

GENERIC · POWERTRAIN

P0D5F

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0D5F

Hybrid/EV Battery Pack Cooling Fan 2 Sense Circuit/Open

P0D5F indicates that the hybrid or electric vehicle's battery pack cooling fan number two sense circuit is open, meaning the control module cannot detect the fan's feedback signal. The computer expects a specific voltage or current on the sense line but sees a value outside the normal range, which prevents it from confirming the fan is operating correctly.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Hybrid propulsion

Symptoms you may notice

- Illumination of the hybrid system warning light or service vehicle soon message
- Often no symptoms besides the warning light, especially if the fan is not needed for current conditions
- Reduced hybrid system performance or limited power output in some vehicles
- Possible overheating of the high-voltage battery pack during heavy use or fast charging
- Audible cooling fan may run continuously or not at all, depending on the failure mode
- In rare cases, the vehicle may enter a fail-safe mode that restricts driving speed

Common causes, most likely first

- 1 Open or damaged wire in the fan sense circuit, such as a broken conductor or corroded connector
- 2 Failed battery pack cooling fan number two assembly, including its internal sense electronics
- 3 Poor electrical connection at the fan connector or at the control module harness
- 4 Faulty cooling fan control module or hybrid battery control module
- 5 Blown fuse or relay that supplies power to the fan circuit (though this often sets additional codes)
- 6 Contamination or debris blocking the fan, causing it to overheat and damage the sense circuit
- 7 Water intrusion or corrosion in the fan connector or wiring harness



How to diagnose and fix it

- 1 Perform a visual inspection of the fan, connector, and wiring for obvious damage, corrosion, or debris
- 2 Check the fan fuse and relay, and verify power and ground at the fan connector
- 3 Measure resistance of the sense circuit from the fan connector to the control module to check for an open
- 4 Back-probe the sense circuit at the control module and compare voltage with the factory specification
- 5 Substitute a known-good fan or simulate the sense signal to confirm whether the fan or module is at fault
- 6 Repair or replace the faulty wiring, connector, fan assembly, or control module as diagnosed
- 7 Clear the diagnostic trouble codes and verify the repair by running the fan and monitoring live data

Before you replace the cooling fan

- A common oversight is assuming the fan motor is bad when the actual problem is a corroded terminal in the sense circuit, which costs far less to fix.
- The sense circuit is a low-current signal path, so even slight corrosion or a loose pin can set this code without affecting fan operation under normal conditions.
- Some vehicles will not set this code until the battery pack reaches a temperature that commands fan operation, so a test drive may be needed to reproduce the fault.
- This code can be set by a faulty control module that misreads a good signal, so always verify the sense circuit integrity before condemning the module.
- Related codes for fan control or battery temperature may also be present, and diagnosing those first can save time and prevent unnecessary parts replacement.

Can I keep driving with P0D5F?

You can generally continue driving, but avoid aggressive driving, sustained high speeds, and fast charging until the fault is repaired, as these conditions increase battery heat and may trigger reduced power or a fail-safe mode.

Tools that help

- Digital multimeter
- OBD-II scan tool with live data capability
- Factory service information for wiring diagrams and specifications
- Back-probe kit or breakout box
- Basic hand tools for connector and panel access



Reading P0D5F

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- D** Hybrid propulsion.
- 5F** The exact fault within that area.

Often seen with

P0A93 Inverter A Cooling System Performance · **P0AC4** Hybrid/EV Powertrain Control Module Requested MIL Illuminati · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0D5E** Battery Charger Hybrid/EV System Discharge Time Too Long · **P0D60** Hybrid/EV Battery Pack Cooling Fan 2 Sense Range/Performance

See it working

Watch the animated explainer [How a Radiator Fan Relay Circuit Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0d5f/>

