

GENERIC · POWERTRAIN

P2524

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2524

A/C Request 'B' Circuit High

P2524 indicates that the powertrain control module (PCM) has detected an abnormally high voltage on the air conditioning (A/C) request 'B' circuit, which is a secondary input used to signal that the A/C system needs to be engaged. The PCM expects this circuit to operate within a specific voltage range, and a sustained high reading tells the module that the request signal is stuck at a constant high level or shorted to voltage.

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 compressor may not engage at all, resulting in no cold air from the vents.
- The A/C compressor may run continuously even when cabin cooling is not requested.
- The check engine light (malfunction indicator lamp) illuminates on the dashboard.
- The climate control panel may show erratic behavior or fail to respond to button presses.
- Often no symptoms besides the warning light, especially if the fault is intermittent or only affects a secondary request signal.

Common causes, most likely first

- A short to voltage (battery positive) in the A/C request 'B' circuit wiring, often due to chafed insulation or pinched harness.
- A faulty A/C pressure switch or sensor that is internally shorted and sending a constant high signal.
- A defective climate control module or HVAC control head that is outputting an incorrect voltage on the request circuit.
- Corroded or damaged electrical connectors at the PCM, climate control module, or A/C pressure switch.
- A failed PCM driver or internal fault on the A/C request input circuit (less common).
- Aftermarket accessories or improper wiring repairs that backfeed voltage into the A/C request circuit.



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related codes in the HVAC or body control modules to confirm the fault is active.
- 2 Inspect the A/C request 'B' circuit wiring and connectors for signs of damage, corrosion, or shorting to voltage; repair as needed.
- 3 Disconnect the A/C pressure switch and measure voltage on the signal circuit to see if the high voltage disappears, indicating a faulty switch.
- 4 Test the climate control module output on the request circuit with a multimeter to confirm it is not stuck high; replace the module if defective.
- 5 Check for aftermarket wiring or accessories that may be backfeeding voltage into the circuit and remove or correct them.
- 6 If all external circuits and components test good, suspect an internal PCM fault and perform a thorough diagnosis before replacement.

Don't overlook the secondary request circuit

- The 'B' circuit is often a redundant or secondary A/C request input, so many vehicles will still cool normally even when this code is set, leading owners to ignore it until a more serious fault develops.
- A common misdiagnosis is replacing the A/C compressor or clutch when the real problem is a shorted pressure switch or chafed wire feeding voltage back into the request circuit.
- Some vehicles use a multiplexed signal on the A/C request circuit, and a high voltage can be caused by a failed control module rather than a simple wiring short.
- Aftermarket remote starters or alarm systems are frequently tapped into A/C request wiring, creating unintended voltage backfeeds that set this code.
- The PCM may set P2524 intermittently if the circuit is only shorted when the harness is moved or when the vehicle is exposed to certain temperatures, so wiggle tests are essential.

Can I keep driving with P2524?

The vehicle is generally safe to drive because this code typically affects only the A/C request signal and does not impair engine operation or safety systems. Avoid using the A/C system until the fault is repaired, and address the issue promptly to prevent potential compressor damage from continuous operation.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Test light or jumper wires
- Socket set and trim removal tools for accessing connectors



Reading P2524

- 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.
- 24** 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 · **P2523** A/C Request 'B' Circuit Low · **P2525** Vacuum Reservoir Pressure Sensor Circuit

See it working

Watch the animated explainer [How a Supercharger Works: Roots Blower in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2524/>

