

GENERIC · POWERTRAIN

P0586

OBD-II TROUBLE CODE

P0586

Cruise Control Vent Control Circuit/Open

P0586 indicates that the powertrain control module (PCM) has detected an open circuit or excessive resistance in the cruise control vent control circuit. The vent solenoid, which allows the cruise servo to release vacuum and disengage the throttle, is not receiving the expected voltage or ground, so the PCM cannot verify proper vent operation.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Cruise control may not engage at all when you press the set button.
- Cruise control may engage but fail to disengage when you press the brake pedal or cancel button.
- The cruise control indicator light may flash or stay off entirely.
- Often no symptoms besides the warning light, especially if the vent solenoid is only intermittently open.
- In rare cases, the engine may idle higher than normal if the vent circuit affects vacuum release.
- The cruise control may disengage abruptly while driving over bumps or when the steering wheel is turned.

Common causes, most likely first

- Broken, chafed, or corroded wiring in the cruise control vent circuit, often near the steering column or under the hood.
- Failed cruise control vent solenoid, where the internal coil opens or the connector pins lose tension.
- Loose or disconnected electrical connector at the vent solenoid or at the cruise control module.
- Open circuit inside the cruise control servo assembly, requiring replacement of the servo.
- Faulty brake pedal position switch or clutch switch that shares a ground or signal with the vent circuit.
- Corrosion or water intrusion in the cruise control wiring harness, particularly at firewall pass-throughs.
- Rarely, a failed powertrain control module (PCM) driver for the vent control circuit.



How to diagnose and fix it

- 1 Inspect the cruise control vent solenoid connector for loose pins, corrosion, or water intrusion and clean or repair as needed.
- 2 Check the wiring harness from the PCM to the vent solenoid for continuity and resistance, looking for chafed or broken wires.
- 3 Test the vent solenoid with a multimeter for coil resistance and compare to the manufacturer's specification.
- 4 Verify that the brake pedal switch and clutch switch (if equipped) are functioning correctly and not holding the vent circuit open.
- 5 Check for technical service bulletins (TSBs) or known wiring issues for your specific vehicle make and model.
- 6 If the solenoid tests bad, replace the cruise control vent solenoid or servo assembly as required.
- 7 Clear the diagnostic trouble code (DTC) and perform a road test to confirm the cruise control engages and disengages properly.

Before you replace the cruise servo

- A common oversight is assuming the vent solenoid itself has failed when the real problem is a corroded connector pin or a broken wire inside the steering column from frequent tilt-wheel adjustment.
- The vent circuit often shares a ground with the brake pedal switch, so a faulty brake switch can set P0586 even though the cruise control seems to work intermittently.
- Some vehicles use a single cruise control module that combines the vent and vacuum functions; an open in the vent coil may not prevent cruise from engaging but will prevent quick disengagement, which is a safety concern.
- P0586 can be set by a low battery or charging system issue that causes the PCM to see an unexpected voltage drop on the vent circuit during self-test.
- After repairing the circuit, always clear the code and perform a full cruise control functional test including brake and cancel inputs, because the PCM may not re-enable cruise until it sees a complete vent cycle.

Can I keep driving with P0586?

You can generally continue driving, but avoid using cruise control until the fault is repaired because a stuck vent can prevent the system from disengaging promptly. If the cruise control fails to disengage with the brake pedal, stop using it immediately and have the vehicle serviced.

Tools that help

- Digital multimeter
- Wire probe set
- Electrical contact cleaner
- Vehicle-specific service information (wiring diagrams)
- Scan tool with bidirectional control capability



Reading P0586

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 5** Vehicle speed, idle control and auxiliary inputs.
- 86** The exact fault within that area.

Often seen with

P0565 Cruise Control On Signal · **P0566** Cruise Control Off Signal · **P0585** Cruise Control Multi-Function Input 'A'/'B' Correlation · **P0587** Cruise Control Vent Control Circuit Low · **P0588** Cruise Control Vent Control Circuit High

See it working

Watch the animated explainer [How a Boxer Engine Works: Flat Engine Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0586/>

