

FORD · POWERTRAIN

P1191

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1191 · Ford

Key Line Voltage

P1191 on Ford vehicles indicates that the powertrain control module (PCM) has detected an abnormal voltage on the key line circuit, which is used to communicate the ignition key position to various modules. The PCM expects a specific voltage range when the key is in the RUN or START position, and this code sets when the signal is out of range or erratic.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Ford specific	Medium	Intermediate	Fuel and air metering

Symptoms you may notice

- The check engine light may be the only noticeable symptom, with no drivability issues.
- The engine may crank but fail to start or may start intermittently.
- The ignition key may need to be jiggled or turned multiple times to get a response.
- Other electrical accessories may behave erratically, such as the radio or interior lights.
- The anti-theft system (PAT) may trigger unexpectedly or prevent starting.
- In some cases, the engine may stall shortly after starting.

Common causes, most likely first

- 1 Faulty ignition switch or key cylinder, causing poor contact on the key line circuit.
- 2 Damaged or corroded wiring in the key line circuit, often near the steering column or under the dash.
- 3 Loose or corroded ground connection for the PCM or body control module.
- 4 Failed body control module (BCM) or smart junction box (SJB) that interprets the key line signal.
- 5 Blown fuse or faulty relay that supplies power to the key line circuit.
- 6 Aftermarket alarm or remote start system improperly installed, tapping into the key line.
- 7 PCM internal fault, though this is less common and should be diagnosed last.



How to diagnose and fix it

- 1 Verify the battery voltage and condition, as a weak battery can cause erratic key line signals.
- 2 Check all fuses related to the ignition switch and key line circuit, and replace any blown fuses.
- 3 Inspect the ignition switch for wear or loose connections, and test the key line voltage at the switch connector.
- 4 Trace the key line wiring from the ignition switch to the BCM/PCM, looking for chafed, corroded, or loose wires.
- 5 Clean and tighten ground connections for the PCM, BCM, and chassis.
- 6 If equipped, remove or disconnect any aftermarket alarm or remote start system to see if the code resolves.
- 7 Use a diagnostic scan tool to perform a key line voltage test and, if necessary, reprogram or replace the BCM/PCM.

Key Line Voltage: Beyond the Ignition Switch

- A common oversight is assuming the ignition switch is always at fault, but the key line signal often passes through the body control module (BCM) or smart junction box (SJB), which can fail and cause this code.
Corrosion inside the connector at the BCM or PCM can mimic a faulty switch, so always perform a voltage drop test under load rather than just a static voltage check.
- Aftermarket accessories like remote starters or alarms are frequently tapped into the key line circuit and can introduce voltage irregularities that set P1191.
- This code can be intermittent and may not set a hard fault until the key is cycled multiple times, so a thorough wiggle test of the wiring harness while monitoring live data is essential.
On some Ford models, a weak or failing battery can cause the key line voltage to drop below threshold during cranking, setting P1191 without any actual circuit fault.

Can I keep driving with P1191?

If the vehicle starts and runs normally, you can drive it to a repair shop, but avoid turning the engine off in an unsafe location because the fault may prevent restarting. If the engine cranks but won't start or stalls frequently, have the vehicle towed to avoid being stranded.

Tools that help

- Digital multimeter
- OBD-II scan tool with live data capability
- Test light
- Wiring diagram for the specific Ford model
- Torx and panel removal tools for steering column access



Reading P1191

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Ford): its meaning depends on the make.
- 1** Fuel and air metering.
- 91** The exact fault within that area.

Often seen with

P1190 Linear Oxygen Sensor Reference Voltage Incorrect Signal · **P1190** Calibration Resistor Out Of Range · **P1190** O2 Sensor Heater Circuit Low Resistance Fault 2 · **P1192** O2 Sensor Heater Circuit Shorted · **P1190** Vacuum Leak · **P1192** Inlet Air Temp Circuit Low · **P1190** Calibration Resistor Out Of Range · **P1192** Voltage External · **P1190** Engine Vacuum Leak · **P1192** Inlet Air Temp Circuit Low · **P1190** Pre-Catalyst Fuel Trim System Bank 1 · **P1192** Post-Catalyst Fuel Trim System Bank 1 · **P0562** System Voltage Low · **P0563** System Voltage High · **U0100** Lost Communication With ECM/PCM A

See it working

Watch the animated explainer [How Push-Button Start Works: Keyless Ignition](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1191/>

