

GENERIC · POWERTRAIN

P2E54

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2E54

Exhaust Pressure Sensor C Circuit

P2E54 indicates that the powertrain control module (PCM) has detected an electrical fault in the signal circuit for exhaust pressure sensor C, which is typically used to monitor backpressure in the exhaust system for particulate filter or turbocharger control. The PCM compares the sensor's voltage to expected values and sets this code when the signal is out of range, intermittent, or implausible.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- Reduced engine power or limp mode, especially under load or during regeneration.
- Poor fuel economy or increased exhaust smoke due to incorrect backpressure readings.
- Frequent or failed diesel particulate filter (DPF) regenerations.
- Rough running or hesitation if the sensor fault affects turbocharger control.

Common causes, most likely first

- 1 Faulty exhaust pressure sensor C, including internal sensor failure or contamination.
- 2 Damaged, corroded, or disconnected wiring or connector at the sensor or PCM.
- 3 Exhaust leaks before the sensor, causing low pressure readings.
- 4 Blocked or restricted pressure port or hose leading to the sensor.
- 5 PCM software issue or internal PCM fault, though less common.
- 6 Aftermarket exhaust modifications that alter backpressure characteristics.

How to diagnose and fix it

- 1 Visually inspect the sensor, connector, and wiring for damage, corrosion, or loose connections.
- 2 Check for exhaust leaks and blockages in the pressure port or hose, and clean or repair as needed.
- 3 Measure sensor reference voltage and signal voltage with a multimeter and compare to manufacturer specifications.
- 4 Perform a wiggle test on the wiring harness while monitoring sensor data to detect intermittent faults.
- 5 If the sensor signal is out of range, replace the exhaust pressure sensor C and clear the code.
- 6 Verify repair by test-driving the vehicle and ensuring the code does not return, and check readiness monitors.



Exhaust Pressure Sensor C Diagnostic Traps

- A clogged pressure port or deteriorated hose is a frequent cause that mimics a failed sensor, so always inspect the entire pressure path before replacing parts.
- This code can be set by exhaust leaks upstream of the sensor, which reduce backpressure and cause implausible readings, so a thorough exhaust inspection is essential.
- Incorrect sensor installation, such as using the wrong thread sealant or over-tightening, can damage the sensor and lead to repeat failures.
- Some vehicles require a relearn or adaptation reset after sensor replacement, and failing to do so may cause the code to persist even with a good sensor.
- The PCM may set this code due to a faulty ground connection shared with other sensors, so checking ground integrity is a smart step before condemning the sensor.

Can I keep driving with P2E54?

Driving with this code is generally safe for short distances, but avoid heavy loads and prolonged driving because incorrect backpressure readings can lead to poor engine performance and potential damage to the exhaust aftertreatment system. Have the fault diagnosed promptly to prevent secondary issues.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Hand vacuum pump or pressure gauge
- Wiring diagram and service information
- Basic hand tools for sensor and connector access

Reading P2E54

P	Powertrain: engine, transmission and emissions.
2	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
E	Hybrid propulsion.
54	The exact fault within that area.

Often seen with

P2452 Diesel Particulate Filter Pressure Sensor Circuit · **P2453** Diesel Particulate Filter Pressure Sensor Circuit Range/Perf · **P2E53** Battery Charger Coupler Temperature D Too High · **P2E55** Exhaust Pressure Sensor C Circuit Range/Performance · **P2E56** Exhaust Pressure Sensor C Circuit Low



See it working

Watch the animated explainer [How a Refrigerator Works: The Cooling Cycle](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2e54/>

