P2600: COOLANT PUMP "A" CONTROL CIRCUIT OPEN

OVERVIEW

Severity	:	High
DIY Difficulty Level	:	Advanced
Repair Cost	:	**$100-$1500**
Can I Still Drive?	:	**Yes** (Short-term only)

What Does The P2600 Code Mean?

This generic powertrain/engine diagnostic trouble code typically applies to all OBDII equipped engines with electric coolant pumps, but shows up more often in certain hybrids vehicles by Ford, Honda, Nissan and Toyota.

The Coolant Pump A (CP-A) is can usually be found mounted to the front of the engine, on top of the engine, inside the wheel wells or against the bulkhead. The CP-A is operated by an electrical signal from the Powertrain Control Module (PCM).

The PCM receives inputs to determine when and how long it needs to operate the CP-A. These inputs are voltage signals received from coolant temp, intake air temp, engine rpm and air conditioning system pressure sensors. Once the PCM has received these inputs it can modify the signal to the CP-A.

P2600 is typically set because of electrical (CP-A circuit) issues. These cannot be overlooked in the troubleshooting stage, especially when dealing with an intermittent problem.

Troubleshooting steps may vary depending upon manufacturer, type of CP-A and wire colors.

Related coolant pump “A” circuit trouble codes:

- P2601 – Coolant Pump “A” Control Circuit Range/Performance
- P2602 – Coolant Pump “A” Control Circuit Low

- P2603 – Coolant Pump “A” Control Circuit High

What Are The Symptoms Of The P2600 Code?

Symptoms of a P2600 code may include:

- Malfunction Indicator Light On
- Overheating
- A/C system not functioning properly

What Are The Potential Causes Of The P2600 Code?

Potential causes for this code to set are:

- Open in the circuit to the Coolant Pump – likely
- Failed Coolant Pump – failed open circuit electrically – likely
- Failed PCM – unlikely

How Can You Fix The P2600 Code?

Step 1

A good starting point is always to check for technical service bulletins (TSB) for your particular vehicle. Your issue may be a known issue with a known fix put out by the manufacturer and can save you time and money during diagnosis.

Step 2

Next, locate the Coolant Pump B (CP-A) on your particular vehicle. This pump is usually found mounted to the front of the engine, on top of the engine, inside the wheel wells or against the bulkhead. Once located, visually inspect the connector and wiring. Look for scraping, rubbing, bare wires, burn spots or melted plastic.

Pull the connector apart and carefully inspect the terminals (the metal parts) inside the connector. See if they look burned or have a green tint indicating corrosion. Use electrical contact cleaner and a plastic bristle brush if cleaning of the terminals is needed. Let dry and apply electrical grease where the terminals contact.

Step 3

If you have a scan tool, clear the diagnostic trouble codes from memory, and see if P2600 code returns. If it does not, then the connections were most likely your problem.

For this particular code, this is the most common area of concern, as are the relays / connections to

the relays, with a pump failure second.

If the code does return, we will need to test the pump and the associated circuits. Typically, there are 2 wires at each coolant pump. First, disconnect the harness going to the coolant pump. With a Digital Volt Ohm Meter (DVOM), connect one lead of the meter to one terminal of the pump.

Connect the remaining meter lead to the other pump terminal. It should not be open or shorted. Verify the resistance specifications for your particular vehicle. If the pump motor is either open or shorted (infinite resistance or no resistance/0 ohms), replace the coolant pump.

Step 4

If that test passes, with a DVOM, check to make sure you have 12V to the coolant pump power supply circuit (Red lead to the pump power supply circuit, black lead to a good ground). With a scan tool that can activate the coolant pump, turn on the coolant pump. If there is no 12 volts to the pump, repair the wiring from the PCM or relay to the pump, or possibly a bad PCM.

Step 5

If that's OK, check to make sure you have a good ground at the coolant pump. Connect a test light to 12V battery positive (red terminal) and touch the other end of the test light to the ground circuit going to the Coolant pump circuit ground. Using the scan tool to actuate the coolant pump, see if the test light comes on each time the scan tool actuates the pump. If the test light does not light up, this would indicate the problem circuit. If it does light up, wiggle the wiring harness going to the pump to see if the test light flickers, indicating an intermittent connection.

Step 6

If all prior tests have passed and you continue to get a P2600, this would most likely indicate a failed coolant pump, although a failed PCM could not be ruled out until the coolant pump had been replaced. If unsure, seek assistance from a trained automotive diagnostician. PCMs must be programmed, or calibrated to the vehicle in order to be installed correctly.

Similar other coolant pump codes include P261A, P261B, P261C, and P261D.

Severity Description

Severity is usually severe due to its impact on the cooling system. Because this is usually an electrical failure, the PCM cannot fully compensate for it. Partial compensation usually means that the cooling fans operate all the time (100% duty cycle).

Reference Sources

P2600 Coolant Pump A Control Circuit Open, OBD-Codes.