

GENERIC · POWERTRAIN

P01A6

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P01A6

Alternative Fuel Rail Pressure Sensor Circuit High

P01A6 indicates that the powertrain control module has detected an abnormally high voltage signal from the alternative fuel rail pressure sensor circuit, which typically means the sensor is reporting a pressure higher than physically possible or the circuit is open or shorted to voltage. The computer sets this code when the signal exceeds the expected maximum threshold for a calibrated period, often pointing to a wiring fault, a failed sensor, or a problem with the alternative fuel pressure regulation system.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough running or misfire under load if the alternative fuel system defaults to a limp mode
- Reduced engine power or a fail-safe mode that limits RPM
- Difficulty starting when running on the alternative fuel, or a stumble during fuel transitions
- Poor fuel economy or unusual fuel smell from the exhaust
- In some cases, the vehicle may refuse to run on the alternative fuel at all and switch back to gasoline

Common causes, most likely first

- 1 Open or high-resistance wire in the sensor signal circuit, such as a broken wire or corroded connector
- 2 Short to voltage on the sensor signal circuit, often from chafed insulation against a power wire
- 3 Failed alternative fuel rail pressure sensor reading high or internally shorted
- 4 Poor ground connection for the sensor or the control module, causing a reference voltage offset
- 5 Faulty pressure regulator or mechanical restriction causing actual rail pressure to spike
- 6 Contaminated or degraded alternative fuel causing sensor clogging or erratic readings
- 7 Rarely, a failed powertrain control module driver or internal signal processing fault



How to diagnose and fix it

- 1 Connect a scan tool and verify the code is current, then check live data for the alternative fuel rail pressure sensor voltage to see if it is pegged high
- 2 Inspect the sensor connector and harness for corrosion, loose pins, or chafed wiring, and perform a wiggle test while watching the signal voltage
- 3 Measure reference voltage and ground at the sensor connector with a digital multimeter to confirm the circuit is not open or shorted
- 4 Disconnect the sensor and check the signal circuit for a short to voltage with the key on, engine off, using a multimeter
- 5 Test the sensor with a known-good pressure gauge or compare its reading to a mechanical gauge if accessible, and replace if it does not track correctly
- 6 Check the alternative fuel pressure regulator and mechanical system for stuck valves or restrictions that could cause actual overpressure
- 7 Clear the code and perform a road test with the scan tool recording to confirm the repair, and verify no pending codes return

Why a High Reading Is Not Always the Sensor

- A short to voltage on the signal wire from a nearby power circuit is a frequent cause that mimics a failed sensor, so always check for voltage on the signal line with the sensor disconnected before condemning the sensor.
- Corroded ground points for the alternative fuel system can elevate the sensor signal voltage because the reference ground floats, leading to a high-voltage code without any sensor fault.
- Some vehicles set P01A6 when the alternative fuel tank is run dry or the fuel is contaminated, causing the pressure sensor to see an abnormal spike during priming, so check fuel quality and level first.
- The code can be set by a mechanical pressure regulator stuck closed, which raises actual rail pressure and drives the sensor signal high, so do not overlook the mechanical side of the system.
- A failing alternative fuel control module or a poor connection at the module can distort the sensor signal, and this is often missed when diagnostics focus only on the sensor and its wiring.

Can I keep driving with P01A6?

You can usually drive the vehicle if it runs normally on gasoline, but avoid sustained driving on the alternative fuel and do not tow or drive under heavy load until the fault is repaired. If the engine runs rough, loses power, or refuses to start on the alternative fuel, park the vehicle and arrange diagnosis to prevent damage to the fuel system or catalytic converter.



Tools that help

- OBD-II scan tool with live data and graphing capability
- Digital multimeter with voltage and resistance measurement
- Fuel pressure gauge suitable for alternative fuel systems
- Wire piercing probes and back-probe kit
- Service information for connector pinouts and voltage specifications

Reading P01A6

- P** Powertrain: engine, transmission and emissions.
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- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
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- 1** Fuel and air metering.
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- A6** The exact fault within that area.

Often seen with

P0087 Fuel Rail/System Pressure - Too Low · **P0193** Fuel Rail Pressure Sensor Circuit High Input · **P01A5** Alternative Fuel Rail Pressure Sensor Circuit Low · **P01A7** Alternative Fuel Rail Pressure Sensor Circuit Intermittent/E · **P01A8** Alternative Fuel Rail/System Pressure - Too Low

See it working

Watch the animated explainer [How a Car Thermostat Works: Wax Pellet and Cooling Fan](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p01a6/>

