

GENERIC · POWERTRAIN

P090D

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P090D

Clutch B Actuator Control Circuit High

P090D indicates that the powertrain control module (PCM) has detected an abnormally high voltage on the control circuit for the clutch B actuator, which is part of an automated manual or dual-clutch transmission. The PCM expects a specific voltage range on this circuit when commanding the actuator, and a reading above the expected threshold triggers this code.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Professional	Transmission

Symptoms you may notice

- Illumination of the check engine light or transmission warning light
- Transmission may enter limp mode or fail to shift properly
- Harsh or delayed engagement of gears
- Inability to select certain gears or complete a shift
- Often no symptoms besides the warning light, especially if the fault is intermittent

Common causes, most likely first

- 1 Faulty clutch B actuator solenoid or motor
- 2 Damaged or corroded wiring harness or connector at the actuator
- 3 Short to voltage on the control circuit
- 4 Failed transmission control module (TCM) or PCM driver
- 5 Poor ground connection for the actuator circuit
- 6 Internal transmission mechanical issue causing actuator overload

How to diagnose and fix it

- 1 Verify the code with a scan tool and check for related codes in the transmission control module
- 2 Inspect the actuator connector and wiring for corrosion, chafing, or loose pins
- 3 Measure resistance and voltage on the control circuit according to manufacturer specifications
- 4 Test the actuator with a bidirectional scan tool to confirm proper operation
- 5 Check the ground circuit for the actuator and repair any high resistance
- 6 If the circuit tests good, replace the clutch B actuator
- 7 After repair, clear codes and perform a transmission adaptation or relearn procedure



Don't overlook the wiring before replacing the actuator

- A short to voltage on the control circuit is often caused by a rubbed wire near a heat source or moving component, which can be missed if only the actuator is inspected.
- The code can set intermittently due to a loose connector that tests fine when the harness is wiggled, so a thorough wiggle test while monitoring live data is essential.
- A weak battery or charging system issue can cause voltage spikes that mimic a high circuit fault, so always verify battery and charging system health first.
- Some vehicles require a relearn procedure after actuator replacement, and skipping it can cause the code to return even with a new part.
- The clutch B actuator may share a power or ground circuit with other actuators, so a fault in a shared circuit can set multiple codes and mislead diagnosis.

Can I keep driving with P090D?

Driving with this code is not recommended because the transmission may not shift properly, leading to unsafe driving conditions or further damage. If you must drive, avoid heavy acceleration and have the vehicle inspected as soon as possible.

Tools that help

- OBD-II scan tool with bidirectional control and live data
- Digital multimeter
- Wiring diagram and service information
- Basic hand tools for connector and component access
- Oscilloscope for waveform analysis if needed

Reading P090D

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

Often seen with

P090A Clutch B Actuator Control Circuit/Open · **P090B** Clutch B Actuator Control Circuit Performance · **P090C** Clutch B Actuator Control Circuit Low · **P0910** Gate Select Actuator Circuit/Open



See it working

Watch the animated explainer [Manual Car Driving Simulator: Learn Clutch Control](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p090d/>

