

BMW · POWERTRAIN

P1560

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1560 · BMW

B Camshaft Position Actuator Control Open Circuit Bank 1

P1560 on BMW vehicles indicates that the engine control module (DME) has detected an open circuit in the control wiring for the bank 1 B camshaft position actuator, which is the variable valve timing solenoid responsible for adjusting the intake or exhaust camshaft on that bank. The computer commands a duty cycle to move the actuator, but the expected electrical current is not present, so it flags the circuit as open and disables the variable valve timing function.

SYSTEM

Powertrain

CODE TYPE

BMW specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Illumination of the check engine light, often with no other symptoms besides the warning light
- Rough idle or unstable engine operation, especially when cold
- Reduced engine power and poor acceleration due to disabled variable valve timing
- Increased fuel consumption and higher exhaust emissions
- Occasional stalling or hesitation when coming to a stop
- A noticeable rattle or ticking noise from the front of the engine if the actuator is stuck

Common causes, most likely first

- 1 Broken or chafed wire in the actuator control circuit, often near the connector or where the harness bends
- 2 Corroded or loose electrical connector at the camshaft position actuator solenoid
- 3 Failed camshaft position actuator solenoid with an open internal coil
- 4 Open circuit inside the engine control module (DME) driver for that actuator
- 5 Oil contamination or sludge blocking the actuator, causing the solenoid to overheat and fail open
- 6 Damaged wiring harness from rodent damage or previous repair work



How to diagnose and fix it

- 1 Clear the code and perform a road test to confirm it returns, then check for any related pending codes
- 2 Visually inspect the actuator connector and wiring for corrosion, loose pins, or chafing, and repair as needed
- 3 Measure the resistance of the camshaft position actuator solenoid with a multimeter and compare to BMW specifications
- 4 Backprobe the actuator control circuit at the DME connector and check for continuity and short to ground or power
- 5 Command the actuator with a BMW-capable scan tool and observe current draw and camshaft timing response
- 6 If the circuit and solenoid test good, check for mechanical binding in the camshaft adjuster unit and oil sludge
- 7 Replace the faulty actuator solenoid or repair the wiring, clear the code, and verify the variable valve timing operates correctly

Before you replace the camshaft actuator

- A loose or corroded connector at the actuator solenoid is far more common than a failed solenoid itself, so always inspect and clean the pins before condemning the part.
- The DME driver for the actuator can fail open, especially if the solenoid coil shorted previously, so check for a shorted coil before installing a new solenoid to avoid repeat failure.
- Oil sludge or a restricted oil passage can cause the actuator to stick and overheat, leading to an open coil; ignoring the mechanical cause will result in the new part failing quickly.
- This code does not always mean the actuator is faulty; a broken wire inside the harness loom near the engine lifting eye or under the intake manifold is a known BMW weak point.
- After repairs, the DME may need a adaptation reset or a short drive cycle before the variable valve timing learns its new end stops and the light stays off.

Can I keep driving with P1560?

You can drive the vehicle short distances to a repair shop, but avoid sustained high-speed driving or heavy loads because the disabled variable valve timing can cause poor performance and increased emissions. If the engine runs roughly or stalls, stop driving and have it towed to prevent further damage.

Tools that help

- BMW-capable OBD-II scan tool with bidirectional control
- Digital multimeter with backprobe pins
- Wire repair kit with crimp connectors and heat shrink
- Socket set and Torx bits for removing engine covers
- Contact cleaner and dielectric grease



Reading P1560

- 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.
- 60** The exact fault within that area.

Often seen with

P1559 Idle Speed Control Throttle Position Adaptation Malfunction · **P1561** Quantity Adjuster Deviation · **P1559** Cruise Control Power Management Mode · **P1561** Cruise Vent Solenoid · **P1559** Cruise Control Power Management Mode · **P1561** Cruise Vent Solenoid · **P0010** 'A' Camshaft Position Actuator Circuit (Bank 1) · **P0011** 'A' Camshaft Position - Timing Over-Advanced or System Perfo · **P0016** Crankshaft/Camshaft Position Correlation (Bank 1 Sensor A)

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-p1560/>

