

GENERIC · POWERTRAIN

P0A55

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0A55

Drive Motor B Current Sensor Circuit

P0A55 indicates that the hybrid or electric vehicle's control module has detected an implausible signal from the current sensor circuit dedicated to drive motor B, which is the motor responsible for propulsion or regenerative braking. The computer compares the sensor's reported current against expected values from other sensors and operating conditions, and when the signal falls outside the acceptable range, it stores this code and illuminates the warning light.

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

Symptoms you may notice

- Illumination of the hybrid system warning light or check engine light, often with no other noticeable symptoms
- Reduced power output or a limp-home mode that limits vehicle speed
- The vehicle may refuse to start or shift into gear, especially in hybrid models where the motor is integral to the drivetrain
- Inconsistent or jerky acceleration or deceleration during regenerative braking
- A message on the dashboard indicating a hybrid system fault or service required

Common causes, most likely first

- 1 Faulty current sensor integrated into the drive motor B circuit
- 2 Damaged or corroded wiring or connector at the current sensor or motor harness
- 3 Poor electrical connection or ground at the motor control module
- 4 Internal failure within the drive motor B assembly affecting the sensor signal
- 5 Failed motor control module or inverter that processes the sensor signal
- 6 Software glitch or calibration error in the hybrid control module requiring reprogramming



How to diagnose and fix it

- 1 Perform a visual inspection of the current sensor, wiring, and connectors for damage, corrosion, or loose pins
- 2 Use a scan tool to retrieve all stored codes and freeze-frame data, then clear codes and test-drive to see if P0A55 returns
- 3 Check the sensor's reference voltage and signal voltage with a multimeter according to the manufacturer's specifications
- 4 Inspect and test the motor harness for continuity and shorts between the sensor and the control module
- 5 If the sensor is integrated into the motor, follow the manufacturer's procedure to test the motor assembly and sensor output
- 6 Reprogram or update the hybrid control module software if a known calibration issue exists
- 7 Replace the faulty current sensor or motor assembly as required, then clear codes and verify the repair with a test drive

Before you replace the drive motor

- A loose or corroded connector at the motor current sensor is a frequent culprit that mimics a failed sensor or motor, so always inspect connectors before condemning expensive components.
- The code can be set by a low 12-volt auxiliary battery or poor grounds, which cause voltage irregularities that the control module misinterprets as a sensor fault.
- On some vehicles, the current sensor is part of the motor assembly and cannot be replaced separately, but the fault may actually lie in the wiring harness or control module, so thorough circuit testing is essential.
- After any repair, the hybrid control module may need a relearn or calibration procedure; simply clearing the code may not be enough to prevent recurrence.
- This code does not always indicate a hard failure; intermittent signals from vibration or temperature extremes can set it, so a wiggle test of the harness while monitoring sensor data can reveal the issue.

Can I keep driving with P0A55?

Because this fault can cause a sudden loss of power or put the vehicle into limp mode, you should avoid driving at high speeds or in heavy traffic until it is diagnosed. It is safest to have the vehicle inspected by a qualified technician as soon as possible, and if the warning light is accompanied by reduced power, stop driving and arrange a tow.

Tools that help

- OBD-II scan tool with hybrid system capability
- Digital multimeter
- Oscilloscope for signal analysis
- Manufacturer-specific wiring diagrams and service information
- Insulation tester for high-voltage circuit checks



Reading P0A55

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

Often seen with

- P0A3F** Drive Motor A Position Sensor Circuit · **P0A40** Drive Motor A Position Sensor Circuit Range/Performance
- **P0A44** Drive Motor A Position Sensor Circuit Overspeed · **P0A54** Drive Motor A Current Sensor Circuit High
- **P0A56** Drive Motor B Current Sensor Circuit Range/Performance

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/p0a55/>

