

GENERIC · POWERTRAIN

P0114

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0114

Intake Air Temperature Circuit Intermittent

P0114 means the engine computer has detected an intermittent fault in the intake air temperature (IAT) sensor circuit, where the signal momentarily drops out or jumps erratically rather than failing completely. The computer sets this code when the IAT voltage reading goes outside the expected range for a calibrated amount of time, often due to a loose connection or damaged wire.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Low	Intermediate	Fuel and air metering

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the intermittent fault is brief.
- A momentary stumble or rough idle when the signal cuts out, particularly during cold starts.
- Poor fuel economy or slightly rough running if the intermittent signal causes the computer to miscalculate air density.
- A check engine light that comes and goes, sometimes clearing itself after several drive cycles.
- In rare cases, a brief hesitation or surge during acceleration when the sensor signal drops.
- No noticeable performance change in many cases, making the code easy to ignore until it returns.

Common causes, most likely first

- 1 A loose, corroded, or partially unseated electrical connector at the IAT sensor.
- 2 Chafed, cracked, or broken wires in the IAT sensor circuit, often near the intake or harness bends.
- 3 A failing IAT sensor that intermittently opens or shorts internally when exposed to heat or vibration.
- 4 Poor terminal tension inside the sensor connector, causing an intermittent electrical contact.
- 5 Water or oil intrusion into the sensor connector or wiring harness, leading to intermittent shorts.
- 6 A faulty engine computer or poor ground connection, though this is far less common than wiring issues.



How to diagnose and fix it

- 1 Inspect the IAT sensor connector for looseness, corrosion, or pushed-out terminals, and reseal or clean it as needed.
- 2 Wiggle-test the sensor wiring harness while watching live IAT data on a scan tool to reproduce the intermittent signal.
- 3 Check the IAT circuit wires for chafing, cracks, or breaks, especially near the intake and any sharp edges or heat sources.
- 4 Measure the IAT sensor resistance with a multimeter and compare it to the temperature-resistance chart for the vehicle.
- 5 Back-probe the sensor signal wire at the computer and monitor voltage while flexing the harness to locate an intermittent open.
- 6 Replace the IAT sensor if resistance readings jump erratically when the sensor is gently heated or tapped.
- 7 Repair or replace damaged wiring and clear the code, then perform a road test with live data to confirm the fault is gone.

Intermittent faults hide in plain sight

- A scan tool with live data is essential here because the code only sets when the signal drops out, so a static resistance check can pass while the sensor still fails under vibration or heat.
- The IAT sensor is often integrated into the mass airflow sensor (MAF) on many modern engines, so a P0114 may actually point to a failing MAF sensor rather than a separate intake air temperature sensor.
- Wiggle-testing the harness while watching live data is the fastest way to find an intermittent connection, but technicians often skip it and replace the sensor unnecessarily.
- Corrosion inside the connector pins can cause an intermittent signal that only appears in damp weather, so a visual inspection after a rainstorm or car wash can be revealing.
- This code does not always mean the sensor is bad; a poor ground or a faulty computer can also cause intermittent IAT readings, so circuit testing should precede parts replacement.

Can I keep driving with P0114?

It is generally safe to keep driving with a P0114 code because the fault is intermittent and the engine computer uses default values when the signal drops out. Avoid extended driving if you notice rough running or poor fuel economy, and have the circuit inspected soon to prevent a complete failure that could affect cold-start drivability.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wire piercing probes or back-probe kit
- Electrical contact cleaner
- Vehicle-specific wiring diagram

Reading P0114

- 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.
- 14** The exact fault within that area.

Often seen with

P0101 Mass/Volume Air Flow Circuit Range/Performance · **P0110** Intake Air Temperature Circuit Malfunction · **P0111** Intake Air Temperature Circuit Range/Performance · **P0112** Intake Air Temperature Circuit Low Input · **P0113** Intake Air Temperature Circuit High Input

See it working

Watch the animated explainer [How a Gyroscope Works: Gimbals and Precession](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0114/>

