

P061E: INTERNAL CONTROL MODULE BRAKE SIGNAL PERFORMANCE

OVERVIEW

Severity	:	High
DIY Difficulty Level	:	Intermediate
Repair Cost	:	\$100-\$200
Can I Still Drive?	:	Yes

What Does The P061E Code Mean?

When a code P061E is stored, it means that the powertrain control module (PCM) has detected an internal performance error in the brake signal circuit. Other controllers may also detect an internal PCM performance error (with the engine RPM monitoring system) and contribute to a P061E being stored.

Internal control module monitoring processors are responsible for various controller self-test duties and overall internal control module accountability.

Engine air mass calculation system input and output signals are subject to self-test and are monitored constantly by the PCM and other related controllers. The transmission control module (TCM), traction control module (TCSM), and other controllers are subject to interaction with the brake signal circuit.

The brake signal (also called the stop lamp) circuit is monitored (by the PCM and other controllers) using input signals from the brake pedal sensor. The brake signal circuit is integral to several control systems used in OBD-II vehicles. The cruise control system and the transmission torque converter lockup system are just a couple of the most common of these systems.

The PCM and other controllers receives input signals from the stop lamp switch and uses these inputs to activate and deactivate various functions accordingly. Brake signal inputs are typically

limited to distinctions of either ON or OFF.

Whenever the ignition is on and the PCM is energized, internal engine brake signal circuit self-tests are initiated. In addition to running internal controller self-tests, the controller area network (CAN) also compares signals from each individual module to ensure that all controllers are functioning properly. These tests are performed simultaneously.

If the PCM detects an internal error in brake signal circuit, a code P061E will be stored and a malfunction indicator lamp (MIL) may be illuminated. Multiple ignition cycles (with a failure) may be required for MIL illumination.

What Are The Symptoms Of The P061E Code?

Symptoms of a P061E trouble code may include:

- Harsh or delayed shifting (transmission)
- Engine shutdown when coming to a stop (in drive)
- Inoperative stop (brake) lamps
- Lack of torque converter lockup may result in transmission damage

What Are The Potential Causes Of The P061E Code?

Causes for this code may include:

- Defective stop (brake) lamp switch
- Defective PCM or PCM programming error
- Open or shorted circuit or connectors in the CAN harness
- Insufficient control module ground
- Open or shorted circuits between the brake signal switch and the PCM

How Can You Fix The P061E Code?

Even to the most experienced and well-equipped professional technician, diagnosing a code P061E can prove to be quite a challenge. There is also the issue of reprogramming. Without the necessary reprogramming equipment, it will be impossible to replace a defective controller and complete a successful repair.

If there are ECM/PCM power supply codes present, they will obviously need to be rectified before attempting to diagnose a P061E. Also, if brake lamp switch/signal codes are present, these must be diagnosed and repaired first.

Follow manufacturer's recommendations for testing brake lamp switches. Replace failed components as required.

There are several preliminary tests that can be performed prior to declaring an individual controller defective. A diagnostic scanner, a digital volt/ohmmeter (DVOM), and a source of reliable vehicle information will be required. An oscilloscope may also prove to be helpful.

Retrieve All Stored Codes

Connect the scanner to the vehicle diagnostic port and retrieve all stored codes and freeze frame data. You will want to write this information down, just in case the code proves to be an intermittent one. After recording all pertinent information, clear the codes and test drive the vehicle until the code is reset or the PCM enters readiness mode. If the PCM enters readiness mode, the code is intermittent and will be more difficult to diagnose. The condition, which caused the P061E to be stored, may even need to worsen before a diagnosis can be made. If the code is reset, continue with this short list of preliminary tests.

When attempting to diagnose a P061E, information may be your greatest tool. Search your vehicle information source for technical service bulletins (TSB) that parallel the code stored, vehicle (year, make, model, and engine), and symptoms exhibited. If you find the right TSB, it may yield diagnostic information that will aid you in a major way.

Use your source of vehicle information to obtain connector face views, connector pin-out charts, component locators, wiring diagrams, and diagnostic flow charts related to the code and vehicle in question.

Use The DVOM To Test Controller Power Supply Fuses And Relays

Test and replace blown fuses as required. Fuses should be tested with the circuit loaded.

If all fuses and relays appear to be functioning as intended, a visual inspection of controller related wiring and harnesses is in order. You will also want to check chassis and engine ground junctions. Use your vehicle information source to obtain ground locations for related circuits. Use the DVOM to test ground integrity.

Visually inspect system controllers for signs of water, heat, or collision damage. Any controller that is damaged, especially by water, should be considered defective.

If controller power and ground circuits are intact, suspect a defective controller or a controller programming error. Controller replacement will require reprogramming. In some cases, you may purchase reprogrammed controllers through aftermarket sources. Other vehicles/controllers will require on-board reprogramming that may only be done through a dealership or other qualified source.

- Unlike most other codes, the P061E is likely caused by a defective controller or a controller programming error

- Test system ground integrity by connecting the negative test lead of the DVOM to ground and the positive test lead to battery voltage

Severity Description

Internal control module processor codes should be categorized as severe. A stored code P061E could result in erratic transmission torque converter lockup operation or inoperative cruise control (speed control).

Reference Sources

[P061E ICM Brake Signal Performance](#), OBD-Codes.