:14 is present, GO to J3 If DTC C0038:11 or C003B:11 is present, GO to J4
No	The system is operating correctly at this time. INSPECT both front wheel speed sensor electrical connectors and the ABS module electrical connector. REPAIR or CLEAN the connector as necessary. ADDRESS the root cause of any connector or pin issues.

J2 CHECK THE WHEEL SPEED SENSOR CIRCUITS FOR A SHORT TO BATTERY VOLTAGE

Ignition OFF.

Disconnect ABS module C135 .

Disconnect the suspect wheel speed sensor.

Ignition ON.

For the LH rear wheel speed sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
C135-18		Ground
C135-31		Ground

For the RH rear wheel speed sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
C135-17		Ground

C135-29		Ground
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Is any voltage present?

Yes	REPAIR the circuit.
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No	GO to J3
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J3 CHECK THE WHEEL SPEED SENSOR CIRCUITS FOR AN OPEN

Ignition OFF.

Disconnect ABS module C135 (if not previously disconnected).

Disconnect the suspect wheel speed sensor (if not previously disconnected).

For the LH rear wheel speed sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
C135-18	Ω	C440-2
C135-31	Ω	C440-1

For the RH rear wheel speed sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
C135-17	Ω	C426-1
C135-29	Ω	C426-2

Are the resistances less than 3 ohms?

Yes	GO to J4
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No	REPAIR the circuit.
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J4 CHECK FOR SHORTED WHEEL SPEED SENSOR CIRCUITS

Ignition OFF.

Disconnect ABS module C135 (if not previously disconnected).

Disconnect the suspect wheel speed sensor (if not previously disconnected).

For the LH rear wheel speed sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
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C440-1	Ω	C440-2
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For the RH rear wheel speed sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
C426-1	Ω	C426-2

Is the resistance greater 10, 000 ohms?

Yes	If DTC C0037:01, C0037:14, C0038:11, C003A:01, C003A:14, C003B:11 is present, GO to J5 If DTC C0037:12 or C003A:12 is present, GO to J6
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No	REPAIR the circuit.
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J5 CHECK THE WHEEL SPEED SENSOR CIRCUITS FOR A SHORT TO GROUND

For the LH rear wheel speed sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
C135-18	Ω	Ground
C135-31	Ω	Ground

For the RH rear wheel speed sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
C135-17	Ω	Ground
C135-29	Ω	Ground

Are the resistances greater than 10, 000 ohms?

Yes	GO to J6
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No	REPAIR the circuit.
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J6 CHECK THE ABS (ANTI-LOCK BRAKE SYSTEM) MODULE OUTPUT

Ignition OFF.

Connect ABS module C135 .

Ignition ON.

For the LH rear wheel speed sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
C440-1		C440-2

For the RH rear wheel speed sensor, measure:

Positive Lead	Measurement / Action	Negative Lead
C426-1		C426-2

Is the voltage greater 10 volts?

Yes	INSTALL a new rear wheel speed sensor. REFER to: Rear Wheel Speed Sensor .
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No	GO to J7
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J7 VERIFY ALL WIRING CONNECTIONS

Ignition OFF.

Disconnect ABS module C135 .

Disconnect the suspect wheel speed sensor electrical connector.

Disconnect all in-line electrical connectors between the ABS module and the suspect wheel speed sensor.

Using a good light source, inspect all disconnected electrical connectors for the following:

corrosion - install new connector or terminal and clean the module pins

damaged or bent pins - install new terminals or pins

pushed-out pins - install new pins as necessary

spread terminals - install new terminals as necessary

Is the connector free of corrosion, damaged pins, bent pins, pushed-out pins and spread terminals?

Yes	GO to J8
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No	REPAIR the affected connectors or terminals. Refer to Connector Repair Procedures for schematic and connector information.
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J8 CHECK FOR CORRECT ABS (ANTI-LOCK BRAKE SYSTEM) MODULE OPERATION

Connect ABS module C135 . Make sure it seats and latches correctly.

Connect the suspect wheel speed sensor electrical connector. Make sure it seats and latches correctly.