

GENERIC · POWERTRAIN

P203B

OBD-II TROUBLE CODE

P203B

Reductant Level Sensor A Circuit Range/Performance

P203B indicates that the reductant level sensor circuit, which monitors the diesel exhaust fluid (DEF) tank level, is reporting a signal outside the expected range or behaving erratically. The engine control module (ECM) compares the sensor voltage against known good values and sets this code when the signal does not correlate with expected level changes or falls outside the valid operating window.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering and auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- A warning message on the dash indicating low DEF level even when the tank is full
- The vehicle may enter limp mode or limit engine power after a certain number of driving cycles
- Inconsistent or fluctuating DEF level readings on the instrument cluster
- Possible activation of the malfunction indicator lamp (MIL) and a stored freeze-frame of the fault conditions

Common causes, most likely first

- 1 Faulty reductant level sensor or sending unit inside the DEF tank
- 2 Damaged or corroded wiring harness or connector at the sensor
- 3 Open or short circuit in the sensor signal or ground circuit
- 4 Contaminated or crystallized DEF fluid affecting sensor float movement
- 5 Failed DEF tank module or control unit (on systems with integrated electronics)
- 6 Software calibration issue in the ECM requiring an update



How to diagnose and fix it

- 1 Use a scan tool to retrieve the freeze-frame data and verify the sensor voltage reading against the actual DEF level
- 2 Visually inspect the sensor connector and wiring for corrosion, chafing, or loose pins
- 3 Perform a resistance and voltage drop test on the sensor signal circuit to rule out wiring faults
- 4 Drain and inspect the DEF tank for contamination or crystallization, flushing if necessary
- 5 Replace the reductant level sensor or sending unit if electrical tests confirm it is out of specification
- 6 Check for and install any available ECM software updates related to the reductant level system
- 7 Clear the code and perform a road test to verify the repair and ensure the monitor runs to completion

Before you replace the DEF level sensor

- A common oversight is assuming the sensor is faulty when the real problem is a chafed wire near the tank filler neck or a corroded connector pin that intermittently shorts.
- Crystallized DEF from a partially filled tank or infrequent use can coat the sensor float and cause erratic readings that mimic an electrical failure.
- On some vehicles, a weak battery or low charging voltage can cause the ECM to misread sensor signals and set P203B without any sensor fault.
- The code can be set by a faulty DEF quality sensor or tank module on systems where level and quality sensors share a common circuit.
- Always check for related codes such as P203A or P203C before condemning the sensor, as multiple level codes often point to a shared wiring or module issue.

Can I keep driving with P203B?

You can usually continue driving for a short period, but avoid long trips or heavy loads because the vehicle may enter limp mode once the fault counter reaches its threshold. Refill the DEF tank with fresh fluid and schedule diagnosis promptly to prevent power reduction.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the reductant level circuit
- Basic hand tools for trim and connector removal
- DEF refractometer (to check fluid quality if contamination is suspected)



Reading P203B

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 0** Fuel and air metering and auxiliary emission controls.
- 3B** The exact fault within that area.

Often seen with

P203A Reductant Level Sensor A Circuit · **P203C** Reductant Level Sensor A Circuit Low · **P203D** Reductant Level Sensor A Circuit High · **P20E8** Reductant Pressure Too Low · **P20EE** NOx Catalyst Efficiency Below Threshold (Bank 1)

See it working

Watch the animated explainer [How Push-Button Start Works: Keyless Ignition](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p203b/>

