

GENERIC · POWERTRAIN

P2523

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2523

A/C Request 'B' Circuit Low

P2523 indicates that the powertrain control module (PCM) has detected a low voltage condition on the air conditioning (A/C) request 'B' circuit, which is a dedicated input used by some vehicles to signal an A/C request to the PCM. The PCM expects to see a voltage within a specific range when the A/C is requested, and a sustained low voltage (near ground) triggers this code.

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

Symptoms you may notice

- The A/C may not engage at all, resulting in no cold air from the vents.
- The A/C may blow warm air even when the controls are set to maximum cold.
- The A/C compressor clutch may fail to engage, which can be confirmed by visual inspection.
- Often no symptoms besides the warning light, especially if the vehicle uses a separate circuit for primary A/C control.
- In some cases, the A/C may work intermittently if the low voltage condition is caused by a loose connection.

Common causes, most likely first

- A short to ground in the A/C request 'B' circuit wiring, often due to chafed insulation or pinched wires.
- A faulty A/C request switch or control panel that is internally shorted to ground.
- Corroded or loose electrical connectors at the A/C request switch, PCM, or inline harness connectors.
- A defective PCM that incorrectly interprets the A/C request signal, though this is less common.
- Aftermarket accessories or improper wiring repairs that inadvertently ground the circuit.
- Water intrusion into a connector or module causing a short to ground.



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related codes in the A/C and body control systems.
- 2 Inspect the A/C request 'B' circuit wiring for visible damage, chafing, or loose connectors, especially near the A/C control panel and PCM.
- 3 Disconnect the A/C request switch and measure resistance to ground on the signal circuit; a very low resistance indicates a short to ground.
- 4 Check the A/C request switch operation using a multimeter or scan tool data stream to see if it toggles correctly.
- 5 Repair any damaged wiring or replace corroded connectors, then clear the code and retest the system.
- 6 If the wiring and switch are good, test the PCM by checking for proper voltage on the signal circuit with the switch disconnected; if voltage is still low, the PCM may be faulty.
- 7 After repairs, clear codes and verify the A/C system operates correctly and the code does not return.

Don't overlook the A/C request switch

- A common mistake is to replace the A/C compressor or clutch when the real problem is a simple short to ground in the request circuit, which costs far less to fix.
- The A/C request 'B' circuit is often a separate input from the main A/C request, so the A/C may still work normally in some conditions, leading owners to ignore the code.
- Water intrusion into the A/C control panel or a connector behind the dashboard can cause intermittent shorts that are hard to reproduce.
- Aftermarket remote starters or alarm systems that tap into A/C request wires are a frequent cause of unexplained low-voltage codes on this circuit.
- The PCM may set this code only after a certain number of ignition cycles with the fault present, so a one-time low voltage may not trigger it immediately.

Can I keep driving with P2523?

The vehicle is safe to drive with this code because it does not affect engine operation or safety systems, but the A/C may not function. Avoid using the A/C until the fault is repaired to prevent potential compressor damage from short cycling.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Trim removal tools for accessing connectors
- Electrical contact cleaner and dielectric grease



Reading P2523

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

Often seen with

P0532 A/C Refrigerant Pressure Sensor 'A' Circuit Low · **P0533** A/C Refrigerant Pressure Sensor 'A' Circuit High
 · **P0645** A/C Clutch Relay Control Circuit · **P2522** A/C Request 'B' Circuit · **P2524** A/C Request 'B' Circuit High

See it working

Watch the animated explainer [How a Six-Speed Manual Gearbox Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2523/>

