

GENERIC · NETWORK

U046E

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U046E

Invalid Data Received From Exhaust Gas Sensor Module B

U046E is a communication fault where the engine control module (ECM) or another controller receives invalid or corrupted data from the exhaust gas sensor module over the vehicle's controller area network (CAN) bus. The computer detects that the sensor module's messages are missing expected values, out of range, or fail checksum validation, so it cannot trust the exhaust sensor readings.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Network	Generic (all makes)	Medium	Intermediate	Invalid data received from a module

Symptoms you may notice

- Illumination of the malfunction indicator lamp (MIL) on the dashboard
- Often no symptoms besides the warning light, especially if the fault is intermittent
- Reduced fuel economy or poor engine performance if the invalid data affects air-fuel ratio control
- Possible hesitation, rough idle, or stalling in some cases
- Other communication-related codes stored in multiple modules
- Emissions-related warning or limp mode in severe instances

Common causes, most likely first

- 1 Faulty exhaust gas sensor module itself, such as internal failure or corrupted firmware
- 2 Damaged or corroded wiring and connectors between the exhaust gas sensor module and the CAN bus
- 3 CAN bus communication issues, including open or shorted data lines or excessive resistance
- 4 Low battery voltage or poor charging system causing modules to send invalid data
- 5 Water intrusion or heat damage affecting the exhaust gas sensor module or its connectors
- 6 Aftermarket accessories or poor previous repairs introducing electrical noise on the CAN bus
- 7 Software glitch or outdated calibration in the exhaust gas sensor module or ECM



How to diagnose and fix it

- 1 Verify battery voltage and charging system output; low voltage can cause communication faults
- 2 Inspect the exhaust gas sensor module connectors and wiring for corrosion, damage, or loose pins
- 3 Check CAN bus integrity with a digital multimeter or oscilloscope for proper voltage levels and resistance
- 4 Retrieve all stored codes from all modules to identify related communication faults
- 5 Perform a wiggle test on harnesses while monitoring live data for the exhaust gas sensor module
- 6 Reprogram or update the exhaust gas sensor module and ECM with the latest software if applicable
- 7 Replace the exhaust gas sensor module if wiring and communication checks pass but invalid data persists

Before you replace the exhaust gas sensor module

- A weak battery or failing alternator often causes modules to send corrupted data, so always load-test the battery and check charging voltage first.
- Corroded ground connections can elevate resistance on the CAN bus and mimic a failed sensor module, so inspect and clean grounds before condemning parts.
- Aftermarket electronic accessories wired into the CAN bus can introduce noise that corrupts messages, so disconnect non-factory devices during diagnosis.
- The code may set intermittently due to a loose connector that only loses contact over bumps, so a wiggle test while monitoring live data is essential.
- Replacing the exhaust gas sensor module without checking for updated software can lead to a repeat failure if the root cause is a calibration issue.

Can I keep driving with U046E?

The vehicle is generally safe to drive with U046E, but avoid long trips or heavy loads until diagnosed because invalid exhaust sensor data can affect emissions and fuel economy. If the engine runs poorly or enters limp mode, seek service promptly.

Tools that help

- OBD-II scan tool with live data and CAN bus monitoring capability
- Digital multimeter
- Oscilloscope for CAN bus signal analysis
- Battery load tester
- Wiring diagram and connector pinout reference
- Basic hand tools for connector and harness inspection



Reading U046E

- U** Network: communication between the vehicle's control modules.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 4** Invalid data received from a module.
- 6E** The exact fault within that area.

Often seen with

P0130 O2 Sensor Circuit Malfunction (Bank 1 Sensor 1) · **P0135** O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 1) · **U0100** Lost Communication With ECM/PCM A · **U0121** Lost Communication With Anti-Lock Brake System (ABS) Control · **U0140** Lost Communication With Instrument Panel Cluster

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/u046e/>

