

P06AF: TORQUE MANAGEMENT SYSTEM - FORCED ENGINE SHUTDOWN

OVERVIEW

Severity	:	High
DIY Difficulty Level	:	Advanced
Repair Cost	:	\$600-\$1200
Can I Still Drive?	:	No

What Does The P06AF Code Mean?

If your OBD-II equipped vehicle has stored a code P06AF, it means that the powertrain control module (PCM) has detected an irregularity in the torque management system. The malfunction was severe enough that a forced engine shutdown was warranted or perceived. Engine torque management codes are applicable to vehicles with automatic transmissions only.

Torque management systems (used in OBD-II vehicles) are designed to reduce engine torque between automatic transmission shifts. This is necessary to aid in the longevity of the transmission and all other driveline components. The torque management system is activated using the PCM. The PCM calculates data from such sensors as the throttle position sensor (TPS), the transmission input and output speed sensors, and the mass airflow (MAF) sensor to determine the parameters which must be applied to the torque management system. Once a torque management strategy has been configured, the PCM initiates it and repeats it with each applicable drive cycle.

The actual reduction in engine torque is realized when ignition timing is retarded by the PCM. If the PCM perceives that ignition timing cannot be retarded or that engine torque cannot be effectively controlled, to the degree that engine shutdown becomes necessary, a code P06AF may be stored and a service engine soon/malfunction indicator lamp (SES/MIL) illuminated. SES/MIL illumination may require multiple ignition cycles with a failure.

What Are The Symptoms Of The P06AF Code?

Symptoms of a P06AF trouble code may include:

- Engine no-start condition
- Engine hesitation or miss
- Engine drivability issues
- Erratic transmission shift patterns
- Harsh shifting

What Are The Potential Causes Of The P06AF Code?

Causes for this code may include:

- Defective transmission input or output speed sensor
- Failed torque converter
- Catastrophic mechanical transmission failure
- Open or shorted wiring and/or connectors or grounds
- PCM failure or a PCM programming error

How Can You Fix The P06AF Code?

Any other stored diagnostic codes (especially those related to the torque management system) should be diagnosed and repaired prior to diagnosing the code P06AF.

In order to diagnose a code P06AF, you will need a diagnostic scanner, a digital volt/ohmmeter (DVOM), and a source of reliable vehicle information.

Search for technical service bulletins (TSB) that replicate the code stored, vehicle (year, make, model, and engine), and symptoms exhibited using your vehicle information source. Finding the appropriate TSB, could yield diagnostic information that will point you in the direction of a successful diagnosis.

Step 1

Connect the scanner to the vehicle diagnostic port and retrieve all stored codes and pertinent freeze frame data. I usually like to write this information down in case the code proves to be an intermittent one. After recording all pertinent data and freeze frame information, clear the codes and test drive the vehicle until one of two things happen; the code is restored or the PCM enters readiness mode.

The bad news is that if the PCM enters readiness mode, the code is intermittent. That makes it more difficult to diagnose. The good news is that the condition which caused the P06AF to be

stored may need to worsen before an accurate diagnostic conclusion can be reached. However, if the code is restored, continue with your diagnosis.

Step 2

Obtain connector face views, connector pinout charts, component locators, wiring diagrams, and diagnostic flow charts (pertaining to the code and vehicle in question) using your source of vehicle information.

Step 3

Visually inspect all related wiring and connectors. Wiring that has been cut, burned, or damaged should be repaired or replaced. You may now want to check chassis and engine grounds. Use your vehicle information source (power and ground locations) to obtain ground junction locations for related circuits.

Step 4

If no other codes are stored and the P06AF continues to reset, use the DVOM to test controller power supply fuses and relays. Replace blown fuses, relays, and fusible links as required. Fuses should always be tested with the circuit loaded to avoid a misdiagnosis.

Step 4

You may suspect a defective controller or a controller programming error if all controller power and ground circuits are intact. Keep in mind that controller replacement will likely require reprogramming. Reprogrammed controllers may be available through aftermarket sources for some applications; other vehicles/controllers will require on-board reprogramming that may only be done through a dealership or other qualified source.

Step 5

Visually inspect system controllers for signs of water, heat, or collision damage and suspect that any controller that shows signs of damage is defective.

Note: Certain torque management features may be removed when aftermarket or high performance programmers are used. This could result in a stored code P06AF

Severity Description

Torque reduction systems are not critical to vehicle operation. Most driver's would not notice if the torque management system failed to operate and many have reported that they preferred the way their automatic transmission shifted with the torque management disabled. The only reason that I

would classify this code as severe is because of the ability of the torque management system to shut down the engine.

Reference Sources

[P06AF Torque Management System - Forced Engine Shutdown](#), OBD-Codes.