

GENERIC · POWERTRAIN

P0E6F

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0E6F

Control Pilot Signal Frequency Range/Performance

P0E6F means the powertrain control module (PCM) has detected that the frequency of the Control Pilot signal is outside the range it expects for the current charging state. The Control Pilot is the low-voltage communication line between the vehicle and the charging station that negotiates available current and confirms the vehicle is ready to charge.

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

Symptoms you may notice

- The charging session may fail to start or stop unexpectedly shortly after plugging in.
- The vehicle may refuse to charge even though the connector is fully seated.
- A warning light or charging system message appears on the dashboard.
- The charging station may display a fault or refuse to release the connector.
- In some cases there are no symptoms besides the stored code and warning light.

Common causes, most likely first

- Damaged or corroded pins in the vehicle charge port or on the charging connector.
- A faulty Control Pilot signal generator inside the onboard charger or charge controller.
- Wiring damage or high resistance in the Control Pilot circuit between the charge port and the controller.
- A charging station that is not producing a valid Control Pilot signal or is incompatible with the vehicle.
- Water intrusion or contamination in the charge port assembly causing signal distortion.
- A software or calibration issue in the charge control module affecting signal interpretation.



How to diagnose and fix it

- 1 Inspect the charge port and connector pins for corrosion, bending, debris, or water intrusion and clean or repair as needed.
- 2 Test the Control Pilot signal at the charge port with an oscilloscope or charging station simulator to confirm frequency and duty cycle.
- 3 Check the wiring harness between the charge port and the charge controller for continuity, shorts, and resistance.
- 4 Try a different known-good charging station to rule out an external equipment fault.
- 5 Check for technical service bulletins or software updates for the charge control module.
- 6 If the signal is correct at the port but not recognized, diagnose or replace the onboard charger or charge controller.
- 7 Clear the code and verify the repair by performing a complete charging session.

Control Pilot faults often misdiagnosed

- A bad charging station or a damaged public connector is a common cause that gets overlooked because the fault is stored in the vehicle.
- The Control Pilot signal is a low-voltage square wave, so a standard multimeter cannot confirm its frequency or duty cycle accurately.
- This code can set intermittently from a poor connection that only acts up when the connector is wiggled or when water is present.
- Some vehicles set this code when the charging station does not follow the expected communication sequence, even though the vehicle is fine.
- The Control Pilot circuit is separate from the high-voltage charging path, so the vehicle may still drive normally with this code stored.

Can I keep driving with P0E6F?

The vehicle can usually be driven normally because this fault affects charging rather than propulsion, but avoid repeated charging attempts until the cause is found. Do not use a charging station that shows visible damage or fault indicators.

Tools that help

- OBD-II scan tool
- Digital multimeter
- Oscilloscope
- Charging station simulator or test box
- Terminal cleaning tools



Reading P0E6F

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
E	Hybrid propulsion.
6F	The exact fault within that area.

Often seen with

P0E6E Generator Torque Delivered Performance · **P0E70** Control Pilot Signal Frequency Too Low · **P0E71** Control Pilot Signal Frequency Too High · **P0E72** Hybrid/EV Battery Internal Isolation Performance · **P0E73** Coolant Bypass Valve A Control Circuit/Open

See it working

Watch the animated explainer [Manual Car Driving Simulator: Learn Clutch Control](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0e6f/>

