

GENERIC · POWERTRAIN

P26A3

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P26A3

Engine Coolant Bypass Valve A Range/Performance

P26A3 indicates that the engine control module (ECM) has detected a range or performance problem with the coolant bypass valve circuit for bank A, meaning the valve is not moving or responding as commanded. The ECM compares commanded valve position with actual feedback and sets this code when the correlation falls outside the expected range during a self-test.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Computer and output circuits

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Engine coolant temperature that rises more slowly than normal or stays below operating range
- Poor heater performance, especially at idle or in cold weather
- Slightly reduced fuel economy due to the engine running cooler than intended
- In some cases, a stored code but no drivability complaints at all

Common causes, most likely first

- 1 Faulty coolant bypass valve that is stuck, binding, or has an internal electrical failure
- 2 Damaged or corroded wiring or connector at the bypass valve
- 3 Open or shorted circuit in the valve control or feedback wiring
- 4 Failed engine coolant temperature sensor providing inaccurate data to the ECM
- 5 Low coolant level or air pockets in the cooling system affecting valve operation
- 6 ECM software calibration issue or internal driver fault (less common)

How to diagnose and fix it

- 1 Check coolant level and inspect for leaks or air pockets in the cooling system
- 2 Perform a visual inspection of the bypass valve connector and wiring for damage or corrosion
- 3 Use a scan tool to command the bypass valve and observe feedback data for proper movement
- 4 Measure resistance and voltage on the valve control circuit and compare to manufacturer specifications
- 5 Test the engine coolant temperature sensor to rule out false readings affecting valve control
- 6 Replace the coolant bypass valve if it fails electrical or mechanical testing
- 7 Clear the code and verify repair with a road test and monitor for code return



Bypass valve faults often misdiagnosed

- A stuck-open bypass valve can cause the engine to run too cool, leading to poor heater performance and increased emissions without triggering a temperature gauge warning.
- The ECM may set P26A3 due to a faulty coolant temperature sensor rather than the valve itself, so always compare sensor readings with actual coolant temperature.
- Air pockets in the cooling system after a coolant service can cause the bypass valve to hunt or fail its self-test, setting this code intermittently.
- Some vehicles use the bypass valve to speed cabin heater warm-up, so a failing valve may only show symptoms in cold weather or during heater use.
- A binding valve mechanism can pass electrical tests but still fail to move fully, so mechanical verification with a scan tool command is essential.

Can I keep driving with P26A3?

You can usually continue driving with this code, but avoid extended idling or heavy loads until it is repaired, as incorrect coolant flow can lead to overheating or poor heater performance. Monitor the temperature gauge and address the fault promptly to prevent secondary damage.

Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Coolant refractometer or hydrometer
- Basic hand tools (sockets, wrenches, screwdrivers)
- Vacuum refill tool for cooling system (optional)

Reading P26A3

P	Powertrain: engine, transmission and emissions.
2	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
6	Computer and output circuits.
A3	The exact fault within that area.

Often seen with

P00B7 Engine Coolant Flow Low/Performance · **P0128** Coolant Thermostat (Coolant Temperature Below Thermostat Reg · **P2181** Cooling System Performance · **P26A2** Exhaust Aftertreatment Glow Plug Circuit High · **P26A4** Engine Coolant Bypass Valve A Position Sensor Circuit



See it working

Watch the animated explainer **Four-Stroke Engine Cutaway: Intake to Exhaust** on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p26a3/>

