

TOYOTA · POWERTRAIN

P1135

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1135 · Toyota

Air/Fuel Sensor Heater Circuit Response Bank 1 Sensor 1

P1135 on a Toyota means the engine computer (ECM) has detected that the air/fuel ratio sensor heater in Bank 1 Sensor 1 is not responding as expected during the cold-start heater test. The ECM monitors the heater current and the time it takes for the sensor to become active, and this code sets when the heater circuit does not draw the correct current or the sensor does not reach operating temperature within the expected window.

SYSTEM

Powertrain

CODE TYPE

Toyota specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Slightly rough idle or hesitation during the first few minutes after a cold start
- A brief period of poor fuel economy until the sensor reaches operating temperature
- Intermittent check engine light that may clear on its own after several drive cycles
- In rare cases, a slight stumble or surge when accelerating from a stop while the engine is cold

Common causes, most likely first

- 1 Failed air/fuel ratio sensor heater element (open or shorted circuit inside the sensor)
- 2 Damaged or corroded wiring between the sensor heater and the ECM, especially at the connector
- 3 Blown heater circuit fuse in the engine bay fuse box
- 4 Poor ground connection for the heater circuit at the engine or chassis
- 5 ECM internal driver fault for the heater circuit (less common)
- 6 Aftermarket sensor with incorrect heater resistance installed previously

How to diagnose and fix it

- 1 Check the heater circuit fuse and replace it if blown, then recheck for the code
- 2 Inspect the sensor connector and wiring for corrosion, chafing, or loose pins, and repair as needed
- 3 Measure the resistance of the heater element at the sensor connector and compare to Toyota specifications
- 4 Check for battery voltage at the heater supply wire with the key on and engine off
- 5 Check the ground circuit for the heater using a voltage drop test while the circuit is loaded
- 6 If the circuit tests good, replace the air/fuel ratio sensor with a genuine Toyota or OEM-equivalent part
- 7 Clear the code and perform a test drive including a cold start to confirm the heater monitor runs and passes

What the heater response test actually checks

- The ECM does not simply check for an open heater; it measures how quickly the sensor becomes active after a cold start, so a lazy heater that still has continuity can set P1135 without a completely failed sensor.
- A common misdiagnosis is replacing the sensor when the real fault is a corroded connector pin or a chafed wire near the exhaust manifold that only breaks contact when the engine is cold.
- Aftermarket air/fuel ratio sensors often have heater resistance that is slightly out of Toyota's expected range, which can set P1135 even though the sensor appears to work once warm.
- This code can be set by a weak battery or low charging voltage during cranking, because the heater test runs immediately after start-up and low voltage skews the current measurement.
- P1135 is specific to Bank 1 Sensor 1, which is the sensor closest to the engine on the bank that contains cylinder number one, so do not confuse it with a downstream oxygen sensor heater code.

Can I keep driving with P1135?

You can usually drive the vehicle with P1135 set, but avoid long periods of idling and heavy acceleration until the fault is repaired because the engine may run slightly rich while the sensor is cold. If the check engine light begins flashing or you notice misfiring, stop driving and have the vehicle diagnosed promptly.

Tools that help

- OBD-II scan tool with Toyota-specific live data capability
- Digital multimeter with resistance and voltage drop functions
- Fuse puller or small pliers
- Socket set and oxygen sensor wrench
- Wiring diagram for the air/fuel ratio sensor heater circuit

Reading P1135

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



Often seen with

P1134 Oxygen Sensor Heating Circuit Bank 1 + 2 Sensor 2 Short To B · **P1133** Oxygen Sensor Heating Circuit Bank 1 + 2 Sensor 1 Electrical · **P1130** Long Term Fuel Trim Bank 2 System Too Lean · **P1133** Air/Fuel Sensor Circuit Response Bank 1 Sensor 1 · **P1130** Air/Fuel Sensor Circuit Range Performance Bank 1 Sensor 1 · **P1134** Front Oxygen AF Sensor Microcomputer Problem · **P1130** Front Oxygen Sensor Circuit Malfunction Open Circuit · **P1130** Swirl Control Valve Control Solenoid Valve · **P1130** HO2S Bank 1 Sensor 1 Not Switching Fuel Control Limit Reached · **P1134** Bank 1 Fuel Control Shifted Rich · **P1133** Bank 1 Fuel Control Shifted Lean · **P1133** O2 Sensor Insufficient Switching (Bank 1 Sensor 1) · **P1130** HO2S Circuit Low Variance Bank 1 Sensor 1 · **P1134** O2 Sensor Transition Time (Bank 1 Sensor 1) · **P1133** Bank 1 Fuel Control Shifted Lean · **P1130** Lack of Upstream Heated Oxygen Sensor Switch Adaptive Fuel L · **P1134** Bank 1 Fuel Control Shifted Rich · **P1130** HO2S Circuit Low Variance Bank 1 Sensor 1 · **P1134** HO2S Transition Time Ratio · **P1133** HO2S Insufficient Switching · **P1134** O2 Sensor Heater Circuit Signal Intermittent Bank 1 Sensor 1 · **P1133** O2 Sensor Heater Control Circuit Bank 2 Sensor 1 · **P0135** O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 1) · **P2195** O2 Sensor Signal Stuck Lean (Bank 1 Sensor 1)

See it working

Watch the animated explainer [Helicopter Simulator: Take Off, Hover and Land](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/toyota-p1135/>

