

GM · POWERTRAIN

P1653

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1653 · GM

Oil Level Lamp Control Circuit

P1653 on GM vehicles indicates that the powertrain control module (PCM) has detected a fault in the control circuit for the oil level indicator lamp, which is the light that warns the driver when the engine oil level is low. The PCM monitors the circuit for expected voltage changes when it commands the lamp on or off, and it sets this code when the circuit does not respond as expected, often due to an open, short, or excessive resistance in the wiring or the lamp itself.

SYSTEM

Powertrain

CODE TYPE

GM specific

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Computer and output circuits

Symptoms you may notice

- The oil level warning lamp may fail to illuminate when the ignition is first turned on, so you never see the bulb check.
- The oil level lamp may stay illuminated continuously even when the oil level is correct.
- The lamp may flicker or turn on intermittently while driving over bumps or when the engine is idling.
- Often no symptoms besides the warning light, and the engine may run normally with no drivability issues.
- If the lamp is stuck on, you might mistakenly add oil and overfill the engine, leading to foaming and poor lubrication.
- In some cases, a related oil level sensor code may also be stored, but P1653 itself does not affect engine performance.

Common causes, most likely first

- 1 A burned-out or faulty oil level indicator bulb or light-emitting diode (LED) in the instrument cluster.
- 2 An open or high-resistance connection in the control circuit wiring between the PCM and the instrument cluster, often due to a chafed wire or corroded connector.
- 3 A short to ground or short to voltage in the control circuit, which can command the lamp on or off incorrectly.
- 4 A faulty instrument cluster printed circuit board or cluster module that does not properly process the lamp command.
- 5 A defective PCM driver circuit for the oil level lamp, though this is less common than wiring or cluster issues.
- 6 A poor ground connection at the instrument cluster or at the PCM, causing erratic lamp operation.
- 7 Aftermarket accessories or alarm systems improperly tapped into the cluster wiring, introducing interference or a short.



How to diagnose and fix it

- 1 Verify the oil level is correct with the dipstick and confirm the lamp operation during the bulb check; if the lamp never lights, suspect the bulb or cluster first.
- 2 Check for any aftermarket wiring or accessories near the instrument cluster and PCM, and disconnect them temporarily to see if the code returns.
- 3 Inspect the wiring harness between the PCM and the instrument cluster for chafing, corrosion, or loose pins, focusing on the specific oil level lamp control circuit.
- 4 Test the control circuit with a digital multimeter for continuity, short to ground, and short to voltage, comparing readings to the factory service information.
- 5 If the circuit tests good, remove the instrument cluster and test the oil level lamp bulb or LED directly; replace the bulb or cluster as needed.
- 6 If the lamp and wiring are confirmed good, check the PCM driver output with a scan tool and oscilloscope, and replace the PCM only if the driver is faulty.
- 7 Clear the code and perform a road test with several ignition cycles to confirm the repair and ensure the lamp operates correctly under all conditions.

Before you replace the instrument cluster

- A common mistake is replacing the instrument cluster when the real problem is a chafed wire in the harness near the steering column or under the dash, so always perform a wiggle test on the harness while watching the lamp.
- The oil level lamp control circuit is often shared with other indicator lamps in the cluster, so a single faulty ground or power feed can cause multiple lamp issues that may not all set codes.
- On some GM vehicles, the oil level lamp is controlled by the body control module (BCM) over a serial data bus rather than directly by the PCM, so a communication fault can set P1653 even when the lamp circuit itself is intact.
- A weak or failing battery or charging system can cause voltage spikes that confuse the PCM and set false P1653 codes, so always check battery voltage and connections before diving into circuit diagnostics.
- After replacing a bulb or cluster, the PCM may need a relearn procedure or several drive cycles before the code clears permanently, so do not assume the repair failed if the light stays on briefly.

Can I keep driving with P1653?

You can continue driving with P1653 because it only affects the oil level warning lamp and does not impact engine operation or safety. However, since the lamp may not warn you of low oil, check the oil level manually with the dipstick at every fuel stop until the fault is repaired.



Tools that help

- Digital multimeter with backprobe pins
- Scan tool with bidirectional control capability
- Factory service information or wiring diagrams
- Trim removal tools for instrument cluster access
- Test light or LED test lamp
- Oscilloscope for PCM driver testing

Reading P1653

P	Powertrain: engine, transmission and emissions.
1	Manufacturer-specific code (GM): its meaning depends on the make.
6	Computer and output circuits.
53	The exact fault within that area.

Often seen with

P1652 Check DTC Memory Of Transmissions ECU · **P1654** Check DTC Memory Of Control Panel ECU · **P1652** Idle Air Control Valve Control Circuit · **P1652** Power Steering Pressure Switch Circuit · **P1652** Powertrain Induced Chassis Pitch Output Circuit · **P1654** Service Throttle Soon Lamp Control Circuit · **P0522** Engine Oil Pressure Sensor/Switch Circuit Low Voltage · **P0523** Engine Oil Pressure Sensor/Switch Circuit High Voltage · **P0524** Engine Oil Pressure Too Low

See it working

Watch the animated explainer [Turbocharger Trainer: Boost, Wastegate and Intercooler](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1653/>

