

GENERIC · BODY

B0258

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

B0258

HVAC Air Mix Door 1 Circuit

B0258 indicates that the body control module or HVAC control module has detected a fault in the electrical circuit for the air mix door 1 actuator, which is the motor that blends hot and cold air to achieve the requested cabin temperature. The computer monitors the circuit for abnormal voltage, current, or feedback from the actuator and sets this code when the signal falls outside the expected range.

SYSTEM

Body

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Airbags, seats, doors, lights and comfort systems

Symptoms you may notice

- Temperature blend door stuck on hot or cold, causing one side of the cabin to stay at an extreme temperature
- Clicking, ticking, or grinding noise from behind the dashboard when the temperature setting is changed
- HVAC system unable to maintain the set cabin temperature, leading to constant manual adjustments
- Blower motor may run but air temperature does not change regardless of settings
- Often no symptoms besides the warning light, especially if the fault is intermittent

Common causes, most likely first

- 1 Failed air mix door actuator motor (internal binding, stripped gears, or open winding)
- 2 Damaged or disconnected wiring harness at the actuator connector
- 3 Corroded or loose electrical terminals in the actuator circuit
- 4 Binding or jammed air mix door flap due to debris or broken linkage
- 5 Faulty HVAC control module or body control module driver circuit
- 6 Blown fuse or relay supplying power to the actuator circuit (less common)

How to diagnose and fix it

- 1 Connect a scan tool and record all HVAC-related codes and freeze-frame data to confirm B0258 is current
- 2 Inspect the actuator connector and wiring for corrosion, damage, or loose pins, and repair as needed
- 3 Check the actuator circuit for power and ground with a multimeter or test light, following the manufacturer's wiring diagram
- 4 Command the actuator through the scan tool to verify movement and listen for clicking or binding
- 5 Remove the actuator and inspect the door flap and linkage for binding or debris; repair or replace as necessary
- 6 Replace the air mix door actuator if electrical tests and mechanical checks pass but the fault persists
- 7 Clear codes and perform a HVAC calibration or relearn procedure if required by the vehicle manufacturer

Before you replace the blend door actuator

- A binding door flap or debris in the HVAC case can mimic a failed actuator and cause repeated actuator failures if not corrected.
- Intermittent B0258 codes often trace to a poor connection at the actuator connector rather than a failed motor, so always wiggle-test the harness while watching live data.
- Some vehicles require a HVAC control module calibration or relearn after actuator replacement, and skipping this step can leave the code stored or cause poor temperature control.
- The code can be set by a faulty HVAC control module even when the actuator and wiring test good, so module diagnostics should be performed before condemning parts.
- Aftermarket actuators sometimes have different resistance or feedback values that trigger the code even when new, so verify compatibility with the vehicle's system.

Can I keep driving with B0258?

The vehicle remains safe to drive because the fault only affects cabin temperature comfort, not engine or safety systems. Avoid extreme temperature settings that may stress the actuator further, and plan to have the issue diagnosed soon to prevent additional HVAC component wear.

Tools that help

- OBD-II scan tool with HVAC bidirectional control capability
- Digital multimeter
- Test light
- Trim removal tools
- Socket and wrench set
- Manufacturer-specific wiring diagram

Reading B0258

B Body: airbags, seats, doors, lights and comfort systems.

0 Generic (SAE) code: it means the same thing on every OBD-II vehicle.

2 Airbags, seats, doors, lights and comfort systems.

58 The exact fault within that area.

Often seen with

B0263 HVAC Air Mix Door 2 Circuit · **B0268** HVAC Mode Door 1 Circuit · **B0273** HVAC Recirculation Door Circuit



See it working

Watch the animated explainer **V6 Engine Explained: 60° Bank and Firing Order** on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/b0258/>

