

FORD · POWERTRAIN

P1380

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1380 · Ford

VCT Solenoid Valve Circuit Short or Open

P1380 on Ford vehicles means the powertrain control module (PCM) has detected an open or short circuit in the electrical path for the variable camshaft timing (VCT) solenoid valve. The PCM monitors the solenoid's control circuit and flags this code when the expected voltage or current is outside the normal range, indicating a wiring or solenoid fault rather than a mechanical timing issue.

SYSTEM

Powertrain

CODE TYPE

Ford specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

**Ignition system
and misfire**

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or stumbling, especially when the engine is cold
- Reduced engine performance and poor fuel economy due to incorrect camshaft timing
- Possible engine hesitation or lack of power during acceleration
- In some cases, the engine may enter limp mode or exhibit hard starting

Common causes, most likely first

- 1 Faulty VCT solenoid valve (open or shorted internally)
- 2 Damaged or disconnected electrical connector at the VCT solenoid
- 3 Broken, chafed, or corroded wires in the VCT solenoid circuit
- 4 PCM internal circuit fault (rare but possible)
- 5 Oil sludge or debris blocking the solenoid, causing electrical resistance changes (though this typically sets a different code)

How to diagnose and fix it

- 1 Inspect the VCT solenoid connector for loose pins, corrosion, or damage; clean or repair as needed
- 2 Check the solenoid's resistance with a multimeter and compare to factory specification; replace if out of range
- 3 Perform a wiggle test on the wiring harness while monitoring solenoid resistance or voltage to detect intermittent opens
- 4 Check for power and ground signals at the solenoid connector with the key on and engine cranking; repair wiring if signals are missing
- 5 Verify continuity and resistance of the control circuit between the PCM and solenoid; repair any open or short
- 6 If all electrical checks pass, substitute a known-good VCT solenoid and clear the code to see if it returns
- 7 As a last resort, diagnose the PCM for internal driver faults and replace if necessary



Don't overlook the connector and wiring

- A loose or corroded connector at the VCT solenoid is a frequent cause of P1380 that is often missed during a quick visual inspection.
- The code can be set by a short to ground or power in the harness, which may not affect drivability until the circuit completely fails.
- Replacing the VCT solenoid without checking the circuit first can lead to a repeat failure if the underlying wiring issue remains.
- On some Ford engines, oil contamination can cause the solenoid to draw excessive current, mimicking a short and setting P1380.
- P1380 is strictly an electrical circuit code; mechanical timing problems or low oil pressure will typically set different codes like P0011 or P0021.

Can I keep driving with P1380?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration or towing because incorrect camshaft timing can reduce engine power and may lead to further damage. If the engine runs very poorly or stalls, stop driving and have it towed.

Tools that help

- OBD-II scanner with live data capability
- Digital multimeter
- Wire probe set
- Electrical contact cleaner
- Factory service information for circuit specifications

Reading P1380

P	Powertrain: engine, transmission and emissions.
1	Manufacturer-specific code (Ford): its meaning depends on the make.
3	Ignition system and misfire.
80	The exact fault within that area.

Often seen with

P1381 CYP Sensor A Intermittent Interruption · **P1390** Timing Belt Skipped One Tooth Or More · **P1390** Octane Adjust Shorting Bar Out Or Circuit Open · **P1381** CYP Sensor A Intermittent Interruption · **P1381** Misfire Detected No Communication with Brake Control Module · **P1390** Wheel Speed Sensor 1 G-Sensor Circuit · **P1381** Cam Timing Advance is Excessive · **P1383** Cam Timing Advance is Excessive · **P1390** Octane Adjust Out of Self-Test Range · **P1381** Misfire Detected No Communication with Brake Control Module · **P1390** Timing Belt Skipped One Tooth Or More · **P0010** 'A' Camshaft Position Actuator Circuit (Bank 1) · **P0011** 'A' Camshaft Position - Timing Over-Advanced or System Perfo

See it working

Watch the animated explainer **Four-Stroke Engine Cutaway: Intake to Exhaust** on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1380/>

