

GM · POWERTRAIN

P1666

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1666 · GM

Driver 3 Line 6

P1666 on GM vehicles means the powertrain control module (PCM) has detected an electrical fault on the driver 3 line 6 circuit, which is a dedicated serial data line used for communication with a specific module or device. The PCM monitors the voltage and current on this line and sets the code when the signal is out of range, shorted, or missing entirely.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	GM specific	Medium	Professional	Computer and output circuits

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the fault is intermittent or affects a non-critical module.
- A dead or intermittent accessory that shares the driver 3 line 6 circuit, such as a body control module or instrument panel cluster function.
- Multiple unrelated warning lights or communication codes if the fault disrupts a shared data bus segment.
- The engine may start and run normally, but some convenience features or module-to-module communications may fail.
- In rare cases, a no-start or stall condition if the affected line is part of a critical communication path.

Common causes, most likely first

- A chafed, corroded, or broken wire on the driver 3 line 6 circuit, often near a connector or where the harness passes through a bulkhead.
- A faulty module or device connected to that line that is internally shorted and pulling the signal down.
- Water intrusion or corrosion in a connector that carries the driver 3 line 6 circuit, especially in door jamb or underhood areas.
- A poor ground connection at the module or device that uses this line, causing erratic voltage on the circuit.
- A failed PCM driver circuit itself, though this is less common than wiring or module faults.
- Aftermarket accessories improperly tapped into the data line, introducing noise or a short.



How to diagnose and fix it

- 1 Connect a scan tool and record all stored codes and freeze-frame data to confirm P1666 is active and not a history code from a past event.
- 2 Obtain the factory wiring diagram for the specific GM model and year to identify every module and connector on the driver 3 line 6 circuit.
- 3 Visually inspect the harness and connectors along that circuit for chafing, corrosion, water intrusion, or loose pins, starting at the most accessible points.
- 4 Disconnect each module on the line one at a time and recheck the code; if the code clears with a module disconnected, that module is the likely culprit.
- 5 Measure resistance and voltage on the line with a digital multimeter (DMM) to check for shorts to ground, shorts to power, or an open circuit, comparing to factory specifications.
- 6 Repair or replace the faulty wire, connector, or module as identified, then clear the code and verify the repair with a test drive and a scan tool recheck.

What the driver 3 line 6 circuit really does

- Driver 3 line 6 is not a generic OBD-II code; it is part of GM's proprietary serial data bus, so a generic scan tool may show it but cannot tell you which module is at fault without factory service information.
- A common misdiagnosis is replacing the PCM first, when the actual fault is often a corroded connector or a shorted module elsewhere on the line that drags the whole circuit down.
- This code can be set by a module that is not even related to engine operation, such as a body control module or a seat module, so do not assume the engine is the problem.
- Intermittent P1666 codes often appear after a rainstorm or car wash, pointing to water intrusion in a connector that you may not find unless you inspect the harness in wet conditions.
- If multiple communication codes are stored alongside P1666, the fault is likely a shared power or ground issue rather than the data line itself, so check powers and grounds before condemning any module.

Can I keep driving with P1666?

You can usually drive the vehicle with P1666 set, but avoid long trips or relying on features that may be affected by the communication fault, and address the code promptly to prevent a more serious no-start or safety system failure.

Tools that help

- Factory service information with wiring diagrams for the specific GM model
- Digital multimeter (DMM) with back-probing pins
- Scan tool capable of reading GM manufacturer-specific codes and live data
- Wire terminal removal tools and electrical contact cleaner
- Test light or logic probe for quick circuit checks



Reading P1666

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

Often seen with

P1665 Power Stage Group 'A' · **P1665** Driver 3 Line 5 · **P1667** Reverse Inhibit Solenoid Control Circuit · **P1667** CI Circuit Malfunction · **U0100** Lost Communication With ECM/PCM A · **U0121** Lost Communication With Anti-Lock Brake System (ABS) Control · **U0140** Lost Communication With Instrument Panel Cluster

See it working

Watch the animated explainer [EV Powertrain Trainer: How an Electric Car Drives](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1666/>

