

GENERIC · BODY

B0821

OBD-II TROUBLE CODE

B0821

Right Headlamp High Beam Circuit

B0821 indicates that the body control module (BCM) or lighting control module has detected an open circuit, short to ground, or short to voltage on the right headlamp high beam circuit. The module monitors the voltage or current on the control wire and sets the code when the expected electrical load is not present or when the circuit is outside normal operating parameters.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Body	Generic (all makes)	Low	Intermediate	Airbags, seats, doors, lights and comfort systems

Symptoms you may notice

- The right high beam does not illuminate when selected, while the left high beam may still work.
- A high beam indicator on the instrument cluster may stay on, flash, or fail to illuminate.
- The driver may receive a bulb-out or lighting system warning message on the dashboard.
- The right high beam may work intermittently, often flickering over bumps or in wet weather.
- Other lighting functions on the right side, such as the low beam or turn signal, may also be affected if a shared ground or connector is faulty.
- Often no symptoms besides the warning light if the fault is stored but the circuit currently makes good contact.

Common causes, most likely first

- Failed right high beam bulb or cracked bulb socket.
- Corroded, loose, or damaged right headlamp assembly connector.
- Open or shorted wire in the right high beam circuit between the module and the lamp.
- Defective right high beam relay, if the vehicle uses a separate relay for that circuit.
- Faulty body control module (BCM) or lighting control module driver for the right high beam output.
- Poor ground connection at the right headlamp assembly or chassis ground point.
- Aftermarket LED or HID bulb installation that changes the circuit load and triggers the module's self-test.



How to diagnose and fix it

- 1 Verify the complaint and check the right high beam bulb visually and with a known-good replacement.
- 2 Inspect the right headlamp connector and socket for corrosion, loose terminals, or melted plastic.
- 3 Measure voltage and ground at the right high beam bulb connector with the high beams commanded on.
- 4 Perform a voltage drop test on the ground circuit and the power feed to isolate an open or high-resistance connection.
- 5 Check the right high beam relay and its socket if the vehicle uses a dedicated relay for that circuit.
- 6 Disconnect the BCM and inspect the right high beam output terminal for damage or corrosion, then test the wire for continuity and shorts.
- 7 If all wiring and components test good, follow the manufacturer's diagnostic flow for the BCM output driver before replacing the module.

Before you replace the body control module

- A common misdiagnosis is replacing the BCM when the real fault is a corroded ground point behind the right headlamp assembly, which costs far less to repair.
- Aftermarket LED or HID bulbs often draw less current than the factory bulb, and the lighting module may interpret that reduced load as an open circuit and set B0821 even though the bulb lights.
- The right high beam circuit may share a ground or splice with other right-side lighting, so a single bad ground can set multiple lighting codes that appear unrelated.
- On some vehicles the high beam is controlled by a smart junction box or FET (field-effect transistor) driver inside the BCM, and a shorted bulb can damage that driver, so always repair the circuit before installing a new module.
- B0821 can be stored as a history code after a bulb replacement or battery service, so clear the code and verify it does not return before beginning extensive diagnostics.

Can I keep driving with B0821?

The vehicle remains safe to drive during daylight, but avoid using high beams at night until the fault is repaired because the right side will not illuminate and may reduce your view of the road. If the low beam on the right side is also affected, limit night driving until the circuit is fixed.

Tools that help

- OBD-II scan tool with body code capability
- Digital multimeter
- Test light
- Trim removal tools
- Wiring diagram for the right high beam circuit



Reading B0821

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

Often seen with

B0820 Left Headlamp High Beam Circuit

See it working

Watch the animated explainer [Four-Stroke Engine Notebook: The Otto Cycle Explained](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/b0821/>

