

GENERIC · POWERTRAIN

P03F8

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P03F8

B Camshaft Position Actuator Position Sensor C Circuit Low Bank 1

P03F8 indicates that the powertrain control module has detected a low-voltage condition on the signal circuit for the 'C' camshaft position actuator position sensor on bank 1. This sensor reports the actual position of the camshaft phaser, and a low signal means the circuit is shorted to ground, has excessive resistance, or the sensor's internal electronics have failed.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Ignition system and misfire

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or unstable engine operation as camshaft timing control degrades
- Reduced engine power or limp mode when the PCM defaults to a fixed cam timing strategy
- Poor fuel economy or increased emissions due to incorrect valve timing
- Intermittent misfire or hesitation during acceleration if the signal fluctuates

Common causes, most likely first

- 1 Faulty camshaft position actuator position sensor 'C' on bank 1
- 2 Damaged or chafed wiring in the sensor signal circuit, causing a short to ground
- 3 Corroded or loose electrical connector at the sensor or PCM
- 4 High resistance in the sensor ground circuit or reference voltage supply
- 5 Internal PCM driver fault on the sensor signal input
- 6 Oil contamination or debris interfering with the sensor's magnetic pickup

How to diagnose and fix it

- 1 Connect a scan tool and verify P03F8 is active, then check for related camshaft or crankshaft codes
- 2 Inspect the sensor connector and wiring harness for corrosion, chafing, or loose pins
- 3 Measure reference voltage and ground at the sensor connector with the key on
- 4 Backprobe the signal wire and compare the sensor output voltage to the manufacturer's specification while moving the camshaft actuator
- 5 Perform a resistance test on the signal circuit between the sensor and PCM to check for a short to ground
- 6 Replace the camshaft position actuator position sensor if electrical tests confirm it is faulty
- 7 Clear codes and perform a road test to confirm the repair and ensure the monitor runs to completion



What a low signal really tells you

- A low signal code often results from a short to ground in the wiring rather than a failed sensor, so always inspect the harness before replacing parts.
- Oil sludge or metal debris on the sensor tip can cause a low signal without any electrical fault, especially on engines with deferred oil changes.
- The PCM may set this code intermittently if the connector is loose, so wiggle-test the harness while watching live sensor data.
- A failing camshaft actuator solenoid can alter cam position so drastically that the sensor signal appears low, mimicking a sensor circuit fault.
- After repairs, the PCM may need to relearn the camshaft position; failing to perform a relearn can leave the code pending or cause driveability issues.

Can I keep driving with P03F8?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration or towing because incorrect cam timing can cause poor performance and increased emissions. If the engine runs roughly or enters limp mode, stop driving and have it diagnosed promptly.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Backprobe pins or breakout box
- Wiring diagram for the specific vehicle
- Socket set and basic hand tools

Reading P03F8

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
3	Ignition system and misfire.
F8	The exact fault within that area.

Often seen with

P0011 'A' Camshaft Position - Timing Over-Advanced or System Perfo · **P0016** Crankshaft/Camshaft Position Correlation (Bank 1 Sensor A) · **P0340** Camshaft Position Sensor A Circuit Malfunction (Bank 1) · **P03F7** B Camshaft Position Actuator Position Sensor C Range/Perform · **P03F9** B Camshaft Position Actuator Position Sensor C Circuit High



See it working

Watch the animated explainer **Four-Stroke Engine Cutaway: Intake to Exhaust** on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p03f8/>

