

CHRYSLER · POWERTRAIN

P1116

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1116 · Chrysler

ECT Signal Unstable Or Intermittent

P1116 on a Chrysler vehicle means the engine computer has seen the engine coolant temperature (ECT) sensor signal jump around or drop out intermittently instead of changing smoothly as the engine warms up. The computer compares the coolant temperature reading against a model of how fast the engine should warm up and flags the code when the signal is unstable or erratic.

SYSTEM

Powertrain

CODE TYPE

Chrysler specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air
metering

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the glitch is brief
- Temperature gauge needle that jumps, drops, or reads cold after the engine is warm
- Poor fuel economy or a rich-running condition because the computer thinks the engine is still cold
- Rough idle or hesitation when the engine is cold
- Cooling fan running constantly or not coming on when it should
- Hard starting or a longer crank time in cold weather

Common causes, most likely first

- 1 Faulty engine coolant temperature sensor with an internal intermittent connection
- 2 Corroded, loose, or chafed wiring at the ECT sensor connector or along the harness
- 3 Coolant level low enough to expose the sensor tip, causing erratic readings
- 4 Thermostat stuck open or a cooling system air pocket that makes the temperature signal swing
- 5 Poor ground connection at the engine block or sensor return circuit
- 6 Damaged pins or terminals in the ECT sensor pigtail
- 7 Rarely, a failing powertrain control module (PCM) driver on the sensor circuit



How to diagnose and fix it

- 1 Check coolant level and inspect for leaks or air pockets in the cooling system
- 2 Inspect the ECT sensor connector and wiring for corrosion, looseness, or chafing
- 3 Back-probe the ECT signal wire and watch live data on a scan tool while wiggling the harness
- 4 Compare the ECT reading cold and hot against a known-good value or an infrared thermometer
- 5 Test the ECT sensor resistance with a multimeter and compare to the Chrysler specification for that temperature
- 6 Check the sensor ground circuit for excessive voltage drop
- 7 Replace the ECT sensor if resistance is out of spec or the signal drops out during the wiggle test

What a jumpy coolant reading really means

- A low coolant level is a common cause of P1116 on Chrysler vehicles because the sensor tip can be exposed to air, making the temperature signal swing wildly even though the sensor itself is fine.
- Technicians often replace the ECT sensor only to find the real problem is a chafed wire near the exhaust manifold or a corroded pin in the connector that only acts up when the engine bay is hot.
- P1116 does not always mean the sensor has failed; a sticking thermostat or an air pocket from a recent cooling system service can create the same unstable signal pattern.
- The code can set intermittently and clear itself, so a scan tool that records freeze-frame data is more useful than a simple code reader for catching the fault in the act.
- On some Chrysler models the ECT sensor shares a ground with other sensors, so a bad ground can set P1116 along with other sensor codes that seem unrelated.

Can I keep driving with P1116?

You can usually drive the vehicle short distances to a repair shop, but avoid long trips or heavy load because an unstable coolant signal can cause the computer to run the engine rich and may affect cooling fan operation. If the temperature gauge is jumping into the red or the engine is overheating, stop driving and have it towed.

Tools that help

- Scan tool with live data capability
- Digital multimeter
- Infrared thermometer
- Wire piercing probes or back-probe kit
- Coolant refractometer or hydrometer



Reading P1116

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Chrysler): its meaning depends on the make.
- 1** Fuel and air metering.
- 16** 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 [How a Supercharger Works: Roots Blower in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/chrysler-p1116/>

