

CHRYSLER · POWERTRAIN

P1494

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1494 · Chrysler

Leak Detection Pump Switch Or Mechanical Fault

P1494 on Chrysler vehicles indicates that the leak detection pump (LDP) switch circuit is not responding as expected during the natural vacuum leak detection monitor. The powertrain control module (PCM) commands the LDP to pressurize the evaporative emission (EVAP) system and then looks for the switch to change state within a calibrated time; when it does not, the PCM stores this code.

SYSTEM

Powertrain

CODE TYPE

Chrysler specific

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Malfunction indicator lamp (MIL) illuminated, often with no other drivability symptoms.
- Intermittent rough idle or slight hesitation after refueling, though this is uncommon.
- A faint fuel odor may be present around the rear of the vehicle if the EVAP system has a physical leak.
- Failed state emissions inspection due to the commanded MIL.
- No noticeable change in engine performance or fuel economy in most cases.

Common causes, most likely first

- 1 Faulty leak detection pump switch or the pump assembly itself.
- 2 Damaged, disconnected, or corroded wiring or connector at the LDP switch.
- 3 Failed leak detection pump (mechanical diaphragm or solenoid).
- 4 Restricted or disconnected EVAP hose between the LDP and the fuel tank.
- 5 Powertrain control module (PCM) internal driver fault, though rare.
- 6 A stuck-open or stuck-closed EVAP canister purge solenoid affecting system pressure.
- 7 A physical leak in the EVAP system that prevents the LDP from building pressure.



How to diagnose and fix it

- 1 Connect a scan tool and verify that P1494 is active or pending, then check for any related EVAP codes.
- 2 Inspect the LDP electrical connector and harness for corrosion, loose pins, or chafed wires; repair as needed.
- 3 Command the LDP on and off with the scan tool and listen for the pump to run; if it does not, test the pump motor circuit.
- 4 Test the LDP switch signal circuit with a multimeter while commanding the pump; compare to manufacturer specifications.
- 5 Perform a smoke test on the EVAP system to rule out a physical leak that could prevent switch activation.
- 6 If the switch or pump fails electrical or mechanical testing, replace the leak detection pump assembly.
- 7 Clear the code and run the EVAP monitor to confirm the repair; verify no pending codes return.

LDP switch faults often misdiagnosed

- A stuck-open or leaking EVAP purge solenoid can cause the LDP switch to not change state, leading to a false P1494 without any fault in the pump itself.
The LDP switch is a simple reed or pressure switch; testing it with a scan tool's bidirectional controls is far more reliable than static resistance checks.
- Corroded terminals at the LDP connector are a common cause on older Chrysler vehicles, especially those driven in salt-belt states.
- A physical EVAP leak large enough to prevent pressure buildup will set P1494 along with leak codes, so always smoke-test before replacing the pump.
The PCM expects the switch to toggle within a specific time window; a slow-responding pump due to a clogged filter can trigger P1494 without a hard failure.

Can I keep driving with P1494?

The vehicle remains safe to drive under normal conditions because P1494 does not affect engine operation or safety systems. Avoid topping off the fuel tank and schedule diagnosis soon to prevent a small EVAP leak from worsening.

Tools that help

- OBD-II scan tool with bidirectional controls
- Digital multimeter
- EVAP smoke machine
- Hand tools for trim and connector removal
- Wiring diagram for the specific Chrysler model



Reading P1494

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Chrysler): its meaning depends on the make.
- 4** Auxiliary emission controls.
- 94** The exact fault within that area.

Often seen with

P1495 EVAP Ventilation Solenoid Circuit Fault · **P1495** Leak Detection Pump Solenoid Circuit Open Or Shorted · **P1495** Leak Detection Pump Solenoid Circuit Open Or Shorted · **P0440** Evaporative Emission Control System Malfunction · **P0442** EVAP System Leak Detected (Small) · **P0455** EVAP System Leak Detected (Large) · **P0456** Evaporative Emission System Leak Detected (very small leak)

See it working

Watch the animated explainer [Four-Stroke Engine Notebook: The Otto Cycle Explained](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/chrysler-p1494/>

