

GENERIC · POWERTRAIN

P205A

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P205A

Reductant Tank Temperature Sensor A Circuit

P205A indicates that the powertrain control module has detected an abnormal signal from the reductant tank temperature sensor A circuit, which monitors the temperature of the diesel exhaust fluid tank. The computer compares the sensor voltage to expected values and sets the code when the signal falls outside the normal operating range for a calibrated time.

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 or service engine soon light
- Often no symptoms besides the warning light
- Possible reduced engine power or limp mode in some vehicles
- Driver information message indicating diesel exhaust fluid system fault
- In rare cases, difficulty starting or rough running if the fluid is frozen or overheated

Common causes, most likely first

- 1 Faulty reductant tank temperature sensor
- 2 Damaged or corroded wiring or connector at the sensor
- 3 Open or short circuit in the sensor signal or ground circuit
- 4 Failed sensor heating element (if equipped) causing implausible temperature readings
- 5 Contaminated or degraded diesel exhaust fluid affecting sensor response
- 6 Powertrain control module software issue or internal fault (less common)



How to diagnose and fix it

- 1 Connect a scan tool and record freeze-frame data for P205A, then clear the code and verify if it returns
- 2 Visually inspect the sensor, connector, and wiring for damage, corrosion, or loose pins
- 3 Measure sensor resistance and compare to manufacturer specifications across known temperatures
- 4 Check reference voltage and ground at the sensor connector with a multimeter
- 5 Perform a voltage drop test on the signal and ground circuits to rule out high resistance
- 6 If wiring and sensor test good, check for technical service bulletins or software updates for the powertrain control module
- 7 Replace the reductant tank temperature sensor if faulty, then clear codes and verify repair with a test drive

What Most Techs Overlook on P205A

- A failed sensor heating element can cause the temperature signal to stay fixed or read implausibly low, setting P205A without any visible fluid leak or driveability complaint.
- Corrosion inside the connector pins is a frequent cause that mimics a failed sensor, so always back-probe the connector under load before condemning the sensor.
- The code can be set by a completely separate issue such as a low battery or charging system fault that causes voltage spikes and disrupts the sensor signal.
- After replacing the sensor, some vehicles require a relearn or adaptation reset for the reductant system to prevent the code from returning immediately.
- Do not assume the tank temperature sensor is the same as the exhaust gas temperature sensor; misidentifying the component leads to unnecessary parts replacement.

Can I keep driving with P205A?

You can generally continue driving with P205A, but avoid long trips or heavy loads until diagnosed, as some vehicles may enter limp mode or refuse to restart after a key cycle if the fault escalates. Do not ignore the code, because a failed temperature sensor can lead to incorrect diesel exhaust fluid dosing and eventual aftertreatment damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Back-probe kit or breakout leads
- Vehicle-specific service information for sensor resistance specifications
- Basic hand tools for connector and sensor access



Reading P205A

- 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.
- 5A** The exact fault within that area.

Often seen with

P205B Reductant Tank Temperature Sensor A Circuit Range/Performance · **P205C** Reductant Tank Temperature Sensor A Circuit Low · **P205D** Reductant Tank Temperature Sensor A Circuit High · **P20B9** Reductant Heater A Control Circuit/Open · **P20BA** Reductant Heater A Control Performance

See it working

Watch the animated explainer [How a Starter Motor Works: Pre-Engaged Starter](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p205a/>

