

GENERIC · POWERTRAIN

P0193

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0193

Fuel Rail Pressure Sensor Circuit High Input

P0193 means the powertrain control module (PCM) has detected a fuel rail pressure sensor signal voltage that is higher than the maximum expected value for the current operating conditions. The sensor is reporting an abnormally high pressure reading, or the circuit itself is being pulled toward a high voltage reference.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Reduced engine power or limp mode as the PCM substitutes a default fuel pressure value
- Hard starting, long cranking, or a no-start condition when rail pressure is misreported
- Rough idle, hesitation, or stumble on acceleration
- Poor fuel economy or black smoke from the tailpipe if the PCM commands excessive fuel pressure
- Intermittent driveability complaints that come and go with vibration or temperature

Common causes, most likely first

- 1 Fuel rail pressure sensor signal wire shorted to voltage or chafed against a power feed
- 2 Failed fuel rail pressure sensor reading high or internally shorted
- 3 Corroded, pushed-back, or loose terminals at the sensor or PCM connector
- 4 Open sensor ground circuit, which drives the signal voltage toward the reference
- 5 PCM internal fault on the signal input circuit (rare but possible)
- 6 Wiring harness damage from heat, rodent chewing, or previous repair work near the rail

How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P0193 before clearing anything
- 2 Inspect the fuel rail pressure sensor connector and harness for corrosion, chafing, or pushed pins
- 3 Measure sensor reference voltage, signal voltage, and ground continuity at the sensor connector with the key on
- 4 Back-probe the signal wire at the PCM and compare it with the sensor reading to isolate a wiring fault
- 5 Check for a short to voltage on the signal circuit by wiggling the harness while watching a multimeter
- 6 Replace the fuel rail pressure sensor only after the circuit tests prove the sensor is at fault
- 7 Clear codes and verify the repair with a road test that includes key cycles and full-throttle acceleration



Why P0193 is often a wiring fault

- A high signal voltage usually points to a short to voltage or an open ground rather than a failed sensor, so ohm and voltage checks at the connector come before parts replacement.
- Many vehicles set P0193 only after a key-on, engine-off rationality check, so a sensor that reads correctly while running can still trigger the code during the startup self-test.
- A weak or missing sensor ground will pull the signal voltage up and mimic a high-pressure reading, which is why ground continuity is tested before condemning the sensor.
- Aftermarket fuel system work, such as a replaced rail or injector line, can pinch or stretch the sensor harness and set this code without any sensor fault.
- The PCM may default to a calculated fuel pressure and keep the engine running, so the vehicle can feel normal while the code is stored and the underlying circuit fault remains.

Can I keep driving with P0193?

The vehicle is usually driveable because the PCM substitutes a default fuel pressure, but avoid heavy throttle and towing until the fault is repaired. If the engine enters limp mode or stalls, stop driving and have it diagnosed promptly.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter with back-probe pins
- Fuel pressure gauge or scan tool fuel pressure PID
- Wiring diagram for the fuel rail pressure sensor circuit
- Terminal pick and contact cleaner

Reading P0193

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

Often seen with

P0087 Fuel Rail/System Pressure - Too Low · **P0088** Fuel Rail/System Pressure - Too High · **P0190** Fuel Rail Pressure Sensor Circuit Malfunction · **P0191** Fuel Rail Pressure Sensor Circuit Range/Performance · **P0192** Fuel Rail Pressure Sensor Circuit Low Input



See it working

Watch the animated explainer [How a Radiator Fan Relay Circuit Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0193/>

