

GENERIC · POWERTRAIN

P0980

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0980

Shift Solenoid 'C' Control Circuit High

P0980 means the transmission control module (TCM) has detected an abnormally high voltage on the control circuit for shift solenoid 'C', which is one of the solenoids that directs hydraulic pressure to engage different gear ratios. The TCM commands the solenoid on or off and monitors the circuit; a high-voltage reading tells it the circuit is likely open, shorted to power, or the solenoid coil is not drawing the expected current.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Transmission

Symptoms you may notice

- Illumination of the check engine light or transmission warning light, often with no other noticeable symptoms
- Harsh or delayed shifting, especially when the affected solenoid is commanded to change state
- Transmission stuck in a single gear or fails to shift into certain gears (limp mode)
- Slipping or flaring during gear changes that involve the affected clutch pack
- Increased engine RPM at highway speed if overdrive or a higher gear is inhibited

Common causes, most likely first

- 1 Open or damaged wiring in the shift solenoid 'C' control circuit, such as a broken wire or corroded connector
- 2 Shift solenoid 'C' coil failure (open winding) causing the circuit to draw no current
- 3 Poor electrical connection at the solenoid or transmission case connector, including water intrusion
- 4 Short to voltage on the control wire between the TCM and solenoid
- 5 Faulty TCM driver circuit for that solenoid
- 6 Internal transmission mechanical damage that prevents the solenoid from moving freely, though this is less common for a high-voltage code



How to diagnose and fix it

- 1 Inspect the transmission wiring harness and connectors for chafing, corrosion, or loose pins, especially near the solenoid pack
- 2 Measure the resistance of shift solenoid 'C' with a multimeter and compare to the manufacturer's specification
- 3 Check for battery voltage on the control circuit with the key on and the solenoid disconnected to rule out a short to power
- 4 Perform a voltage drop test on the ground side of the solenoid circuit to confirm a good ground path
- 5 If wiring and solenoid resistance are within spec, test the TCM output with a bidirectional scan tool or oscilloscope
- 6 Replace the faulty solenoid or repair the damaged wiring as needed, then clear codes and verify the repair with a road test
- 7 If the TCM driver is faulty, replace or reprogram the TCM according to the manufacturer's procedure

What a high-voltage solenoid code really means

- A high-voltage code on a solenoid circuit almost always indicates an open circuit or a coil with excessive resistance, not a shorted solenoid, so replacing the solenoid without checking wiring often wastes money.
- Many vehicles set P0980 only when the TCM commands the solenoid and sees voltage above a threshold for a set time; intermittent faults may not store until the circuit fails under specific temperature or vibration conditions.
- A corroded connector or a pin that has backed out of the transmission case connector can mimic a failed solenoid, so always wiggle-test the harness while watching live data.
- Some transmissions use shift solenoid 'C' for multiple gear functions, so a failure can cause different symptoms depending on which gear the transmission is in when the fault occurs.
- The TCM may substitute a default shift schedule when P0980 is active, which can make the transmission feel like it has a mechanical problem even though the root cause is electrical.

Can I keep driving with P0980?

You can usually drive the vehicle with P0980, but the transmission may enter limp mode or shift harshly, so avoid heavy acceleration and highway speeds until the fault is repaired. Continued driving with a faulty solenoid can cause clutch wear over time, so schedule diagnosis soon.

Tools that help

- OBD-II scan tool with bidirectional control and live data
- Digital multimeter
- Wiring diagram for the specific vehicle
- Test light or oscilloscope for circuit testing
- Socket set and trim removal tools for access to the solenoid pack



Reading P0980

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 9** Transmission.
- 80** The exact fault within that area.

Often seen with

P0700 Transmission Control System Malfunction · **P0979** Shift Solenoid 'C' Control Circuit Low · **P0981** Shift Solenoid 'D' Control Circuit Range/Performance · **P0982** Shift Solenoid 'D' Control Circuit Low · **P0983** Shift Solenoid 'D' Control Circuit High

See it working

Watch the animated explainer [How an Automatic Transmission Works, Gear by Gear](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0980/>

