

GENERIC · POWERTRAIN

P0587

OBD-II TROUBLE CODE

P0587

Cruise Control Vent Control Circuit Low

P0587 means the cruise control module has detected that the vent control circuit for the cruise servo is at a lower voltage than expected, typically a short to ground or an open circuit on the vent solenoid's control wire. The computer commands the vent valve to release vacuum and disengage cruise, but the feedback signal stays low, so it flags the circuit as faulty.

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 will not engage or drops out intermittently
- The cruise control warning light or a general powertrain warning illuminates
- The cruise control may disengage abruptly when the vent valve is commanded
- Often no symptoms besides the warning light, with cruise still working normally
- In some vehicles, the cruise control set speed cannot be maintained on grades
- A faint click or no click from the cruise servo when the vent is commanded

Common causes, most likely first

- Damaged or corroded wiring harness between the cruise control module and the vent solenoid
- Failed vent solenoid coil inside the cruise control servo
- Poor electrical connection at the vent solenoid or cruise module connector
- Short to ground on the vent control circuit due to chafed insulation
- Failed cruise control module driver circuit for the vent solenoid
- Water intrusion into the cruise servo or connector causing corrosion
- Aftermarket alarm or accessory wiring tapped into the cruise circuit

How to diagnose and fix it

- Inspect the cruise servo and vent solenoid connectors for corrosion, water intrusion, or loose pins
- Check the vent solenoid circuit for continuity and short to ground with a digital multimeter
- Verify battery voltage and ground at the cruise control module before condemning any component
- Command the vent solenoid with a scan tool and listen for an audible click to confirm circuit operation
- Repair or replace any damaged wiring, terminals, or connectors found during inspection
- Replace the cruise control servo or vent solenoid if the coil or driver circuit is proven faulty
- Clear the code and perform a road test to confirm the cruise control engages and disengages correctly



What the vent circuit really does

- The vent solenoid releases vacuum from the cruise servo to disengage cruise; a low circuit can leave cruise stuck engaged if the valve fails closed, which is a safety concern.
- Many technicians replace the cruise servo only to find a chafed wire behind the engine or near the pedal assembly causing the low voltage.
- A weak or failing battery or charging system can cause spurious low-voltage codes on the cruise circuit, so always check system voltage first.
- Aftermarket cruise control kits or alarm systems tapped into the vent wire are a common hidden cause of P0587 on older vehicles.
- The code can set intermittently from a poor ground at the cruise module even when the vent solenoid itself tests good.

Can I keep driving with P0587?

You can usually drive the vehicle, but avoid using cruise control until the fault is repaired because a stuck vent valve could prevent cruise from disengaging. If cruise engages and will not release, pull over safely and shut off the engine.

Tools that help

- Digital multimeter
- Scan tool with bidirectional cruise control commands
- Wiring diagram for the cruise control circuit
- Trim removal tools for accessing harness routing
- Test light or jumper wires

Reading P0587

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.
87	The exact fault within that area.

Often seen with

P0565 Cruise Control On Signal · **P0566** Cruise Control Off Signal · **P0586** Cruise Control Vent Control Circuit/Open · **P0588** Cruise Control Vent Control Circuit High · **P0589** Cruise Control Multi-Function Input 'B' Circuit



See it working

Watch the animated explainer [Engine Cooling System Trainer: How Engines Stay Cool](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0587/>

