

GENERIC · CHASSIS

C0821

OBD-II TROUBLE CODE

C0821

Air Suspension Height Sensor Front Right

C0821 indicates that the air suspension control module has detected a fault with the front right height sensor circuit, which monitors the ride height at that corner of the vehicle. The module compares the sensor's voltage signal against expected values and sets this code when the signal is out of range, erratic, or missing entirely.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Chassis	Generic (all makes)	Medium	Intermediate	Brakes, steering and suspension

Symptoms you may notice

- The air suspension warning light illuminates steadily on the dashboard.
- The vehicle may sit lower or higher than normal at the front right corner.
- The air suspension system may fail to adjust ride height, leaving the vehicle at a fixed height.
- A message such as 'Suspension Fault' or 'Ride Control Malfunction' may appear on the driver information display.
- The compressor may run excessively or not at all, depending on the failure mode.
- Often no symptoms besides the warning light, especially if the sensor signal is only intermittently out of range.

Common causes, most likely first

- A faulty front right height sensor, worn internally or damaged by debris.
- A damaged or corroded electrical connector at the sensor or harness.
- A broken, chafed, or open wire in the sensor circuit.
- A short to ground or short to voltage in the sensor wiring.
- A failed air suspension control module, though this is less common.
- Mechanical damage to the sensor linkage or mounting bracket.
- Water intrusion into the sensor or connector causing intermittent signals.



How to diagnose and fix it

- 1 Perform a visual inspection of the front right height sensor, its linkage, and the connector for damage, corrosion, or debris.
- 2 Check the sensor's voltage supply and ground at the connector with a multimeter, comparing to manufacturer specifications.
- 3 Backprobe the sensor signal wire and observe the voltage while slowly moving the suspension through its range to check for smooth variation.
- 4 Inspect the wiring harness from the sensor to the control module for chafing, breaks, or corrosion, and repair as needed.
- 5 If the sensor signal is erratic or out of range, replace the front right height sensor and clear the code.
- 6 After repair, recalibrate the air suspension ride height using a scan tool if required by the manufacturer.
- 7 Road test the vehicle and verify that the code does not return and that the suspension adjusts correctly.

Height Sensor Diagnostics Beyond the Obvious

- A height sensor can produce a plausible-looking signal that is offset or non-linear, so comparing live data from the opposite corner is a quick way to spot a skewed sensor.
- The code can be set by a mechanical problem such as a bent linkage or a sensor that has slipped on its mount, not just by an electrical fault.
- Intermittent C0821 codes often trace to water intrusion in the connector or a wire that flexes with suspension movement, so wiggle tests while watching live data are essential.
- Replacing a height sensor without checking ride height calibration can leave the vehicle sitting unevenly even though the code is gone.
- A weak battery or low charging voltage can cause the control module to misread sensor signals, so always verify battery condition before condemning the sensor.

Can I keep driving with C0821?

You can usually drive the vehicle with C0821 set, but the air suspension may default to a fixed height or stop adjusting, which can affect ride quality and handling. Avoid heavy loads or high-speed driving until the fault is repaired, and address the issue promptly to prevent compressor damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Jack and jack stands or a lift
- Wire probe set and electrical tape
- Manufacturer-specific service information for wiring diagrams and calibration procedures



Reading C0821

- C** Chassis: brakes, steering and suspension.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 8** Brakes, steering and suspension.
- 21** The exact fault within that area.

Often seen with

C0820 Air Suspension Height Sensor Front Left · **C0822** Air Suspension Height Sensor Rear Left · **C0823** Air Suspension Height Sensor Rear Right · **C0825** Steering Effort Sensor Range/Performance

See it working

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

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/c0821/>

