

VOLKSWAGEN · POWERTRAIN

P1622

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1622 · Volkswagen

Engine Coolant Temperature Signal Range Performance

P1622 on Volkswagen vehicles indicates that the engine control module (ECM) has detected an implausible or out-of-range signal from the engine coolant temperature (ECT) sensor circuit during a specified monitoring period. The ECM compares the coolant temperature signal against other temperature inputs and expected values after a cold start, and it sets this code when the signal does not rise or correlate as expected.

SYSTEM

Powertrain

CODE TYPE

Volkswagen specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Computer and output circuits

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Poor fuel economy or rich-running condition due to incorrect temperature data
- Rough idle or stalling when the engine is cold
- Incorrect temperature gauge reading or no reading at all
- Hard starting or extended cranking in cold weather
- Cooling fan running continuously or not engaging when needed

Common causes, most likely first

- 1 Faulty engine coolant temperature sensor (ECT) giving a skewed or intermittent signal
- 2 Damaged or corroded wiring or connector at the ECT sensor
- 3 Open or short circuit in the ECT sensor signal or ground circuit
- 4 Failed thermostat stuck open, causing the engine to warm up too slowly
- 5 Low coolant level or air pockets in the cooling system affecting sensor readings
- 6 ECM software issue or internal fault in the temperature input circuit (less common)



How to diagnose and fix it

- 1 Verify coolant level and condition; top up or bleed the cooling system if needed
- 2 Use a scan tool to read live ECT data and compare it with actual engine temperature using an infrared thermometer
- 3 Inspect the ECT sensor connector and wiring for corrosion, damage, or loose pins
- 4 Measure resistance across the ECT sensor and compare with Volkswagen specifications for the current temperature
- 5 Check the thermostat operation by monitoring coolant temperature rise during warm-up
- 6 If the sensor and wiring test good, perform a resistance test on the circuit and check for ECM software updates or faults
- 7 Replace the ECT sensor if it fails resistance or response tests, then clear codes and verify the repair

Coolant temperature sensor diagnostics for Volkswagen

- A stuck-open thermostat can mimic a failed ECT sensor by preventing the engine from reaching normal operating temperature, setting P1622 without any sensor fault.
- Volkswagen ECT sensors often fail intermittently when hot, so a resistance test at room temperature may pass while the sensor still causes the code during real-world driving.
- Air pockets in the cooling system after a coolant service can cause erratic ECT readings and set this code even when all components are healthy.
- The ECM may use the ECT signal for fan control and fuel enrichment; a faulty sensor can cause driveability issues that seem unrelated to temperature.
- Always check for technical service bulletins (TSBs) or ECM software updates for the specific Volkswagen model, as reflashing can resolve false P1622 codes.

Can I keep driving with P1622?

You can usually continue driving with P1622, but avoid aggressive acceleration or heavy loads until the fault is repaired, as incorrect temperature data can affect fuel mixture and cooling fan operation. If the engine overheats or runs poorly, stop driving and seek service immediately.

Tools that help

- OBD-II scan tool with live data capability
- Infrared thermometer
- Digital multimeter
- Volkswagen-specific repair information or wiring diagrams
- Socket set and basic hand tools



Reading P1622

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Volkswagen): its meaning depends on the make.
- 6** Computer and output circuits.
- 22** The exact fault within that area.

Often seen with

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 · **P2181** Cooling System Performance

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/volkswagen-p1622/>

