

GENERIC · CHASSIS

C0622

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

C0622

Variable Effort Steering Lock/Safety Actuator Control Circuit High

C0622 indicates that the control module for the variable effort steering system has detected an abnormally high voltage on the circuit that powers the steering lock or safety actuator. This actuator is responsible for engaging or disengaging a mechanical lock or safety function within the steering column, and a high voltage condition suggests an open circuit, a short to voltage, or a faulty actuator.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Chassis	Generic (all makes)	Medium	Intermediate	Brakes, steering and suspension

Symptoms you may notice

- The steering warning light or a message such as 'Service Steering System' appears on the dashboard.
- The steering may feel heavier or require more effort than usual, especially at low speeds.
- The steering column lock may fail to engage or disengage, potentially preventing the vehicle from starting or the steering wheel from turning.
- In some cases, the vehicle may not start because the steering lock safety interlock is not satisfied.
- Often no symptoms besides the warning light, with the system defaulting to a fail-safe mode.
- Intermittent operation of the steering assist, with the warning light cycling on and off.

Common causes, most likely first

- A damaged or disconnected wiring harness or connector at the steering lock actuator.
- An open circuit in the power or ground circuit to the actuator, causing the control module to see high voltage.
- A short to voltage on the actuator control circuit, often due to chafed wiring.
- A failed steering lock or safety actuator solenoid.
- Corrosion or water intrusion in the actuator connector or control module connector.
- A faulty steering control module or body control module that is misreporting the voltage.
- A blown fuse or relay that supplies power to the actuator circuit, though this more commonly causes a low voltage code.



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related codes in the steering control module and body control module.
- 2 Inspect the wiring harness and connectors at the steering lock actuator for damage, corrosion, or loose pins.
- 3 Measure the voltage on the actuator control circuit at the actuator connector with the key on and compare to specifications.
- 4 Check the resistance of the actuator solenoid and compare to the manufacturer's specification to rule out an open or shorted coil.
- 5 Perform a voltage drop test on the power and ground circuits to the actuator to identify high resistance connections.
- 6 If the circuit and actuator test good, suspect the steering control module and follow the manufacturer's diagnostic flow chart.
- 7 Clear the code and test-drive the vehicle to confirm the repair, ensuring the steering lock functions correctly.

What a high voltage code really means

- A high voltage code on an actuator circuit often indicates an open circuit rather than a short to power, because the control module pulls the circuit up and sees battery voltage when the load is missing.
- The steering lock actuator is frequently part of the steering column assembly, and a binding lock mechanism can cause the actuator to draw excessive current, leading to a high voltage code in some designs.
- Technicians sometimes replace the steering control module when the real fault is a corroded connector behind the dash, so always perform a thorough visual inspection before condemning any module.
- This code can be set by a weak battery or charging system issue that causes voltage spikes, so check the battery and charging system before diving into the steering circuit.
- On some vehicles, the steering lock actuator is controlled by the body control module, and a fault in the body control module can set this code even if the steering system itself is fine.

Can I keep driving with C0622?

If the steering lock is not engaging or disengaging properly, the vehicle may be unsafe to drive because the steering wheel could lock unexpectedly. If the only symptom is a warning light and the steering feels normal, you can drive cautiously to a repair shop, but avoid sharp turns and high speeds until the fault is repaired.

Tools that help

- OBD-II scan tool with manufacturer-specific software
- Digital multimeter
- Wiring diagram for the steering lock actuator circuit
- Test light
- Socket set and trim removal tools



Reading C0622

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

Often seen with

C0621 Variable Effort Steering Lock/Safety Actuator Control Circuit · **C0623** Variable Effort Steering Lock/Safety Actuator Control Circuit · **C0624** Variable Effort Steering Sensor Circuit · **C0625** Variable Effort Steering Sensor Circuit Range/Performance · **C0626** Variable Effort Steering Sensor Circuit Low

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/c0622/>

