

GENERIC · BODY

B0166

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

B0166

HVAC Discharge Air Temperature Sensor

B0166 indicates that the body control module (BCM) or HVAC control module has detected an out-of-range signal from the HVAC discharge air temperature sensor, which monitors the temperature of air leaving the evaporator or heater core. The computer compares the sensor's voltage to expected values and sets the code when the signal falls outside the valid range for a calibrated time.

SYSTEM

Body

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Airbags, seats, doors, lights and comfort systems

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the sensor fails gradually.
- HVAC system may blow air that is too hot or too cold regardless of the temperature setting.
- Automatic climate control may fail to maintain the set cabin temperature, causing constant adjustments.
- Blower motor may run at unexpected speeds or the system may default to a fixed temperature.
- In some vehicles, the air conditioning compressor may be disabled to protect the system.
- Intermittent temperature fluctuations as the sensor signal cuts in and out.

Common causes, most likely first

- 1 Faulty discharge air temperature sensor (open, shorted, or drifted thermistor).
- 2 Damaged or corroded wiring harness or connector at the sensor.
- 3 Poor electrical connection at the HVAC control module or BCM.
- 4 Failed HVAC control module or BCM internal driver circuit.
- 5 Sensor contaminated by debris, moisture, or oil from the refrigerant system.
- 6 Aftermarket or incorrect sensor installed previously.
- 7 Extreme ambient temperatures or low refrigerant charge causing out-of-range readings.



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related HVAC or BCM codes.
- 2 Inspect the sensor connector and wiring for corrosion, chafing, or loose pins.
- 3 Measure the sensor resistance with a multimeter and compare to the manufacturer's temperature-resistance chart.
- 4 Backprobe the sensor signal wire at the control module and compare voltage to the sensor output.
- 5 Check the sensor's reference voltage and ground circuits for opens or shorts.
- 6 Replace the discharge air temperature sensor if resistance is out of specification or the signal is erratic.
- 7 Clear the code and perform a HVAC calibration or relearn procedure if required by the vehicle.

Before you replace the HVAC control module

- A common misdiagnosis is replacing the HVAC control module when the actual fault is a chafed sensor wire behind the dashboard.
- The discharge air temperature sensor is often a thermistor, and its resistance changes with temperature; a dirty or oil-fouled sensor can read incorrectly without setting a hard fault.
- On some vehicles, a low refrigerant charge can cause the discharge air temperature to exceed normal limits and trigger this code, so check the A/C system performance first.
- Intermittent codes often result from a poor ground connection at the sensor or control module, which can be overlooked during a quick visual inspection.
- The code can be set by a sensor that is within resistance specification but has a slow response time, so a live data comparison during HVAC operation is more reliable than a static test.

Can I keep driving with B0166?

The vehicle remains safe to drive because this fault affects only cabin comfort and does not impair engine, steering, or braking systems. Avoid long trips in extreme temperatures until repaired, as the HVAC system may not regulate temperature properly and could cause discomfort or fogging.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Temperature probe or infrared thermometer
- Vehicle-specific wiring diagram
- Trim removal tools
- Socket set and screwdrivers



Reading B0166

- B** Body: airbags, seats, doors, lights and comfort systems.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 1** Airbags, seats, doors, lights and comfort systems.
- 66** The exact fault within that area.

Often seen with

B0168 HVAC Air Mix Door Performance · **B0170** HVAC Mode Door Position Sensor · **B0173** HVAC Air Inlet Door

See it working

Watch the animated explainer [Turbocharger Trainer: Boost, Wastegate and Intercooler](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/b0166/>

