

GENERIC · CHASSIS

C004E

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

C004E

Brake System Pressure Control Valve Actuator Stuck

C004E means the electronic brake control module has commanded the brake pressure control valve actuator to move, but the actuator did not reach the commanded position within the expected time or current window. The module detects a stuck actuator by comparing commanded valve position or motor current against feedback from the pressure control circuit.

SYSTEM

Chassis

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Brakes, steering and suspension

Symptoms you may notice

- Anti-lock brake system (ABS) warning light illuminated on the dashboard
- Traction control or stability control warning light on, often together with the ABS light
- Reduced or disabled ABS and stability control functions while the light is on
- A brake pedal that feels firmer, softer, or different during hard stops
- Pulsing or dragging sensation from one wheel during braking in some cases
- Often no symptoms besides the warning light, with normal base braking still available

Common causes, most likely first

- 1 Brake pressure control valve actuator mechanically stuck or seized from contamination or corrosion
- 2 Sticking valve spool or solenoid armature inside the hydraulic control unit
- 3 Debris or degraded brake fluid blocking the valve passage
- 4 Open, shorted, or high-resistance wiring to the pressure control valve actuator
- 5 Corroded or loose connector pins at the hydraulic control unit or actuator harness
- 6 Failed pressure control valve solenoid coil or internal actuator motor
- 7 Internal fault in the electronic brake control module driver circuit



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for C004E before clearing anything
- 2 Inspect the hydraulic control unit connector and actuator harness for corrosion, chafing, and loose pins
- 3 Measure actuator circuit resistance and check for shorts to ground or power against the manufacturer's specification
- 4 Command the pressure control valve actuator with a bidirectional scan tool and watch for feedback or current deviation
- 5 Flush and replace brake fluid if contamination or moisture is suspected, then retest actuator operation
- 6 Replace the brake pressure control valve actuator or hydraulic control unit if the actuator remains stuck after electrical and fluid checks
- 7 Clear codes, perform the required ABS calibration or bleed procedure, and verify the code does not return on a road test

Why a stuck valve is not always the valve

- A weak battery or low charging voltage can cause the control module to log a stuck actuator code because the driver circuit cannot deliver commanded current.
- Corroded ground straps near the hydraulic control unit are a commonly missed cause of actuator feedback faults that mimic a failed valve.
- The code can set intermittently from a sticking valve that only binds when brake fluid is cold or contaminated, so a single clear-and-retest may hide the fault.
- Replacing the hydraulic control unit without checking actuator circuit resistance first often repeats the same code on the new part.
- A binding brake caliper or collapsed brake hose on the same hydraulic circuit can load the valve and set this code even though the valve itself is healthy.

Can I keep driving with C004E?

The vehicle usually retains normal base braking, but ABS and stability control are disabled while the light is on, so avoid hard stops, slippery surfaces, and towing until the fault is repaired. If the brake pedal feels abnormal or the vehicle pulls during braking, stop driving and have it inspected immediately.

Tools that help

- Bidirectional scan tool with ABS actuator test capability
- Digital multimeter with resistance and current measurement
- Manufacturer wiring diagram for the ABS hydraulic control unit circuit
- Brake fluid tester and pressure bleeder
- Basic hand tools and terminal pick set



Reading C004E

- C** Chassis: brakes, steering and suspension.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 0** Brakes, steering and suspension.
- 4E** The exact fault within that area.

Often seen with

C0040 Left Rear Wheel Speed Sensor Circuit · **C0045** Left Rear Wheel Speed Sensor Circuit Malfunction · **C0050** Right Rear Wheel Speed Sensor Circuit Malfunction · **C0110** ABS Pump Motor Circuit Malfunction · **U0121** Lost Communication With Anti-Lock Brake System (ABS) Control

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/c004e/>

