

GENERIC · POWERTRAIN

P05DD

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P05DD

Brake Pedal Position Sensor B Circuit Low

P05DD means the brake pedal position sensor B circuit is reporting a voltage below the expected range to the control module. The computer has detected that the signal wire for sensor B is at or near ground level when the brake pedal is in a known position, which prevents accurate brake pedal position information from being used for functions such as brake assist, hill start, or cruise control release.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- The brake warning light or traction control light may illuminate on the dashboard.
- Cruise control may fail to engage or may disengage unexpectedly when the brake pedal is pressed.
- The vehicle may hesitate or stumble when accelerating from a stop if the powertrain controller misinterprets brake status.
- Hill start assist or electronic parking brake functions may become unavailable.
- Often no symptoms besides the warning light, especially if the redundant sensor A circuit continues to provide a valid signal.

Common causes, most likely first

- A faulty brake pedal position sensor B, typically due to internal wear or contamination.
- A short to ground in the signal wire between sensor B and the control module.
- Corroded, loose, or damaged electrical connector pins at the sensor or module.
- A misadjusted or improperly installed brake pedal position sensor after recent brake pedal or booster work.
- A failed control module that is unable to correctly read the sensor B voltage, though this is less common.
- Water intrusion into the sensor or connector causing a low-resistance path to ground.



How to diagnose and fix it

- 1 Connect a scan tool and record all stored and pending codes, then clear codes and test-drive to see if P05DD returns.
- 2 Visually inspect the brake pedal position sensor B connector and wiring for corrosion, chafing, or loose pins, and repair as needed.
- 3 Back-probe the sensor B signal wire at the control module and measure voltage with the key on and brake pedal at rest; compare to the manufacturer's specification.
- 4 Disconnect the sensor and check for a short to ground on the signal wire using a multimeter set to resistance or continuity.
- 5 If the wiring and connectors are good, replace the brake pedal position sensor B with a quality replacement part and perform any required calibration or relearn procedure.
- 6 After repair, clear codes and verify that the sensor B voltage reads within the normal range throughout the full pedal travel using live data.
- 7 If the code persists after sensor replacement and wiring checks, diagnose the control module and its power and ground circuits before condemning it.

What the brake pedal sensor B code hides

- Many vehicles use two brake pedal position sensors for redundancy, and a low signal on sensor B often does not disable the brakes but can quietly disable cruise control or hill start assist without an obvious driver complaint.
- A common misdiagnosis is replacing the sensor when the real fault is a chafed signal wire near the pedal assembly or a corroded connector that only acts up in damp weather.
- After replacing the brake pedal position sensor, some vehicles require a calibration or relearn procedure through the scan tool; skipping this step can leave the code stored even with a good part.
- A low voltage on sensor B can be caused by a poor ground connection shared with other sensors, so checking ground integrity at the chassis and module is a worthwhile step before condemning the sensor.
- The code does not always mean the sensor itself has failed; a short to ground anywhere along the signal circuit, including inside a wire harness routed near metal brackets, will set the same low-voltage fault.

Can I keep driving with P05DD?

The vehicle remains safe to drive in most cases because the foundation brakes are unaffected, but you should avoid relying on cruise control or hill start assist until the fault is repaired. If the brake warning light is on along with a noticeable change in pedal feel, have the vehicle inspected promptly.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Back-probe kit or fine test leads
- Socket and ratchet set
- Torx or hex bit set for sensor fasteners
- Manufacturer service information for voltage specifications and calibration procedures

Reading P05DD

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
5	Vehicle speed, idle control and auxiliary inputs.
DD	The exact fault within that area.

Often seen with

C0040 Left Rear Wheel Speed Sensor Circuit · **C0050** Right Rear Wheel Speed Sensor Circuit Malfunction · **P05DC** Brake Pedal Position Sensor B Circuit Range/Performance · **P05DE** Brake Pedal Position Sensor B Circuit High · **P05DF** Brake Pedal Position Sensor B Circuit Intermittent/Erratic

See it working

Watch the animated explainer [How ABS Works: Anti-Lock Brakes in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p05dd/>

