

mitsubishi · powertrain

P1296

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1296 · Mitsubishi

No 5 Volt Supply To MAP Sensor

P1296 on Mitsubishi vehicles means the engine control module (ECM) has detected that the 5-volt reference supply to the manifold absolute pressure (MAP) sensor is missing or out of range. The ECM monitors this supply circuit and sets the code when the voltage falls below a calibrated threshold, which prevents the MAP sensor from reporting accurate intake manifold pressure.

SYSTEM

Powertrain

CODE TYPE

Mitsubishi
specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air
metering (injector
circuits)

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- Rough idle or unstable engine speed as the ECM loses accurate load information.
- Poor acceleration or hesitation during throttle application.
- Increased fuel consumption due to incorrect air-fuel mixture calculations.
- In some cases, the engine may enter limp mode or stall when coming to a stop.

Common causes, most likely first

- 1 Open or shorted 5-volt reference wire between the ECM and the MAP sensor connector.
- 2 Corroded, loose, or damaged MAP sensor electrical connector terminals.
- 3 Failed MAP sensor internally shorting the 5-volt reference to ground.
- 4 Faulty engine control module (ECM) not supplying the 5-volt reference.
- 5 Chafed wiring harness rubbing against metal components, causing a short to ground.
- 6 Water intrusion into the MAP sensor connector or wiring harness.
- 7 Poor ground connection at the MAP sensor or ECM, affecting reference voltage stability.



How to diagnose and fix it

- 1 Inspect the MAP sensor connector and wiring for corrosion, damage, or loose terminals; clean or repair as needed.
- 2 Measure the 5-volt reference voltage at the MAP sensor connector with the key on and engine off; compare to specification.
- 3 Check for continuity and resistance in the 5-volt reference wire between the ECM and MAP sensor; repair open or short circuits.
- 4 Test the MAP sensor by checking its signal output with a scan tool or multimeter while applying vacuum; replace if faulty.
- 5 Verify the ECM is supplying the 5-volt reference by backprobing the ECM connector; if absent, diagnose ECM power and ground circuits.
- 6 If all circuits and sensor test good, substitute a known-good ECM and retest the system.
- 7 Clear the diagnostic trouble code (DTC) and perform a road test to confirm the repair.

Don't overlook the MAP sensor connector

- A common misdiagnosis is replacing the MAP sensor when the real problem is a corroded connector terminal that interrupts the 5-volt reference.
- The 5-volt reference circuit often feeds multiple sensors; a short in another sensor on the same circuit can cause P1296 on Mitsubishi vehicles.
- Intermittent P1296 codes can be caused by wiring harness chafing that only shorts when the engine moves under load or over bumps.
- A failed MAP sensor can short the 5-volt reference to ground, but the ECM may still show 5 volts at the connector until the sensor is plugged in.
- Always check for related codes; a P0107 or P0108 may accompany P1296 and point to a MAP sensor signal circuit issue rather than the reference supply.

Can I keep driving with P1296?

You can usually drive the vehicle to a repair shop, but avoid heavy acceleration or towing because the ECM may be using default values that affect performance and emissions. If the engine runs poorly or stalls, stop driving and seek immediate repair.

Tools that help

- Digital multimeter (DMM)
- Scan tool with live data capability
- Wire piercing probes or backprobe pins
- Vacuum pump with gauge
- Electrical contact cleaner and dielectric grease
- Factory service information for wiring diagrams and voltage specifications



Reading P1296

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Mitsubishi): its meaning depends on the make.
- 2** Fuel and air metering (injector circuits).
- 96** The exact fault within that area.

Often seen with

P1297 ELD Circuit Low Input · **P1298** Electrical Load Detector Circuit High Voltage · **P1297** No Charge In MAP From Start To Run · **P1298** Injector Driver Module Failure · **P1297** ELD Circuit Low Input · **P1298** Electrical Load Detector Circuit High Voltage · **P1297** No Change In MAP From Start To Run · **P1298** Lean Operation At Wide Open Throttle · **P1297** Injector High Sides Shorted Together · **P1298** IDM Failure · **P1297** No Change In MAP From Start To Run · **P1298** Lean Operation At Wide Open Throttle · **P0106** MAP/Barometric Pressure Circuit Range/Performance · **P0107** MAP/Barometric Pressure Circuit Low Input · **P0108** MAP/Barometric Pressure Circuit High Input

See it working

Watch the animated explainer [How an Automatic Transmission Works, Gear by Gear](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/mitsubishi-p1296/>

