

GENERIC · POWERTRAIN

P06F3

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P06F3

Reductant Control Module Internal Temperature Sensor Circuit High

P06F3 indicates that the reductant control module has detected an abnormally high voltage on its internal temperature sensor circuit, which typically means the sensor signal is out of range or the circuit is open. The module uses this sensor to protect itself from overheating, so a high reading can trigger the warning light and may disable reductant dosing.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Professional	Computer and output circuits

Symptoms you may notice

- Illumination of the check engine light (malfunction indicator lamp) with no other noticeable symptoms.
- Reductant system warning message on the dashboard, sometimes limiting vehicle speed or preventing engine start.
- Reduced engine performance or limp mode due to the reductant system being disabled.
- In rare cases, the module may overheat if the sensor is faulty, leading to intermittent shutdown of the reductant system.
- No visible change in driving behavior besides the warning light, especially if the fault is intermittent.

Common causes, most likely first

- 1 Open or high-resistance wiring in the internal temperature sensor circuit, such as a broken wire or corroded connector.
- 2 Faulty internal temperature sensor inside the reductant control module, reading higher than actual temperature.
- 3 Poor electrical connection at the module harness, including loose pins or water intrusion.
- 4 Failed reductant control module due to internal circuit damage or overheating.
- 5 High ambient temperatures or prolonged operation causing the sensor to exceed its normal range, though this is less common.
- 6 Software glitch in the module that misinterprets sensor data, requiring a software update or recalibration.



How to diagnose and fix it

- 1 Use a scan tool to retrieve the freeze-frame data and verify the sensor voltage reading with the key on and engine off.
- 2 Visually inspect the reductant control module harness and connectors for signs of damage, corrosion, or loose pins.
- 3 Measure resistance and voltage on the sensor circuit according to the manufacturer's wiring diagram to check for opens or shorts.
- 4 Perform a wiggle test on the harness while monitoring sensor voltage to identify intermittent connections.
- 5 If the circuit tests good, replace the reductant control module and perform any required programming or calibration.
- 6 Clear the diagnostic trouble codes and verify the repair by running the vehicle through a complete drive cycle.

Don't overlook the module connector

- A common cause of this code is a corroded or loose connector at the reductant control module, which can mimic a failed sensor and is often missed during a quick visual inspection.
- The internal temperature sensor is not a separate serviceable part on many vehicles; replacing the entire reductant control module is often the only fix, so confirm the circuit first.
- High voltage readings can also be set by a faulty ground connection for the module, so check the ground circuit before condemning the module.
- This code does not always mean the module is overheating; it simply means the sensor circuit voltage is higher than expected, which can be due to a simple wiring issue.
- Some vehicles require a relearn or calibration procedure after module replacement, and skipping this step can cause the code to return immediately.

Can I keep driving with P06F3?

You can generally continue driving with this code, but avoid long trips or heavy loads until it is repaired, as the reductant system may be disabled and could lead to reduced performance or increased emissions. If the vehicle enters limp mode or shows a warning to stop driving, pull over safely and seek professional assistance.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the reductant control module circuit
- Terminal pick and electrical contact cleaner
- Factory service information for module replacement and programming



Reading P06F3

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 6** Computer and output circuits.
- F3** The exact fault within that area.

Often seen with

P06F2 Reductant Control Module Internal Temperature Sensor Circuit · **P06F4** Stop-Start Mode Lamp Control Circuit · **P20B9** Reductant Heater A Control Circuit/Open · **P20BA** Reductant Heater A Control Performance · **P20BB** Reductant Heater A Control Circuit Low

See it working

Watch the animated explainer [EV Powertrain Trainer: How an Electric Car Drives](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p06f3/>

