

GENERIC · POWERTRAIN

P2661

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2661

'B' Rocker Arm Actuator System Performance or Stuck Off (Bank 2)

P2661 indicates that the powertrain control module has detected a performance fault or stuck-off condition in the bank 2 'B' rocker arm actuator system, which is part of a variable valve timing or cylinder deactivation mechanism. The computer commands the actuator to change valve lift or disable a cylinder, then monitors the result through sensors or circuit feedback and sets this code when the expected change does not occur.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Computer and output circuits

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or misfire-like shudder, especially when the engine transitions between cylinder modes
- Reduced engine power or a limp-home mode triggered by the control module
- Poor fuel economy or increased emissions due to incorrect valve operation
- Audible ticking or tapping from the bank 2 valve cover area if the actuator is stuck
- Intermittent hesitation during light-throttle cruising when the system attempts to activate

Common causes, most likely first

- 1 Failed or sticking rocker arm actuator solenoid on bank 2
- 2 Wiring damage such as an open circuit, chafed insulation, or corroded connector pins in the actuator circuit
- 3 Low engine oil level or degraded oil causing insufficient oil pressure to operate the actuator
- 4 Clogged oil passage or screen feeding the bank 2 actuator assembly
- 5 Mechanical binding or wear in the rocker arm shaft or actuator linkage
- 6 Faulty powertrain control module driver for the actuator circuit, though this is less common



How to diagnose and fix it

- 1 Verify engine oil level and condition, then perform an oil and filter change if the oil is dirty or low
- 2 Use a scan tool to command the bank 2 'B' rocker arm actuator on and off while watching live data for expected response
- 3 Inspect the actuator electrical connector and harness for corrosion, chafing, or loose pins, and check resistance against the manufacturer's specification
- 4 Measure oil pressure at the actuator feed port to confirm the mechanical system receives adequate pressure
- 5 Remove the bank 2 valve cover and inspect the rocker arm actuator, shaft, and oil passages for sludge, binding, or mechanical wear
- 6 Replace the faulty rocker arm actuator solenoid or the complete actuator assembly if electrical and oil pressure checks pass
- 7 Clear the diagnostic trouble codes and perform a road test to confirm the repair, then verify that no pending codes return

Oil quality and circuit checks before actuator replacement

- A dirty or sludged oil passage feeding the bank 2 actuator is a frequent culprit that many technicians overlook while replacing the solenoid itself.
- The code can set intermittently from a chafed wire that only loses contact when the engine shifts under load, so a wiggle test of the harness is essential.
- A stuck-off actuator may not produce any drivability complaint until the engine tries to enter cylinder deactivation mode, so a simple test drive may not reproduce the fault.
- Aftermarket oil filters with poor anti-drainback valves can cause oil pressure delays at startup that trigger this code on some engines.
- The powertrain control module may set P2661 as a result of a mechanical rocker arm failure rather than an electrical fault, so always verify actuator movement mechanically.

Can I keep driving with P2661?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration or sustained high-speed driving because the engine may be running with incorrect valve operation. If the check engine light flashes or the engine runs very rough, stop driving and have the vehicle towed to prevent catalytic converter damage.



Tools that help

- OBD-II scan tool with bidirectional control and live data capability
- Digital multimeter for circuit resistance and voltage checks
- Oil pressure gauge with adapter for the actuator feed port
- Basic hand tools including socket set and torque wrench
- Feeler gauges or a dial indicator for checking actuator travel
- Service information for bank 2 rocker arm actuator specifications and procedures

Reading P2661

P	Powertrain: engine, transmission and emissions.
2	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
6	Computer and output circuits.
61	The exact fault within that area.

Often seen with

P2660 'B' Rocker Arm Actuator Control Circuit/Open (Bank 2) · **P2662** 'B' Rocker Arm Actuator System Stuck On (Bank 2) · **P2663** 'B' Rocker Arm Actuator Control Circuit Low (Bank 2) · **P2664** 'B' Rocker Arm Actuator Control Circuit High (Bank 2) · **P3400** Cylinder Deactivation System (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/p2661/>

