

FORD · POWERTRAIN

P1625

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1625 · Ford

Voltage to Vehicle Load Control Module Fan Circuit Not Detected

P1625 on Ford vehicles indicates that the Vehicle Load Control Module (VLCM) has not detected the expected voltage on the cooling fan circuit, meaning the module cannot confirm the fan is receiving power or that the circuit is intact. The VLCM monitors the fan control circuit for voltage presence and sets this code when the signal is missing, often due to an open circuit, faulty fan, or module issue.

SYSTEM

Powertrain

CODE TYPE

Ford specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Computer and output circuits

Symptoms you may notice

- Illumination of the Check Engine Light (CEL) on the instrument cluster.
- Often no symptoms besides the warning light, especially if the fan still operates under certain conditions.
- Engine overheating in traffic or at low speeds if the fan fails to run when commanded.
- Cooling fan may run continuously or not at all, depending on the failure mode.
- Possible reduced air conditioning performance if the fan is not engaging as needed.

Common causes, most likely first

- 1 Open or damaged wiring in the fan circuit, including broken wires or corroded connectors.
- 2 Failed cooling fan motor or fan clutch, causing no voltage feedback to the VLCM.
- 3 Blown fuse or faulty relay in the fan power circuit.
- 4 Faulty Vehicle Load Control Module (VLCM) itself, though less common.
- 5 Poor ground connection for the fan or VLCM circuit.
- 6 Corrosion or water intrusion in the fan connector or module connector.

How to diagnose and fix it

- 1 Inspect the fan circuit wiring and connectors for obvious damage, corrosion, or loose pins.
- 2 Check the fan fuse and relay, replacing if blown or faulty.
- 3 Test for voltage at the fan connector with the fan commanded on using a scan tool.
- 4 Perform a resistance test on the fan motor and compare to specifications.
- 5 Check ground circuits for the fan and VLCM for continuity and cleanliness.
- 6 If voltage is present at the fan but the fan does not run, replace the fan assembly.
- 7 If all circuits test good, diagnose or replace the VLCM as needed.



Common misdiagnosis traps for P1625

- A fan that spins freely by hand may still have an internal open circuit in the motor windings, so resistance testing is essential before condemning the module.
- The VLCM often sets P1625 when the fan connector is partially unseated, mimicking a failed module but requiring only reseating and cleaning.
- On some Ford models, a weak battery or charging system issue can cause the VLCM to misreport fan circuit voltage, so always verify battery voltage first.
- P1625 can be stored intermittently due to vibration-related wiring chafing, so wiggle tests on the harness while monitoring live data are valuable.
- Replacing the VLCM without checking the fan circuit is a costly mistake, as the module is rarely the root cause.

Can I keep driving with P1625?

You can drive with P1625 if the engine temperature remains normal, but avoid heavy traffic or prolonged idling where the fan is needed. If the temperature gauge climbs or the A/C stops cooling, pull over and shut off the engine to prevent overheating damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Test light
- Wire probe set
- Service manual for wiring diagrams

Reading P1625

P	Powertrain: engine, transmission and emissions.
1	Manufacturer-specific code (Ford): its meaning depends on the make.
6	Computer and output circuits.
25	The exact fault within that area.

Often seen with

P1626 Data Bus Drive Missing Command From M/T · **P1626** Anti-Theft Fuel Enable Circuit (Passkey) · **P1626** Voltage to Vehicle Load Control Module Circuit Not Detected · **P0480** Cooling Fan 1 Control Circuit Malfunction · **P0481** Cooling Fan 2 Control Circuit Malfunction · **P0482** Cooling Fan 3 Control Circuit Malfunction · **P0483** Fan Rationality Check



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/ford-p1625/>

