

GENERIC · POWERTRAIN

P0C1A

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0C1A

Drive Motor B Torque Delivered Performance

P0C1A indicates that the powertrain control module has commanded a specific torque output from drive motor B but the motor's actual delivered torque, as reported by its internal sensors, does not match the command within an acceptable margin. The computer detects this as a performance fault when the discrepancy persists beyond a calibrated time or threshold, often during acceleration or load changes.

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

Symptoms you may notice

- Illumination of the check engine light or service vehicle soon message, often with no other noticeable symptoms
- Reduced power or a limp-home mode that limits vehicle speed and acceleration
- Hesitation or shuddering during acceleration, especially when the motor is under load
- Unusual noises such as whining or clunking from the drive motor area during torque changes
- Inconsistent acceleration feel compared to normal operation, sometimes with a delay in response
- In rare cases, the vehicle may enter a fail-safe mode that disables the affected motor entirely

Common causes, most likely first

- 1 Faulty or contaminated torque sensor or resolver inside drive motor B, giving inaccurate feedback to the control module
- 2 Wiring harness damage or loose connector pins between the motor and the inverter or control module, causing intermittent signal loss
- 3 Software calibration issue or outdated control module firmware that misinterprets torque delivery data
- 4 Mechanical binding or wear in the motor's internal components, such as bearings or rotor, increasing drag and reducing delivered torque
- 5 Failing inverter or power electronics module that cannot supply the commanded current to the motor
- 6 Low or contaminated transmission fluid in hybrid systems where the motor shares lubrication with the gearbox, affecting torque transfer
- 7 A weak 12-volt battery or poor ground connection causing voltage drops that disrupt sensor readings and module communication



How to diagnose and fix it

- 1 Connect a scan tool and record all stored and pending codes, freeze-frame data, and live torque command versus actual torque values during a test drive
- 2 Visually inspect the motor wiring harness, connectors, and ground points for chafing, corrosion, or loose pins, and repair as needed
- 3 Check the 12-volt battery condition and charging system output, as low voltage can cause false sensor readings
- 4 Verify the motor fluid level and condition if the motor is liquid-cooled or shares fluid with the transmission, and service if contaminated
- 5 Perform a manufacturer-specific actuator or motor calibration procedure using a capable scan tool to relearn torque offsets
- 6 If calibration fails, conduct pinpoint tests on the torque sensor and resolver circuits according to the service manual, including resistance and signal waveform checks
- 7 Replace the faulty torque sensor, resolver, or the drive motor assembly only after confirming a genuine internal fault, and recheck for codes after repair

When the torque sensor lies to the computer

- A common misdiagnosis is replacing the entire drive motor when the real problem is a chafed wire in the harness near the motor connector, which can mimic a failed sensor.
- The code can be set by a weak 12-volt battery or a poor ground connection, so always load-test the battery and check grounds before condemning expensive motor components.
- Some vehicles set P0C1A after a software update or battery replacement because the torque sensor offset was not relearned, and a simple calibration procedure resolves it.
- A binding parking brake or dragging brake caliper can increase load on the drive motor and trigger a torque delivery performance code, so check for mechanical drag elsewhere in the driveline.
- The code does not always mean the motor is failing; it can be an intermittent communication error on the controller area network (CAN) bus that corrupts torque data, so inspect network integrity.

Can I keep driving with P0C1A?

You can usually drive the vehicle to a repair shop, but avoid hard acceleration and heavy loads because the motor may enter a reduced-power mode without warning. If the vehicle feels unsafe or repeatedly enters limp mode, stop driving and have it towed.



Tools that help

- OBD-II scan tool with live data and manufacturer-specific capabilities
- Digital multimeter for circuit and voltage checks
- Oscilloscope for analyzing sensor waveforms
- Battery load tester and charging system tester
- Service manual with wiring diagrams and torque specifications
- Basic hand tools for connector and harness inspection

Reading P0C1A

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
C	Hybrid propulsion.
1A	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 · **P0C1B** Electric/Auxiliary Transmission Fluid Pump Control Module In · **P0C1C** Electric/Auxiliary Transmission Fluid Pump Control Module In

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/p0c1a/>

