

MAZDA · POWERTRAIN

P1680

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1680 · Mazda

Metering Oil Pump Failure

P1680 on a Mazda indicates the powertrain control module (PCM) has detected a failure in the metering oil pump system, which delivers precise amounts of oil to the engine's mechanical components. The PCM monitors the pump's electrical circuit and feedback signal, and sets this code when the signal is out of range or the pump does not respond as commanded.

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

Symptoms you may notice

- Illumination of the check engine light, often with no other symptoms
- Rough idle or hesitation during acceleration
- Reduced engine performance or power loss
- Increased oil consumption or visible oil leaks
- Unusual engine noises such as ticking or knocking
- Difficulty starting or stalling shortly after start

Common causes, most likely first

- 1 Faulty metering oil pump
- 2 Damaged or corroded wiring or connectors in the pump circuit
- 3 Blown fuse or faulty relay supplying power to the pump
- 4 Failed oil metering pump control module
- 5 Clogged oil passages or pick-up screen
- 6 Low oil level or degraded oil quality
- 7 PCM software issue or internal fault

How to diagnose and fix it

- 1 Check oil level and condition; top off or replace oil as needed
- 2 Inspect the metering oil pump fuse and relay; replace if blown or faulty
- 3 Visually inspect wiring and connectors at the pump for damage or corrosion; repair as necessary
- 4 Perform a resistance and voltage test on the pump circuit using a multimeter
- 5 Command the pump with a scan tool to verify operation and listen for activation
- 6 If the pump fails to respond, remove and bench-test the pump; replace if defective
- 7 After repair, clear the code and perform a road test to confirm the fix



Metering oil pump faults often misdiagnosed

- A clogged oil passage can mimic a failed pump, so always verify oil pressure and flow before replacing the pump.
- The metering oil pump on some Mazda engines is driven by the camshaft, and a worn drive gear can cause the code without an electrical fault.
- Intermittent connections at the pump connector are a common cause that may not appear during a simple visual inspection; wiggle-test the harness while monitoring live data.
- This code can be set by a low oil level that causes aeration, so always check the dipstick before condemning electrical components.
- Some aftermarket oil filters with incorrect flow characteristics can affect oil pressure and trigger this code, so use OEM-specified filters.

Can I keep driving with P1680?

It is not safe to continue driving with this code because the engine may not receive proper lubrication, leading to accelerated wear or catastrophic failure. Avoid driving and have the vehicle towed to a repair facility for diagnosis.

Tools that help

- OBD-II scan tool with bidirectional control
- Digital multimeter
- Oil pressure gauge
- Socket and wrench set
- Vehicle service manual

Reading P1680

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

Often seen with

P1681 Control Module Programming Not Finished · **P1681** A/T FI Signal A Low Input · **P1682** A/T FI Signal A High Input · **P1682** Metering Oil Pump Failure · **P1683** Metering Oil Pump Temperature Sensor Circuit · **P1681** A/T FI Signal A Low Input · **P1682** A/T FI Signal A High Input · **P1681** Driver 5 Line 1 · **P1682** Ignition 1 Switch Circuit 2 · **P1683** Driver 5 Line 3 · **P1681** No Instrument Panel Cluster CCD J1850 Messages Received · **P1682** Charging System Voltage Too Low · **P1683** Speed Control Power Relay Or Speed Control 12 Volt Driver Ci · **P0011** 'A' Camshaft Position - Timing Over-Advanced or System Perfo · **P0524** Engine Oil Pressure Too Low

See it working

Watch the animated explainer [How a Radiator Fan Relay Circuit Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/mazda-p1680/>

