

GENERIC · POWERTRAIN

P0A19

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0A19

Motor Torque Sensor Circuit Low

P0A19 indicates that the hybrid or electric vehicle control module has detected an abnormally low voltage signal from the motor torque sensor circuit, which is responsible for reporting the actual torque output of the electric motor. The computer sets this code when the sensor signal falls below the expected minimum threshold, potentially affecting the accuracy of torque control and hybrid system operation.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light or hybrid system warning light
- Reduced power or limp mode, limiting vehicle speed
- Hesitation or jerking during acceleration or deceleration
- Poor fuel economy or increased electric motor usage
- Often no symptoms besides the warning light

Common causes, most likely first

- 1 Faulty motor torque sensor
- 2 Damaged or corroded wiring or connector in the torque sensor circuit
- 3 Open or short circuit in the sensor signal or ground circuit
- 4 Failed hybrid control module or inverter assembly
- 5 Mechanical binding or misalignment affecting the torque sensor reading

How to diagnose and fix it

- 1 Use a scan tool to verify the code and check for related codes in other modules
- 2 Inspect the torque sensor wiring and connectors for damage, corrosion, or looseness
- 3 Measure the sensor reference voltage and ground at the sensor connector
- 4 Check the sensor signal voltage with a multimeter while wiggling the harness
- 5 Perform a resistance test on the sensor circuit if specified by the manufacturer
- 6 Replace the motor torque sensor if tests indicate it is faulty
- 7 Reprogram or replace the hybrid control module if all other components test good



Before you replace the torque sensor

- A low signal code often results from a poor ground connection or a chafed wire rather than a failed sensor, so always perform a voltage drop test on the ground circuit.
- The motor torque sensor may be integrated into the motor assembly on some vehicles, making replacement more involved and costly than a standalone sensor.
- Intermittent codes can be caused by a loose connector that only loses contact during certain driving conditions, so wiggle tests are essential.
- This code can be set by a software issue in the hybrid control module, so check for technical service bulletins before replacing hardware.
- Related codes such as P0A1A (motor torque sensor circuit high) or P0A1B (motor torque sensor circuit intermittent) may also be present and should be diagnosed together.

Can I keep driving with P0A19?

It is generally safe to drive with this code if the vehicle is not in limp mode, but avoid aggressive acceleration or heavy loads until the fault is repaired. If the vehicle enters limp mode or exhibits severe drivability issues, seek professional diagnosis promptly.

Tools that help

- OBD-II scan tool with hybrid system capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Breakout box or backprobe pins
- Insulation resistance tester

Reading P0A19

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

Often seen with

P0A0F Engine Failed to Start · **P0A10** DC/DC Converter Status Circuit High Input · **P0A1A** Generator Control Module · **P0A1B** Drive Motor A Control Module Performance · **P0A1C** Drive Motor B Control Module Performance



See it working

Watch the animated explainer [How a Car Clutch Works: Diaphragm Clutch Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0a19/>

