

GM · POWERTRAIN

P1114

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1114 · GM

Engine Coolant Temperature Sensor Intermittent

P1114 on a GM vehicle indicates that the engine control module (ECM) has detected an intermittent signal from the engine coolant temperature (ECT) sensor. The ECM monitors the sensor's voltage and flags this code when the reading momentarily drops out or jumps erratically, rather than failing completely.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	GM specific	Medium	Intermediate	Fuel and air metering

Symptoms you may notice

- Often no symptoms besides the warning light
- Intermittent rough idle or stalling when the engine is cold
- Poor fuel economy or rich-running condition
- Cooling fan running constantly or not at all
- Erratic temperature gauge readings
- Hard starting or extended cranking in cold weather

Common causes, most likely first

- 1 Faulty engine coolant temperature sensor
- 2 Corroded or loose electrical connector at the sensor
- 3 Chafed or damaged wiring harness between the sensor and ECM
- 4 Coolant contamination or low coolant level causing sensor signal dropout
- 5 Poor ground connection for the sensor circuit
- 6 Failed thermostat keeping the engine from reaching normal temperature

How to diagnose and fix it

- 1 Inspect the ECT sensor connector for corrosion, tightness, and pushed-out pins
- 2 Check the wiring harness for chafing, heat damage, or loose grounds
- 3 Measure the sensor's resistance with a multimeter and compare to the GM temperature-resistance chart
- 4 Backprobe the sensor signal wire at the ECM and wiggle the harness to look for intermittent voltage changes
- 5 Verify coolant level and condition, and pressure-test the cooling system if low
- 6 Replace the ECT sensor if resistance is out of specification or the signal is erratic
- 7 Clear the code and perform a road test with a scan tool to confirm the repair



Why an intermittent ECT code misleads

- A loose or corroded connector pin is more often the culprit than a failed sensor, so always wiggle-test the harness before condemning the sensor.
- The ECM may substitute a default coolant temperature value when the signal drops out, which can mask driveability symptoms and make the code seem harmless.
- Aftermarket sensors with incorrect resistance curves are a common cause of repeat P1114 codes on GM vehicles, so use a quality replacement.
- A thermostat stuck open can keep the engine below the expected temperature range and trigger an intermittent ECT signal without any sensor fault.
- The same intermittent signal can set companion codes for cooling fan control or fuel trim, so check for related codes before replacing parts.

Can I keep driving with P1114?

You can usually drive short distances with this code, but avoid long trips or heavy loads until it is repaired because an intermittent coolant temperature signal can cause poor fuel economy and cooling fan malfunctions. If the temperature gauge behaves erratically or the engine overheats, stop driving and diagnose immediately.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- GM service information for temperature-resistance specifications
- Wire terminal pick and connector cleaner
- Coolant refractometer or hydrometer

Reading P1114

P	Powertrain: engine, transmission and emissions.
1	Manufacturer-specific code (GM): its meaning depends on the make.
1	Fuel and air metering.
14	The exact fault within that area.

Often seen with

P0115 Engine Coolant Temperature Circuit Malfunction · **P0116** Engine Coolant Temperature Circuit Range/Performance · **P0117** Engine Coolant Temperature Circuit Low Input · **P0118** Engine Coolant Temperature Circuit High Input · **P0128** Coolant Thermostat (Coolant Temperature Below Thermostat Reg



See it working

Watch the animated explainer [Engine Cooling System Trainer: How Engines Stay Cool](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1114/>

