

KIA · POWERTRAIN

P1345

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1345 · Kia

No SGC Signal 1.6L

P1345 on a Kia with the 1.6L engine means the powertrain control module (PCM) is not receiving a valid Signal Generator C (SGC) input from the camshaft position sensor circuit. The PCM uses this signal to identify cylinder position for sequential fuel injection and variable valve timing, so when the signal is missing or erratic the computer flags the fault and may default to a less precise operating strategy.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Kia specific	Medium	Intermediate	Ignition system and misfire

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or intermittent misfire at idle and low engine speeds
- Hesitation or stumble during acceleration from a stop
- Reduced fuel economy as the PCM reverts to batch-fire injection
- Hard starting or extended cranking before the engine catches
- In some cases the engine may stall unexpectedly at low speed

Common causes, most likely first

- 1 Faulty camshaft position sensor or a sensor that has become contaminated with metal debris
- 2 Damaged or chafed wiring in the SGC signal circuit between the sensor and PCM
- 3 Corroded or loose electrical connector at the camshaft position sensor
- 4 Failed reluctor wheel or tone ring on the camshaft that no longer produces a clean signal
- 5 PCM internal fault on the SGC input circuit, though this is the least common cause
- 6 Engine oil sludge or debris interfering with the sensor tip on high-mileage 1.6L engines



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, then clear and road-test to confirm P1345 returns
- 2 Visually inspect the camshaft position sensor connector and wiring harness for chafing, corrosion, or loose pins
- 3 Measure the sensor signal with an oscilloscope or a graphing multimeter while cranking to verify a clean square wave
- 4 Check the sensor's power and ground circuits with a multimeter to rule out supply-side faults
- 5 Remove the sensor and inspect the tip and reluctor wheel for metal shavings, sludge, or mechanical damage
- 6 Replace the camshaft position sensor if the signal is absent or distorted, then clear codes and retest
- 7 If the signal is good at the sensor but missing at the PCM, trace the SGC wire for continuity and repair any open or short

What a missing SGC signal really tells you

- A P1345 can set intermittently from a sensor that only drops out when hot, so always test the circuit cold and after a thorough warm-up before condemning parts.
- Many technicians replace the camshaft sensor only to find the real fault is a stretched timing chain on the 1.6L that has moved cam timing far enough to corrupt the SGC signal.
- The SGC signal is also used for variable valve timing control on some 1.6L Kia engines, so a P1345 may be accompanied by drivability complaints that seem unrelated to cam sensing.
- Aftermarket camshaft sensors for Kia 1.6L engines are a common source of repeat P1345 codes, so a known-good OEM sensor is the safer diagnostic substitute.
- A weak or failing battery can cause cranking voltage to drop low enough that the PCM misreads the SGC signal, setting P1345 even though the sensor circuit is healthy.

Can I keep driving with P1345?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration, towing, or long highway trips because the PCM may be running in a default injection mode that hurts fuel economy and can cause misfires. If the engine stalls or runs very rough, stop driving and have it towed.

Tools that help

- OBD-II scan tool with live data and graphing capability
- Digital multimeter
- Oscilloscope or graphing multimeter for signal waveform capture
- Basic hand tools for sensor removal
- Wiring diagram for the 1.6L engine management system



Reading P1345

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Kia): its meaning depends on the make.
- 3** Ignition system and misfire.
- 45** The exact fault within that area.

Often seen with

P0016 Crankshaft/Camshaft Position Correlation (Bank 1 Sensor A) · **P0300** Random/Multiple Cylinder Misfire Detected · **P0335** Crankshaft Position Sensor A Circuit Malfunction · **P0340** Camshaft Position Sensor A Circuit Malfunction (Bank 1) · **P0341** Camshaft Position Sensor A Circuit Range/Performance

See it working

Watch the animated explainer [Fuel Trims Explained: Short-Term and Long-Term](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/kia-p1345/>

