

GENERIC · POWERTRAIN

P041A

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P041A

EGR Temperature Sensor B Circuit

P041A indicates that the powertrain control module has detected an out-of-range signal from the exhaust gas recirculation temperature sensor B circuit, which monitors the temperature of the recirculated exhaust gas on engines with multiple EGR temperature sensors. The computer compares the sensor's voltage or resistance to expected values and flags the circuit when the reading falls outside the normal operating window.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or hesitation during acceleration if the EGR system is affected
- Poor fuel economy or increased emissions
- Intermittent engine stumble or surge at steady speeds
- Failed emissions test due to incomplete readiness monitors

Common causes, most likely first

- 1 Faulty EGR temperature sensor B
- 2 Damaged or corroded wiring or connector at the sensor
- 3 Open or short circuit in the sensor signal or ground circuit
- 4 Failed EGR valve or restricted EGR passage causing abnormal temperatures
- 5 Exhaust leaks near the sensor affecting temperature readings
- 6 Corrosion or contamination on the sensor element

How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm the code and operating conditions
- 2 Visually inspect the sensor, connector, and wiring for damage, corrosion, or loose pins
- 3 Measure sensor resistance or voltage with a multimeter and compare to manufacturer specifications
- 4 Check the sensor signal circuit for opens, shorts, or excessive resistance with a wiring diagram
- 5 Test the EGR valve operation and inspect for carbon buildup or restricted passages
- 6 Replace the EGR temperature sensor B if testing confirms it is out of specification
- 7 Clear codes and perform a drive cycle to verify the repair and ensure the monitor completes



What most technicians overlook on P041A

- A stuck-open EGR valve can cause exhaust temperatures to stay too low, setting a temperature sensor code even when the sensor itself is good.
- Corroded pins in the sensor connector often mimic a failed sensor, so always perform a wiggle test and inspect terminal tension before replacing parts.
- On some engines, a faulty thermostat or cooling system issue can alter EGR temperature readings enough to trigger this code indirectly.
- The code can set intermittently due to vibration or heat cycling, so a road test with live data is more reliable than a static resistance check alone.
- Replacing the sensor without verifying the EGR flow can lead to a repeat failure if carbon blockage or a failing EGR valve is the root cause.

Can I keep driving with P041A?

You can generally continue driving with P041A, but avoid long trips or heavy loads until the fault is repaired because the EGR system may not function correctly, potentially increasing emissions and reducing fuel economy. If the engine runs rough or stalls, have it checked promptly.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the EGR circuit
- Socket set and wrenches
- Contact cleaner and dielectric grease

Reading P041A

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
4	Auxiliary emission controls.
1A	The exact fault within that area.

Often seen with

P0401 EGR Flow Insufficient Detected · **P0402** EGR Flow Excessive Detected · **P041B** EGR Temperature Sensor B Circuit Range/Performance · **P041C** EGR Temperature Sensor B Circuit Low · **P041D** EGR Temperature Sensor B Circuit High



See it working

Watch the animated explainer [Fuel Trims Explained: Short-Term and Long-Term](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p041a/>

