

GENERIC · POWERTRAIN

P04D7

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P04D7

Exhaust Brake Input Circuit Intermittent/Erratic

P04D7 indicates that the powertrain control module (PCM) has detected an intermittent or erratic signal from the exhaust brake input circuit, which is used to command the exhaust brake system on diesel vehicles. The PCM expects a consistent voltage or switch state, but the signal is dropping out or fluctuating, so the computer cannot reliably determine the driver's requested exhaust brake status.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- The check engine light or service engine soon light is illuminated.
- The exhaust brake may fail to engage when the driver activates the switch.
- The exhaust brake may engage and disengage erratically without driver input.
- A warning message or exhaust brake indicator lamp may flash or stay off.
- Often no symptoms besides the warning light, especially if the fault is intermittent.
- Reduced engine braking performance on downhill grades or with heavy loads.

Common causes, most likely first

- 1 A faulty exhaust brake input switch or button that has worn contacts or internal corrosion.
- 2 Damaged, chafed, or corroded wiring in the exhaust brake input circuit, often near the switch or firewall.
- 3 A loose or corroded electrical connector at the switch, PCM, or inline harness connector.
- 4 Water intrusion into the switch or connector causing intermittent short or open circuits.
- 5 A failing exhaust brake control module or relay that intermittently drops the input signal.
- 6 Poor ground connection for the exhaust brake circuit or the PCM.
- 7 Rarely, an internal PCM fault affecting the input processing circuit.



How to diagnose and fix it

- 1 Verify the fault is current by clearing the code and test-driving the vehicle while monitoring the exhaust brake input status with a scan tool.
- 2 Inspect the exhaust brake switch and its connector for corrosion, loose pins, or physical damage, and clean or replace as needed.
- 3 Check the wiring harness from the switch to the PCM for chafing, pinched wires, or signs of water intrusion, repairing any damage found.
- 4 Measure resistance and voltage on the input circuit while wiggling the harness and operating the switch to catch intermittent faults.
- 5 Test the exhaust brake control module or relay if the input signal is present at the module but not reaching the PCM.
- 6 Verify all grounds for the exhaust brake circuit and PCM are clean and tight, repairing any high-resistance connections.
- 7 If all external circuits and components test good, follow the manufacturer's diagnostic flow for PCM pin fit and internal fault confirmation before replacing the PCM.

Intermittent faults hide in connectors and grounds

- A common oversight is replacing the exhaust brake switch without checking the inline connector under the dash, where corrosion often causes an erratic signal.
- The code can be set by a poor ground for the exhaust brake circuit even when the switch and wiring test fine, so always load-test grounds.
- Intermittent faults may not appear during a static test; a wiggle test of the harness while watching live data is often the only way to reproduce the problem.
- Some vehicles use a momentary switch that sends a variable voltage, so a dirty or worn switch can produce erratic signals without completely failing.
- The PCM may set this code from a single brief glitch, so a history-only code with no drivability complaint may not require immediate repair.

Can I keep driving with P04D7?

The vehicle remains safe to drive because the exhaust brake is an auxiliary system, but you should avoid relying on engine braking on long descents until the fault is repaired. If the exhaust brake is needed for your load or terrain, have the circuit inspected promptly.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the exhaust brake circuit
- Test light or jumper wires
- Contact cleaner and dielectric grease

Reading P04D7

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
4	Auxiliary emission controls.
D7	The exact fault within that area.

Often seen with

P04D6 Exhaust Brake Input Circuit High · **P04D8** Excessive Time To Enter Closed Loop EGR Control · **P04D9** Closed Loop EGR Control At Limit - Flow Too Low · **P04DA** Closed Loop EGR Control At Limit - Flow Too High · **P04DB** Crankcase Ventilation System Disconnected

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/p04d7/>

