

KIA · POWERTRAIN

P1105

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1105 · Kia

HO2S12 Heater Circuit High Voltage

P1105 on a Kia means the engine computer has detected an abnormally high voltage on the heater circuit of the downstream oxygen sensor on bank 1, which is sensor 2. The computer expects the heater element to draw current and pull the signal voltage low, so a high-voltage reading tells it the heater circuit is open, has excessive resistance, or the sensor's internal heater has failed.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Kia specific	Low	Intermediate	Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light, often with no other symptoms besides the warning light
- A pending or stored P1105 code that returns immediately after clearing
- Slightly higher fuel consumption as the engine computer loses closed-loop control sooner after a cold start
- A failed oxygen sensor monitor that prevents other emissions tests from completing
- In rare cases, a rough idle or hesitation during the first minute of cold operation
- No noticeable change in driveability for most drivers

Common causes, most likely first

- 1 Failed heater element inside the downstream oxygen sensor (HO2S12)
- 2 Open or broken wire in the sensor heater power or ground circuit
- 3 Corroded, loose, or pushed-back terminal at the sensor connector or the engine computer connector
- 4 Blown fuse or faulty relay that supplies heater power to the oxygen sensor circuit
- 5 High resistance in the heater ground path, often at a corroded chassis ground point
- 6 Engine computer driver circuit fault, though this is far less common than sensor or wiring failure



How to diagnose and fix it

- 1 Clear the code and verify it returns, then check for any related oxygen sensor heater codes that may narrow the circuit
- 2 Inspect the HO2S12 connector and harness for corrosion, chafing, or loose pins, and repair as needed
- 3 Check the oxygen sensor heater fuse and relay, and replace any blown fuse after finding the cause of the overload
- 4 Measure resistance across the heater element at the sensor connector; an open circuit or very high resistance confirms a failed sensor
- 5 Back-probe the heater power and ground wires with the key on to confirm the computer is supplying voltage and the ground path is clean
- 6 Load-test the heater ground circuit and clean or repair any corroded ground points
- 7 Replace the downstream oxygen sensor if the circuit checks out and the heater element is open, then clear codes and verify the monitor completes

What the high-voltage reading really means

- A high-voltage heater code almost always means the heater circuit is open, not shorted, because the computer pulls the signal up when no current flows through the heater element.
- Many technicians replace the downstream sensor without checking the heater fuse and relay first, only to find the new sensor sets the same code because the power feed was dead all along.
- A corroded ground point on the engine block or chassis can mimic a failed sensor by adding resistance to the heater ground path, so always load-test the ground before condemning the sensor.
- The downstream sensor heater is monitored separately from the upstream sensor, so a P1105 does not mean the upstream sensor is faulty, even though both share the same fuse on some Kia models.
- On some Kia vehicles, a failed oxygen sensor heater can prevent the catalyst monitor from running, which may hide a separate catalytic converter problem until the heater circuit is repaired.

Can I keep driving with P1105?

You can usually keep driving with P1105 because the fault mainly affects cold-start emissions and the engine will still run normally once warmed up. Avoid long periods of idling from cold and get the circuit checked soon so the oxygen sensor monitor can complete and any related emissions fault is not masked.

Tools that help

- OBD-II scan tool with live data and monitor readiness capability
- Digital multimeter with resistance and voltage measurement
- Test light or load tester for circuit verification
- Fuse puller and replacement fuses
- Socket set and oxygen sensor wrench
- Contact cleaner and dielectric grease for connector repair



Reading P1105

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

Often seen with

P1104 Oxygen Sensor Bank 1 Sensor 2 Voltage Too Low/Air Leak · **P1104** Engine Torque Control Signal Circuit Malfunction · **P1104** Turbocharger Wastegate Solenoid · **P1104** Mass Air Flow Sensor Circuit Ground · **P0130** O2 Sensor Circuit Malfunction (Bank 1 Sensor 1) · **P0135** O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 1) · **P0136** O2 Sensor Circuit Malfunction (Bank 1 Sensor 2) · **P0141** O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 2)

See it working

Watch the animated explainer [How Push-Button Start Works: Keyless Ignition](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/kia-p1105/>

