

GENERIC · POWERTRAIN

P015E

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P015E

Excessive Time to Enter Closed Loop Fuel Timing Control

P015E means the engine computer (PCM) commanded the fuel system into closed-loop operation, where the oxygen sensors trim fuel delivery in real time, but the sensors did not respond quickly enough to confirm that transition. The PCM measures the time from its command until the upstream oxygen sensor signal begins switching, and it flags this code when that time exceeds the calibrated limit.

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

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- A brief or intermittent rough idle immediately after a cold start
- Slightly higher fuel consumption during warm-up and the first few minutes of driving
- Hesitation or a flat spot when accelerating from a stop while the engine is still cold
- In rare cases, a faint sulfur or raw-fuel smell from the exhaust during warm-up

Common causes, most likely first

- 1 A lazy or contaminated upstream oxygen sensor that responds slowly to changing air-fuel ratios
- 2 An exhaust leak ahead of the upstream oxygen sensor, admitting outside air and delaying the sensor's switch
- 3 A stuck-open or slow-reacting thermostat that keeps coolant temperature below the threshold for closed-loop entry
- 4 A faulty engine coolant temperature sensor reporting a colder temperature than actual, delaying closed-loop enablement
- 5 A vacuum leak or intake leak that skews the mixture and slows the oxygen sensor's transition
- 6 Low fuel pressure or a weak fuel pump that prevents the mixture from reaching the switching range quickly
- 7 A PCM calibration issue or a wiring fault in the oxygen sensor heater circuit that slows sensor warm-up



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data, then verify the coolant temperature reading against actual engine temperature with an infrared thermometer
- 2 Inspect the exhaust system from the manifold to the upstream oxygen sensor for cracks, loose flanges, or failed gaskets and repair any leak
- 3 Graph the upstream oxygen sensor signal on a scan tool during a cold start and confirm how many seconds it takes to begin switching after closed-loop is commanded
- 4 Check the oxygen sensor heater circuit for correct resistance and supply voltage, and compare the sensor's response time to the manufacturer's specification
- 5 Perform a smoke test of the intake and vacuum system to rule out unmetered air that is slowing the sensor's transition
- 6 Measure fuel pressure and compare it to specification, and inspect the fuel filter and pump delivery if pressure is low
- 7 If all inputs are correct, replace the upstream oxygen sensor with the correct part and clear the code, then verify closed-loop entry time on a cold start

What slows closed-loop entry before the sensor

- A thermostat that is stuck partly open is one of the most commonly missed causes because the engine still reaches operating temperature eventually, but not fast enough for the PCM's closed-loop timer.
- The code does not automatically condemn the oxygen sensor; a small exhaust leak at the manifold gasket can dilute the sample and delay the switch without setting a lean or rich code.
- A coolant temperature sensor that reads several degrees low will keep the PCM from enabling closed-loop fuel control, and the sensor often fails gradually without setting its own code.
- On many vehicles the upstream oxygen sensor heater is powered through a fuse shared with other circuits, so a blown fuse can slow sensor warm-up and set this code without any other symptom.
- Replacing the oxygen sensor without graphing its response on a cold start often leads to a repeat repair when the real cause is a vacuum leak or low fuel pressure.

Can I keep driving with P015E?

The vehicle is safe to drive to a repair shop, but avoid heavy acceleration and long idling until the fault is repaired because the engine is running in open-loop fuel control longer than intended. Prolonged driving with this code can raise fuel consumption and load the catalytic converter, so schedule diagnosis soon.



Tools that help

- OBD-II scan tool with live data and graphing capability
- Infrared thermometer
- Smoke machine for intake and vacuum leak testing
- Fuel pressure gauge
- Digital multimeter
- Exhaust leak detection tools or a stethoscope

Reading P015E

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.
5E	The exact fault within that area.

Often seen with

P0117 Engine Coolant Temperature Circuit Low Input · **P0128** Coolant Thermostat (Coolant Temperature Below Thermostat Reg · **P0130** O2 Sensor Circuit Malfunction (Bank 1 Sensor 1) · **P0133** O2 Sensor Circuit Slow Response (Bank 1 Sensor 1) · **P0171** System Too Lean (Bank 1)

See it working

Watch the animated explainer [How Hydraulic Brakes Work: Pedal to Caliper](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p015e/>

