

CHRYSLER · POWERTRAIN

P1336

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1336 · Chrysler

Crankshaft Position (CKP) System Variation Not Learned

P1336 means the powertrain control module has not successfully completed the crankshaft position variation learning procedure, so it cannot reliably correlate the crank and cam signals for misfire detection and sequential fuel timing. The computer is not reporting a failed sensor; it is reporting that the learned correction value for the crankshaft target wheel is missing or invalid.

SYSTEM

Powertrain

CODE TYPE

Chrysler 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 symptoms besides the warning light
- Rough idle or unstable engine speed on some Chrysler engines after battery or PCM replacement
- Intermittent misfire or hesitation that may not set a specific cylinder misfire code
- Hard starting or a crank-no-start condition if the learned variation is completely absent
- Reduced fuel economy or poor driveability during the relearn period
- A stored P1336 that returns immediately after clearing because the learn procedure was never run

Common causes, most likely first

- 1 Crankshaft position variation learn procedure was never performed after PCM replacement, battery disconnect, or engine repair
- 2 Damaged or contaminated crankshaft target wheel with debris, corrosion, or a bent tooth
- 3 Worn or loose crankshaft position sensor air gap or a failing CKP sensor signal
- 4 Camshaft position sensor signal erratic or out of sync, preventing the PCM from completing the learn
- 5 Wiring harness damage or poor ground at the CKP or CMP sensor circuit
- 6 Mechanical timing chain or belt misalignment causing the crank and cam correlation to fall outside the learn window
- 7 PCM software or calibration issue that prevents the variation learn from storing



How to diagnose and fix it

- 1 Verify battery voltage and clear all other codes before attempting the variation learn procedure
- 2 Inspect the crankshaft position sensor and target wheel for debris, damage, or incorrect air gap
- 3 Check the CKP and CMP sensor wiring and grounds for continuity and corrosion
- 4 Confirm camshaft and crankshaft timing marks are aligned per Chrysler service information
- 5 Perform the manufacturer-specified crankshaft variation learn procedure with a capable scan tool
- 6 If the learn fails, scope the CKP and CMP signals to confirm clean, synchronized waveforms
- 7 Replace the faulty sensor or repair the target wheel, then repeat the learn procedure and verify no return of P1336

Why the variation learn will not complete

- A perfectly good CKP sensor will still set P1336 if the target wheel has a single bent tooth or metallic debris stuck to it, because the PCM cannot establish a clean reference edge.
- Technicians often replace the crankshaft sensor first, but the code frequently returns because the camshaft sensor signal is erratic and the PCM refuses to complete the correlation learn.
- P1336 can appear after a simple battery replacement on some Chrysler vehicles because the learned variation value is volatile and must be re-established with a scan tool.
- A weak or failing camshaft position sensor may not set its own code but will still block the crank variation learn, so both signals must be verified together.
- If the engine has a worn timing chain, the crank-to-cam relationship may drift just enough that the learn window is exceeded without any obvious driveability complaint.

Can I keep driving with P1336?

The vehicle is generally safe to drive to a repair shop because P1336 does not command a limp mode on most Chrysler applications, but avoid heavy load and prolonged driving until the learn is completed. If the engine is hard starting, misfiring, or stalling, stop driving and have it diagnosed immediately.

Tools that help

- OBD-II scan tool with Chrysler-specific bidirectional and relearn capability
- Digital multimeter for sensor circuit and ground testing
- Oscilloscope for CKP and CMP waveform analysis
- Feeler gauge or sensor air gap tool
- Basic hand tools for sensor and target wheel inspection



Reading P1336

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

Often seen with

P1391 CMP Sensor Bank 2 Short To Ground · **P1391** Intermittent Loss Of CMP Or CKP Sensor Signals · **P1391** Wheel Speed Sensor 1 G-Sensor Circuit Performance · **P1391** Glow Plug Circuit Low Input Bank 1 · **P1391** Intermittent Loss of CMP Or CKP · **P0016** Crankshaft/Camshaft Position Correlation (Bank 1 Sensor A) · **P0300** Random/Multiple Cylinder Misfire Detected · **P0335** Crankshaft Position Sensor A Circuit Malfunction · **P0340** Camshaft Position Sensor A Circuit Malfunction (Bank 1)

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/chrysler-p1336/>

