

- RCM

DIAGNOSIS AND TESTING > ANTI-LOCK BRAKE SYSTEM (ABS) AND STABILITY CONTROL > PINPOINT TESTS > PINPOINT TEST G : STABILITY CONTROL SENSOR SIGNAL FAULTS > PINPOINT TEST G : STABILITY CONTROL SENSOR SIGNAL FAULTS



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

G1 CHECK FOR RETURNING ABS (ANTI-LOCK BRAKE SYSTEM) MODULE DIAGNOSTIC TROUBLE CODES (DTCs)

Ignition ON.

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

Ignition OFF.

Ignition ON.

Test drive the vehicle above 12 km/h (7 mph) and make at least 1 left turn and 1 right turn.

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

Retrieve and record all ABS module Diagnostic Trouble Codes (DTCs).

Are any Diagnostic Trouble Codes (DTCs) present in the ABS module?

Yes	If any of the Diagnostic Trouble Codes (DTCs) listed in the DTC Fault Trigger Conditions table are present, GO to G2 For all other ABS module Diagnostic Trouble Codes (DTCs), GO to the DTC Chart: ABS Module in Diagnostic Trouble Code (DTC) Charts .
No	The fault is not present and cannot be recreated at this time. CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSPECT all in-line connectors and the wire harness between the RCM and the ABS module for corrosion, loose terminals, spread terminals, loose wire connections, frayed wire connections, pinched wire harnesses and cut or pierced wire harnesses. REPAIR as necessary.

G2 CHECK THE WHEELS AND TIRES

Inspect the wheels and tires for any damage or excessive wear.

Verify all wheels and tires are the same size and match the size indicated on the VC label.

Verify the inflation pressure of all 4 tires is correct as indicated on the VC label.

Are the wheels and tires OK?

Yes	GO to G3
No	INSTALL the correct size wheel or tire as necessary. ADJUST tire pressure as necessary. REFER to: Wheel and Tire .

G3 CHECK THE COMMUNICATION NETWORK

Ignition ON.

Using a diagnostic scan tool, carry out the Network Test.

Does the RCM pass the Network Test?

Yes	GO to G4
No	DIAGNOSE the RCM does not communicate with the diagnostic scan tool. REFER to: MODULE COMMUNICATIONS NETWORK .

G4 CHECK THE ABS (ANTI-LOCK BRAKE SYSTEM) MODULE CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES (CMDTCS)

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

Retrieve and record all ABS module Diagnostic Trouble Codes (DTCs).

Clear the ABS module Diagnostic Trouble Codes (DTCs).

Ignition OFF.

Ignition ON.

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

Are any Diagnostic Trouble Codes (DTCs) present in the ABS module?

Yes	If any of the Diagnostic Trouble Codes (DTCs) listed in the DTC Fault Trigger Conditions table are present, GO to G5 For all other ABS module Diagnostic Trouble Codes (DTCs), GO to the DTC Chart: ABS Module in Diagnostic Trouble Code (DTC) Charts .
No	GO to G6

G5 CHECK THE RCM (RESTRAINTS CONTROL MODULE) FOR DIAGNOSTIC TROUBLE CODES (DTCS)

Ignition ON.

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

Are there any Diagnostic Trouble Codes (DTCs) present in the RCM?

Yes	DIAGNOSE all RCM Diagnostic Trouble Codes (DTCs). REFER to: Airbag Supplemental Restraint System (SRS) .
No	GO to G6

 **NOTE:** The vehicle must be on level ground and at a complete standstill during IVD initialization. Any vehicle movement results in false values for this test.

G6 VERIFY STABILITY CONTROL SENSOR CALIBRATION

Using the diagnostic scan tool, carry out the IVD Initialization routine. Follow the diagnostic scan tool directions.

Ignition OFF.

Ignition ON.

Test drive the vehicle above 12 km/h (7 mph) and make at least 1 left turn and 1 right turn.

Is the Advance Trac® warning indicator illuminated?

Yes	Using a diagnostic scan tool, CARRY OUT the ABS module self-test. If any of the Diagnostic Trouble Codes (DTCs) listed in the DTC Fault Trigger Conditions table are present, GO to G7 For all other ABS module Diagnostic Trouble Codes (DTCs), GO to the DTC Chart: ABS Module in Diagnostic Trouble Code (DTC) Charts .
No	The condition which caused the concern is no longer present. The concern was most likely due to an incomplete calibration or a failed calibration of the stability control sensors.

 **NOTE:** The vehicle must be on level ground and at a complete standstill during this step. Any vehicle movement results in false values for this test.

G7 CHECK THE ABS (ANTI-LOCK BRAKE SYSTEM) MODULE PID (PARAMETER IDENTIFICATION) VALUES

Ignition OFF.

Ignition ON.

Using a diagnostic scan tool, monitor the following ABS module Parameter Identifications (PIDs):

Yaw rate (YAW_RATE)

Lateral accelerometer (LAT_ACCL)

Longitudinal accelerometer (LONG_ACCL)

Roll rate (ROLL_RATE)

Is the YAW_RATE PID value between -0.05 and 0.05, the LAT_ACCL PID value between -0.4 and 0.4, the LONG_ACCL PID value between -0.4 and 0.4, and the ROLL_RATE PID value between -0.05 and 0.05?

Yes	GO to G9
No	GO to G8

G8 CHECK THE RCM (RESTRAINTS CONTROL MODULE) INSTALLATION AND MOUNTING SURFACE

 **WARNING:** Turn the ignition OFF and wait one minute to deplete the backup power supply. Failure to follow this instruction may result in serious personal injury or death in the event of an accidental deployment.

Ignition OFF.

Wait one minute then disconnect RCM C310A and C310B .

Inspect the RCM installation and make sure the fasteners are fully seated and tightened to specifications. REFER to: Restraints Control Module (RCM) .

Inspect the RCM mounting surface for damage, corrosion or dirt.

Is the RCM installed correctly and is the mounting surface clean and free from damage?

Yes	GO to G9
No	CLEAN or REPAIR the mounting surface or correctly REINSTALL the RCM as necessary. REFER to: Restraints Control Module (RCM) .

G9 CHECK FOR CORRECT RCM (RESTRAINTS CONTROL MODULE) OPERATION

Ignition OFF.

Disconnect ABS module C135 and related in-line electrical connectors.

Inspect the ABS module, RCM and related in-line electrical connectors for:

corrosion

loose or spread terminals

loose or frayed wire connections at terminals