



P1552 · BMW

A Camshaft Position Actuator Control Open Circuit Bank 1

P1552 on a BMW indicates that the engine control module (DME) has detected an open circuit in the wiring for the bank 1 camshaft position actuator, which is the solenoid that adjusts intake cam timing. The computer expects a certain current flow when commanding the actuator and sees none, so it flags the circuit as open and typically disables variable valve timing.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	BMW specific	Medium	Intermediate	Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- Rough idle or stumbling, especially when the engine is cold.
- Reduced engine performance and poor fuel economy due to fixed cam timing.
- In some cases, the engine may enter limp mode or have difficulty starting.
- A slight hesitation or surge during acceleration as the cam phaser fails to respond.

Common causes, most likely first

- 1 Broken or disconnected wire in the camshaft actuator circuit, often near the connector or where the harness flexes.
- 2 Corroded or damaged electrical connector at the camshaft position actuator solenoid.
- 3 Failed camshaft position actuator solenoid (open internal coil).
- 4 Faulty engine control module (DME) driver for the actuator circuit, though rare.
- 5 Rodent damage or chafing of the wiring harness causing an open circuit.

How to diagnose and fix it

- 1 Clear the code and test-drive to see if it returns; note any freeze-frame data.
- 2 Visually inspect the actuator solenoid connector and wiring for damage, corrosion, or looseness.
- 3 Measure resistance of the camshaft actuator solenoid with a multimeter and compare to specification.
- 4 Check for continuity and voltage on the control circuit between the DME and the solenoid connector.
- 5 If the circuit is open, repair the wire or replace the connector as needed.
- 6 If the solenoid fails the resistance test, replace the camshaft position actuator solenoid.
- 7 After repair, clear codes and verify that the camshaft timing advances and retards correctly with a scan tool.



Common Misdiagnosis of P1552

- A failed camshaft actuator solenoid often tests fine when cold but fails when hot, so resistance should be checked both cold and after warming the engine.
- The wiring harness near the front of the engine is prone to chafing against the valve cover or intake manifold, causing an intermittent open that may not appear until the engine moves under load.
- P1552 can be set by a poor ground connection at the engine block, which affects the actuator circuit even if the solenoid and wiring test good.
- Do not replace the DME unless all other possibilities are exhausted; the driver circuit rarely fails, and a replacement requires coding.
- A camshaft position sensor fault (such as P0340) can cause similar symptoms but will set a different code; always check for related codes before condemning the actuator.

Can I keep driving with P1552?

You can usually drive the car with P1552, but avoid aggressive acceleration and heavy loads because the engine is running with fixed cam timing, which can reduce performance and fuel economy. Have the fault diagnosed soon to prevent potential damage to the catalytic converter from prolonged rich running.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific BMW model
- Socket set and Torx bits for removing covers
- Electrical contact cleaner and dielectric grease

Reading P1552

P	Powertrain: engine, transmission and emissions.
1	Manufacturer-specific code (BMW): its meaning depends on the make.
5	Vehicle speed, idle control and auxiliary inputs.
52	The exact fault within that area.

Often seen with

P1553 Barometric Manifold Pressure Signal Ratio Out Of Range · **P1554** Idle Speed Control Throttle Position Missing Adaptation Cond · **P1553** Idle Air Control Valve Opening Coil High Voltage · **P1554** Cruise Engaged Circuit High Voltage · **P1554** Cruise Engaged Circuit High Voltage · **P0010** 'A' Camshaft Position Actuator Circuit (Bank 1) · **P0011** 'A' Camshaft Position - Timing Over-Advanced or System Perfo · **P0340** Camshaft Position Sensor A Circuit Malfunction (Bank 1)



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/bmw-p1552/>

