

P2282: AIR LEAK BETWEEN THROTTLE BODY AND INTAKE VALVES

OVERVIEW

Severity	:	<div><div>High</div></div>
DIY Difficulty Level	:	<div><div>Intermediate</div></div>
Repair Cost	:	\$450-\$800
Can I Still Drive?	:	Yes

What Does The P2282 Code Mean?

If your vehicle has stored a code P2282, it means that the powertrain control module (PCM) has detected a degree of airflow at the throttle body which does not exist in the combustion chamber.

In order for today's engines to perform at peak efficiency, air and fuel must be regulated precisely. The fuel pump and fuel injectors provide fuel in adequate supply and the throttle body (or throttle bodies) allows metered air to enter the intake. The delicate air/fuel ratio must be carefully monitored and adjusted; constantly. This is accomplished using the PCM with inputs from engine sensors such as the MAF, the manifold air pressure (MAP) sensor, and the heated oxygen sensors (HO2S).

After comparing the amount of ambient air being drawn into the MAF sensor and the air being drawn into the engine intake manifold, if the PCM detects that the two exceed the maximum allowable threshold for variation, a code P2282 may be stored and a malfunction indicator lamp (MIL) illuminated. Multiple drive cycles with a failure may be required for MIL illumination.

What Are The Symptoms Of The P2282 Code?

Symptoms of a P2282 trouble code may include:

- Severely diminished engine performance

- The engine may shutoff upon acceleration
- Backfires can also occur upon acceleration
- Misfire codes could accompany the P2282

What Are The Potential Causes Of The P2282 Code?

Causes for this code may include:

- Large vacuum leak on or near the intake manifold
- Defective MAP or MAF sensor
- Bad intake manifold gasket
- PCM or programming error

How Can You Fix The P2282 Code?

In order to diagnose a code P2282, a diagnostic scanner, a digital volt/ohmmeter (DVOM), and a source of vehicle specific diagnostic information will be required.

If you can use your source of vehicle information to locate a technical service bulletin (TSB) that matches the vehicle year, make, and model; as well as the engine size, code/s stored, and symptoms exhibited, it could yield helpful diagnostic information.

The engine should be in good working order and capable of producing sufficient vacuum.

Start by carefully checking the intake manifold area for signs of a vacuum leak (with the engine running). Any vacuum leak that is large enough to cause a code P2282 to be stored will likely be very evident with the engine running (don't forget the EGR valve and the PCV valve).

If MAF codes accompany the P2282, carefully inspect the MAF Sensor hot wire for unwanted debris. If debris is present on the hot wire, follow manufacturer's recommendations for cleaning the MAF sensor. Never use chemicals or cleaning methods which are not specifically recommended by the automaker.

Retrieve all stored codes

Use the scanner (connected to the vehicle diagnostic connector) to retrieve all stored codes and pertinent freeze frame data. It is a good idea to write this information down before clearing the codes then test-drive the vehicle until the PCM either enters readiness mode or the code is reset.

If the PCM enters readiness mode at this time, the code is intermittent and may be much more difficult to diagnose. If this is the case, the conditions which contributed to the code being stored may need to worsen before an accurate diagnosis can be made.

However, if the code is immediately reset, completing the next step of your diagnosis will require

that you search your vehicle information source for diagnostic flow-charts, connector pin-out charts, connector face views, and component testing procedures/specifications.

With the air inlet pipe intact and the engine in good working order, follow manufacturer's specifications to test the MAF and MAP sensors using the DVOM. If both these sensors are functional, use the voltage drop method to test system circuit.

- A stored code P2282 is typically rectified by repairing a defective intake manifold or throttle body gasket

Severity Description

A stored code P2282 will likely be accompanied by severe drivability symptoms. The conditions which contributed to code storage should be rectified as quickly as possible.

Reference Sources

[Diagnostic Trouble Code \(DTC\) Charts and Descriptions for P2282](#) - Page 146.