

GENERIC · POWERTRAIN

P2BE6

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2BE6

Hybrid/EV Battery Pack Current Sensor C Low

P2BE6 indicates that the hybrid or electric vehicle's battery management system has detected an abnormally low signal from the current sensor labeled 'C' on the high-voltage battery pack. The computer compares this sensor's reading against expected values from other current sensors and flags the circuit as faulty when the signal falls below the calibrated threshold.

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

Symptoms you may notice

- Illumination of the hybrid system warning light or check engine light
- Often no symptoms besides the warning light, especially if the fault is intermittent
- Reduced electric-only driving range or the engine running more frequently
- The vehicle may enter a limp mode or refuse to start in some cases
- Inaccurate state-of-charge or power gauge readings on the dashboard
- Possible charging system faults or inability to accept a charge

Common causes, most likely first

- 1 Faulty current sensor 'C' on the high-voltage battery pack
- 2 Damaged or corroded wiring or connector at the current sensor
- 3 Open or short circuit in the sensor signal circuit
- 4 Poor ground connection for the current sensor
- 5 Failed battery management system module or internal fault
- 6 Software glitch in the battery energy control module requiring recalibration

How to diagnose and fix it

- 1 Perform a visual inspection of the current sensor and its wiring for damage or corrosion
- 2 Check for technical service bulletins (TSBs) or software updates for the battery management system
- 3 Use a scan tool to read live data from all current sensors and compare readings
- 4 Measure resistance and voltage on the sensor signal and ground circuits to verify integrity
- 5 Test the current sensor with a multimeter or oscilloscope to confirm proper operation
- 6 Replace the current sensor if faulty, following manufacturer procedures for high-voltage safety
- 7 Clear codes and perform a road test to verify the repair and ensure no pending codes return



Current Sensor C Faults Often Misdiagnosed

- A low signal from current sensor 'C' can be caused by a weak 12-volt auxiliary battery, which affects sensor reference voltage and is frequently overlooked.
- The code may set intermittently due to a loose connector that only loses contact during vibration or temperature swings, so wiggle tests are essential.
- Replacing the current sensor without checking the battery management system's software version can lead to a repeat failure if a calibration update is needed.
- High-voltage battery pack current sensors are sometimes integrated into the pack and not serviceable separately, requiring pack replacement in some designs.
- This code can be set by a faulty cell module that causes abnormal current draw, so always check for related cell voltage codes before condemning the sensor.

Can I keep driving with P2BE6?

It is generally safe to drive with this code if the vehicle operates normally, but avoid heavy acceleration or high-speed driving until diagnosed. If the hybrid system warning light is on or the vehicle enters limp mode, seek professional diagnosis promptly to prevent further damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Oscilloscope for signal analysis
- Manufacturer-specific diagnostic software
- Insulated gloves and high-voltage safety equipment

Reading P2BE6

P	Powertrain: engine, transmission and emissions.
2	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
B	Hybrid propulsion.
E6	The exact fault within that area.

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0AFA** Hybrid/EV Battery System Voltage Low · **P2BE5** Hybrid/EV Battery Pack Current Sensor C Circuit Range/Perfor · **P2BE7** Hybrid/EV Battery Pack Current Sensor C High



See it working

Watch the animated explainer [How Regenerative Braking Works in Electric Cars](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2be6/>

