P0245: TURBOCHARGER WASTEGATE SOLENOID A LOW

OVERVIEW

Severity	:	Medium
DIY Difficulty Level	:	Advanced
Repair Cost	:	**$50-$100**
Can I Still Drive?	:	**Yes** (Short-term only)

What Does The P0245 Code Mean?

The Powertrain Control Module (PCM) controls the boost pressure in a gasoline or diesel engine by controlling the output circuit to the “A” wastegate/boost pressure control solenoid.

Depending upon how the manufacturer activates the solenoid, when the PCM provides a power supply or a ground to the solenoid to energize it and the PCM notices that there is no voltage at any time to the circuit when there should be (de-energized), the PCM will set code P0245. This code is considered to be an electrical circuit fault only.

Troubleshooting steps may vary depending upon manufacturer, type of wastegate/boost pressure control, and wire colors to the control solenoid.

What Are The Symptoms Of The P0245 Code?

Symptoms of a P0245 engine code may include:

- Malfunction Indicator Light On
- Instrument cluster message alerting driver to condition
- Lack of power

What Are The Potential Causes Of The P0245 Code?

Potential causes for this code to set are:

- Open in the control circuit (ground circuit) between the wastegate/boost pressure control solenoid A and the PCM
- Open in the power supply circuit between the wastegate/boost pressure control solenoid A and the PCM
- Short to ground in the power supply circuit to the wastegate/boost pressure control solenoid A
- Wastegate/boost pressure control solenoid A faulty
- Possibly a PCM has failed (highly unlikely)

How Can You Fix The P0245 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 “A” wastegate/boost pressure control solenoid on your particular vehicle. Once located, visually inspect the connectors and wiring. Look for scraping, rubbing, bare wires, burn spots or melted plastic. Pull the connectors apart and carefully inspect the terminals (the metal parts) inside the connectors. 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.

The most common failure is due to connection issues.

If you have a scan tool, clear the diagnostic trouble codes from memory, and see if P0245 returns. If it does not, then the connections were most likely your problem.

Step 3

If the code does return, we will need to test the solenoid and its associated circuits. Typically, there are 2 wires at the wastegate/boost pressure control solenoid. First, disconnect the harness going to the wastegate/boost pressure control solenoid. With a Digital Volt Ohm Meter (DVOM), connect one lead of the meter to one terminal of the solenoid. Connect the remaining meter lead to the other solenoid terminal. It should not be open or shorted. Verify the resistance specifications for your particular vehicle. If the solenoid is either open or shorted (infinite resistance or no resistance/0

ohms), replace the solenoid.

Step 4

If that test passes, with a DVOM, check to make sure you have 12V on the wastegate/boost pressure control solenoid power supply circuit (Red lead to the solenoid power supply circuit, black lead to a good ground). Insure ignition is on. If there is no 12 volts to the solenoid, or if there is 12 volts when the ignition is turned off, repair the wiring from the PCM or relay to the solenoid, or possibly a bad PCM.

If that's OK, check to make sure you have a good ground at the wastegate/boost pressure control solenoid. 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 Wastegate/boost pressure control solenoid circuit ground. Using the scan tool to actuate the wastegate/boost pressure control solenoid, see if the test light come on each time the scan tool actuates the solenoid. 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 solenoid to see if the test light flickers, indicating an intermittent connection.

Step 5

If all tests have passed so far, and you continue to get a P0245 code, this would most likely indicate a failed wastegate/boost pressure control solenoid, although a failed PCM could not be ruled out until the solenoid 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.

Reference Sources

Diagnostic Trouble Code (DTC) Charts and Descriptions for P0245 - Page 52.