

HONDA · POWERTRAIN

P1297

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1297 · Honda

ELD Circuit Low Input

P1297 on a Honda means the Engine Control Module (ECM) has detected a low voltage input from the Electrical Load Detector (ELD) circuit, which monitors current draw on the charging system. The ELD is a Hall-effect sensor built into the under-hood fuse box that tells the ECM how much electrical load the alternator is supporting so it can adjust idle speed and charging output.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Honda specific	Medium	Intermediate	Fuel and air metering (injector circuits)

Symptoms you may notice

- Battery warning light or check engine light illuminated on the dash
- Dimming headlights or interior lights at idle, especially when accessories are switched on
- Rough or fluctuating idle as the ECM misjudges electrical load
- Battery that repeatedly goes flat or needs frequent jump starts
- Accessories such as rear defroster or blower motor causing noticeable engine stumble
- Often no symptoms besides the warning light if the ELD signal is only intermittently low

Common causes, most likely first

- Corroded, loose, or damaged ELD sensor connector or terminals at the under-hood fuse box
- Failed ELD sensor unit inside the fuse box assembly
- Open or shorted wire in the ELD signal circuit between the sensor and the ECM
- Poor ground connection at the ELD or at the fuse box mounting point
- Blown fuse or damaged fusible link feeding the ELD circuit
- Failed or failing alternator causing abnormal current draw the ELD reports as low
- ECM internal fault misreading the ELD input (rare, check last)



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm P1297 is active and not a ghost code from a low battery
- 2 Inspect the ELD connector and fuse box terminals for corrosion, looseness, or pushed-back pins and clean or repair as needed
- 3 Check the ELD circuit fuse and verify battery voltage and ground at the ELD sensor with the key on
- 4 Back-probe the ELD signal wire at the ECM and compare voltage to the sensor output to isolate a wiring fault
- 5 Test the ELD sensor output with a scan tool or multimeter while switching electrical loads on and off
- 6 Replace the ELD sensor or fuse box assembly if the signal does not respond correctly to load changes
- 7 Clear codes and verify the repair by running the engine with accessories cycling and confirming no return of P1297

What the ELD code really points to

- A weak or failing battery is a common trigger for P1297 because low system voltage skews the ELD signal, so load-test the battery before condemning the sensor.
- The ELD is integrated into the under-hood fuse box on many Hondas, so a corroded fuse box can set this code even when the sensor itself tests good.
- Technicians often replace the alternator first, but a low ELD input usually reflects a sensing or wiring problem rather than a charging failure.
- Intermittent P1297 can be caused by water intrusion into the fuse box or harness, so check for moisture and green corrosion on connectors.
- The ECM uses the ELD signal to trim idle speed, so a faulty ELD can cause idle quality complaints that seem unrelated to the charging system.

Can I keep driving with P1297?

You can usually drive short distances to a shop, but avoid relying on the vehicle for long trips or heavy electrical loads because a misreported charging load can leave the battery discharged. If the battery light is on or the engine idles poorly, have it checked promptly.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Test light
- Wire terminal pick and contact cleaner
- Service information for ELD circuit pinout



Reading P1297

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

Often seen with

P1637 Data Bus Powertrain Missing Message From Central Electronic · **P1245** Needle Lift Sensor Circuit Short To Ground · **P1245** Wastegate Control Solenoid Valve Malfunction Fail Safe · **P1298** Electrical Load Detector Circuit High Voltage · **P1298** Injector Driver Module Failure · **P1637** CAN Link ECM ABS Control Module Circuit Network · **P1245** Crank Signal Low Input · **P1298** Electrical Load Detector Circuit High Voltage · **P1637** Alternator Warning Lamp Control Signal · **P1245** Intake Plenum Switchover Valve · **P1298** Lean Operation At Wide Open Throttle · **P1298** IDM Failure · **P1245** Alternator Load Input Failed Low · **P1298** Lean Operation At Wide Open Throttle · **P1245** Intake Plenum Switchover Valve · **P1637** Throttle Valve Position Control Deviation · **P0562** System Voltage Low · **P0563** System Voltage High

See it working

Watch the animated explainer [How a MAF Sensor Works: Hot-Wire Airflow Explained](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/honda-p1297/>

