

GENERIC · POWERTRAIN

P0D63

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0D63

Hybrid/EV Battery Pack Cooling Fan 2 Sense Circuit Intermittent/Erratic

P0D63 indicates that the hybrid or electric vehicle battery pack cooling fan 2 sense circuit is reporting an intermittent or erratic signal to the control module. The computer monitors the fan's feedback circuit and detects unpredictable voltage or current fluctuations that fall outside expected limits, often due to a loose connection or failing fan motor.

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

Symptoms you may notice

- Illumination of the check engine light or service vehicle soon message
- Often no symptoms besides the warning light, especially if the fan still operates intermittently
- Reduced hybrid/EV battery cooling performance, potentially leading to power reduction
- Audible fan noise that cycles on and off erratically or runs at inconsistent speeds
- Overheating warnings or derating of battery performance in extreme cases

Common causes, most likely first

- 1 Loose, corroded, or damaged electrical connector at the cooling fan 2 or its sense circuit
- 2 Chafed or broken wiring in the fan sense circuit, often near the fan housing or harness routing
- 3 Failing cooling fan 2 motor causing erratic feedback signals
- 4 Faulty fan control module or relay intermittently dropping the sense signal
- 5 Internal fault in the battery energy control module (BECM) or hybrid control module affecting signal interpretation
- 6 Poor ground connection for the fan circuit causing voltage fluctuations



How to diagnose and fix it

- 1 Inspect and clean the electrical connector at cooling fan 2, checking for corrosion, loose pins, or water intrusion
- 2 Perform a wiggle test on the fan harness while monitoring live data to identify intermittent wiring faults
- 3 Check the fan sense circuit for continuity and resistance to ground, comparing to manufacturer specifications
- 4 Verify the fan motor operates smoothly when commanded on with a scan tool, listening for abnormal noise or hesitation
- 5 Test the fan control module or relay for intermittent operation by tapping or heating while monitoring the sense signal
- 6 Repair or replace damaged wiring or connectors as needed, then clear codes and verify the fault does not return
- 7 If the fan motor or module is faulty, replace the component and retest the system under various operating conditions

Intermittent fan codes often misdiagnosed

- A fan that spins freely by hand may still have an intermittent sense circuit fault, so visual inspection alone is insufficient.
- The sense circuit often shares a ground with other sensors; a bad ground can cause this code without any fan fault.
- Some vehicles set this code when the 12-volt auxiliary battery is weak, causing voltage spikes that confuse the control module.
- After replacing a fan, the control module may require a relearn or calibration procedure to recognize the new sense signal.
- This code can be set by a fan that operates correctly but has a dirty or worn commutator causing erratic current draw.

Can I keep driving with P0D63?

You can usually continue driving with this code, but avoid heavy loads or aggressive driving that increases battery heat. If the vehicle enters a reduced power mode or shows overheating warnings, stop and have it serviced promptly.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Back probe kit
- Contact cleaner and dielectric grease



Reading P0D63

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

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0A93** Inverter A Cooling System Performance · **P0C73** Hybrid Battery Pack Cooling Pump Performance · **P0D62** Hybrid/EV Battery Pack Cooling Fan 2 Sense Circuit High · **P0D64** Hybrid/EV Battery Pack Cooling Fan Enable Circuit/Open

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/p0d63/>

