

GENERIC · POWERTRAIN

P0A06

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0A06

Motor Electronics Coolant Pump Control Circuit Low

P0A06 indicates that the powertrain control module has detected a low-voltage condition on the control circuit for the motor electronics coolant pump, which is the electric pump that circulates coolant through the hybrid or electric drive motor electronics. The computer monitors the circuit and sets this code when the signal voltage falls below the expected range, often indicating a short to ground, an open circuit, or a faulty pump.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

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 limp mode due to overheating protection for the motor electronics
- Overheating warning message or temperature gauge climbing higher than normal
- Cooling fan running excessively or continuously after the vehicle is shut off
- In rare cases, the vehicle may fail to start or shut down unexpectedly if the pump is completely inoperative

Common causes, most likely first

- 1 Faulty motor electronics coolant pump (worn brushes, seized bearing, or internal short)
- 2 Damaged or corroded wiring harness or connector at the pump
- 3 Open circuit or high resistance in the control circuit, such as a broken wire or poor ground
- 4 Short to ground in the control circuit, often due to chafed insulation
- 5 Failed control module driver for the pump circuit (less common)
- 6 Blown fuse or relay supplying power to the pump circuit

How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related codes in other modules
- 2 Inspect the coolant pump connector and wiring for corrosion, damage, or loose pins
- 3 Measure resistance and voltage on the control circuit to check for opens or shorts
- 4 Test the pump directly with a known-good power source to confirm operation
- 5 Check the fuse and relay for the pump circuit and replace if faulty
- 6 If the circuit tests good, replace the motor electronics coolant pump
- 7 Clear the code and perform a road test to verify the repair



What the code does not always mean

- A low circuit code often results from a poor connection at the pump connector rather than a failed pump, so always inspect the terminals before condemning the pump.
- On some vehicles, the motor electronics coolant pump is controlled by a separate module, and a fault in that module can set this code even when the pump itself is fine.
- The pump may run only under certain conditions, so a lack of pump operation during a quick key-on test does not necessarily indicate a fault.
- Corrosion inside the pump connector can cause intermittent low-voltage codes that appear only in wet or humid conditions.
- Replacing the pump without clearing adaptations or checking for air pockets in the cooling system can lead to repeat codes or overheating.

Can I keep driving with P0A06?

It is generally safe to drive short distances to a repair shop, but avoid heavy acceleration or long trips because a failed pump can cause overheating of the motor electronics and lead to reduced power or damage. If the temperature warning light comes on, stop safely and shut off the engine.

Tools that help

- OBD-II scan tool
- Digital multimeter
- Wiring diagram for the specific vehicle
- Basic hand tools (socket set, screwdrivers)
- Coolant refill kit

Reading P0A06

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

Often seen with

P0A05 Motor Electronics Coolant Pump Control Circuit/Open · **P0A07** Motor Electronics Coolant Pump Control Circuit High · **P0A08** DC/DC Converter Status Circuit · **P0A09** DC/DC Converter Status Circuit Low Input · **P0A0A** High Voltage System Interlock Circuit A



See it working

Watch the animated explainer [Engine Cooling System Trainer: How Engines Stay Cool](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0a06/>

