SENSOR FAULTS > PINPOINT TEST M : BRAKE BOOSTER VACUUM SENSOR 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

M1 VERIFY ALL WIRING CONNECTIONS

Ignition OFF.

Disconnect ABS module C135 .

Disconnect brake booster vacuum sensor C1609 .

Using a good light source, inspect each connector terminal for any corrosion.

Inspect both connectors for any pushed-out pins. Refer to CONNECTOR REPAIR PROCEDURES for schematic and connector information.

Using a suitable mating terminal, check each female terminal for deformed or enlarged contacts by comparing the mating terminal's fit between each of the following pins:

C135-36

C135-44

C135-45

C1609-1

C1609-2

C1609-3

Are both connectors free of corrosion, pushed-out pins and deformed or enlarged contacts?

Yes	GO to M2

No	REPAIR the affected terminal.

M2 CHECK THE ABS (ANTI-LOCK BRAKE SYSTEM) MODULE DIAGNOSTIC TROUBLE CODES (DTCS)

Connect ABS module C135 .

Connect brake booster vacuum sensor C1609 .

Ignition ON.

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

Is DTC C0047:26 present?

Yes	GO to M3

No	For DTC C0047:01, C0047:27, C1B14:11, C1015:08, C1B14:12 or C1B15:1C, GO to M4 For all other ABS module codes, GO to the DTC Chart: ABS Module in Diagnostic Trouble Code (DTC) Charts .

M3 CHECK THE BRAKE BOOSTER AND VACUUM HOSES FOR LEAKS

Inspect the vacuum hoses, brake booster and brake booster seals for leaks or evidence of leaks.

Are any leaks or evidence of leaks found?

Yes	REPAIR or INSTALL new components as necessary.

No	GO to M4

M4 CHECK THE VACUUM SENSOR WIRING FOR A SHORT TO VOLTAGE

Ignition OFF.

Disconnect ABS module C135 .

Disconnect brake booster vacuum sensor C1609 .

Ignition ON.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C135-36		Ground
C135-44		Ground
C135-45		Ground

Is any voltage present?

Yes	REPAIR the circuit.

No	GO to M5

M5 CHECK THE VACUUM SENSOR WIRING FOR A SHORT TO GROUND

Ignition OFF.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C135-36	Ω	Ground
C135-44	Ω	Ground
C135-45	Ω	Ground

Are the resistances greater than 10, 000 ohms?

Yes	GO to M6

No	REPAIR the circuit.

M6 CHECK THE VACUUM SENSOR WIRING FOR AN OPEN

Measure:

Positive Lead	Measurement / Action	Negative Lead
C135-36	Ω	C1609-1
C135-44	Ω	C1609-3
C135-45	Ω	C1609-2

Are the resistances less than 3 ohms?

Yes	GO to M7

No	REPAIR the circuit.

M7 CHECK THE VACUUM SENSOR WIRING FOR A SHORT TOGETHER

Measure:

Positive Lead	Measurement / Action	Negative Lead
C1609-1	Ω	C1609-2
C1609-1	Ω	C1609-3
C1609-2	Ω	C1609-3

Are the resistances greater than 10, 000 ohms?

Yes	GO to M8

No	REPAIR the circuit.

M8 CHECK THE ABS (ANTI-LOCK BRAKE SYSTEM) MODULE OUTPUT

Connect ABS module C135 .

Ignition ON.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C1609-3		Ground

Is the approximately 4.7 volts?

Yes	INSTALL a new brake booster vacuum sensor. REFER to: Brake Vacuum Sensor .

No	GO to M9

M9 VERIFY ALL WIRING CONNECTIONS

Ignition OFF.

Disconnect ABS module C135 .

Using a good light source, inspect ABS module C135 for the following:

corrosion - install a new connector or terminal and clean 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

Are the connectors free of corrosion, damaged pins, bent pins, pushed-out pins and spread terminals?

Yes	GO to M10

No	REPAIR the affected connectors or terminals. Refer to CONNECTOR REPAIR PROCEDURES for schematic and connector information.

M10 CHECK FOR CORRECT ABS (ANTI-LOCK BRAKE SYSTEM) MODULE OPERATION

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

Connect brake booster vacuum sensor C1609 . Make sure it seats and latches correctly.