

GENERIC · BODY

B0520

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

B0520

Passenger Door Open Switch

B0520 indicates that the body control module (BCM) has detected a fault in the passenger door open switch circuit, meaning the switch is not reporting the correct open or closed state. The computer monitors the switch input and sets this code when the voltage or signal is outside the expected range for the door's position.

SYSTEM

Body

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Airbags, seats, doors, lights and comfort systems

Symptoms you may notice

- The passenger door open warning light stays on constantly or never illuminates when the door is opened.
- The dome light or courtesy lamp fails to turn on when the passenger door is opened, or stays on after closing.
- The vehicle may not detect the passenger door as open, so the key-in-ignition chime or door-ajar warning does not sound.
- Power door locks or windows on the passenger side may behave erratically if the BCM uses the switch input for other functions.
- Often no symptoms besides the warning light, especially if the switch is only intermittently faulty.

Common causes, most likely first

- Faulty passenger door open switch (plunger or proximity type) that has failed internally or is stuck.
- Damaged or corroded wiring in the passenger door jamb harness, often due to flexing or water intrusion.
- Loose or corroded electrical connector at the switch or at the BCM.
- Blown fuse or poor ground connection for the switch circuit.
- BCM software glitch or internal fault causing false detection (less common).
- Aftermarket accessories or previous repairs that tapped into the door switch circuit incorrectly.



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related body codes in the BCM.
- 2 Inspect the passenger door open switch for physical damage, sticking, or misalignment; clean or adjust as needed.
- 3 Check the wiring harness in the door jamb for chafed, broken, or corroded wires; repair or replace damaged sections.
- 4 Test the switch continuity with a multimeter while opening and closing the door; replace the switch if it does not change state correctly.
- 5 Check the connector at the switch and at the BCM for tightness and corrosion; clean and reseat as necessary.
- 6 Check the fuse and ground for the circuit; repair any open or high-resistance connections.
- 7 Clear the code and test the system; if the code returns, consult factory service information for BCM diagnostics.

Before you replace the door switch

- A common oversight is assuming the switch is bad when the real problem is a broken wire inside the flexible door jamb boot, which flexes every time the door is used.
- The passenger door open switch often shares a ground with other door switches; a single bad ground can set multiple door codes, so check grounds before condemning individual switches.
- On some vehicles, the BCM learns the door switch state and may need a relearn procedure after replacement, which is not always obvious from generic scan tool instructions.
- Intermittent B0520 codes can be caused by water intrusion into the door connector, leading to corrosion that only acts up in damp weather.
- The code does not always mean the switch itself is faulty; the BCM may set it if it sees an implausible signal due to a short to voltage or ground in the wiring.

Can I keep driving with B0520?

This fault is not safety-critical and you can continue driving, but be aware that the passenger door may not be detected as open, so the warning chime or interior lights may not work as expected. Avoid relying on the door-ajar warning until the fault is repaired.

Tools that help

- OBD-II scan tool with body control module capability
- Digital multimeter
- Trim removal tools
- Test light
- Factory service information or wiring diagrams



Reading B0520

- B** Body: airbags, seats, doors, lights and comfort systems.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 5** Airbags, seats, doors, lights and comfort systems.
- 20** The exact fault within that area.

Often seen with

B0510 Driver Door Open Switch · **B0530** Driver Door Lock Actuator Circuit

See it working

Watch the animated explainer [How a MAF Sensor Works: Hot-Wire Airflow Explained](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/b0520/>

