

SUBARU · POWERTRAIN

P1698

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1698 · Subaru

Engine Torque Control Cut Signal Circuit Low Input

P1698 on a Subaru means the engine control module (ECM) has detected a low input voltage on the circuit that carries the engine torque control cut signal, which is the command used to momentarily reduce engine torque during automatic transmission shifts. The ECM expects to see a specific voltage on this signal line, and a reading below the acceptable threshold tells the computer that the circuit is shorted to ground or that the signal is not being generated correctly.

SYSTEM

Powertrain

CODE TYPE

Subaru specific

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Computer and output circuits

Symptoms you may notice

- Illumination of the check engine light or malfunction indicator lamp (MIL) on the dashboard
- Often no symptoms besides the warning light, especially if the fault is intermittent
- Harsh or delayed automatic transmission shifts as torque reduction during shifts is compromised
- Slight hesitation or stumble during acceleration when the transmission is changing gear
- Reduced fuel economy or altered shift feel over time if the signal remains low
- In rare cases, the transmission may enter a limp mode with limited gear selection

Common causes, most likely first

- 1 Damaged or chafed wiring in the engine torque control cut signal circuit, often near the transmission bellhousing or engine harness
- 2 Corroded or loose electrical connector at the transmission control module (TCM) or ECM
- 3 Failed transmission control module (TCM) internal driver for the torque cut signal
- 4 Failed engine control module (ECM) input circuit for the torque cut signal
- 5 Short to ground in the signal wire between the TCM and ECM
- 6 Aftermarket electrical accessories or poor ground connections interfering with the signal circuit
- 7 Internal fault in the automatic transmission valve body or solenoids affecting torque signal generation



How to diagnose and fix it

- 1 Connect a scan tool and record all stored codes and freeze-frame data to confirm P1698 is the primary fault and not a secondary code
- 2 Visually inspect the engine and transmission wiring harness for chafing, corrosion, or loose connectors, especially around the bellhousing and firewall
- 3 Measure resistance and voltage on the torque control cut signal wire between the TCM and ECM, checking for a short to ground or an open circuit
- 4 Check and clean all ground connections for the ECM and TCM, including the engine block and chassis grounds
- 5 If wiring and grounds are good, test the TCM output signal with an oscilloscope or substitute a known-good TCM to rule out an internal driver failure
- 6 Inspect the transmission valve body and solenoids for debris or electrical faults if the signal circuit tests normal but the code persists
- 7 Clear the code after repairs and perform a road test with the scan tool connected to verify the torque cut signal operates correctly during shifts

What the torque cut signal really does

- The engine torque control cut signal is a momentary command from the transmission control module to the engine control module to reduce torque during gear changes, so a low input often causes subtle shift quality issues rather than a no-start condition.
- A common misdiagnosis is replacing the ECM or TCM before checking the wiring harness, because a chafed wire near the transmission bellhousing can short to ground and mimic an internal module failure.
- Aftermarket remote starters, alarm systems, or poorly installed electrical accessories can backfeed the signal circuit and set P1698 even when the factory wiring is intact.
- On some Subaru models, a weak or failing battery or alternator can cause voltage drops that trigger this code intermittently, so always verify charging system health before condemning the TCM.
- P1698 does not always mean the transmission is failing; many cases are resolved by repairing a corroded connector or replacing a shorted section of the signal wire.

Can I keep driving with P1698?

You can usually continue driving with P1698, but avoid aggressive acceleration and towing until the fault is repaired, because compromised torque reduction during shifts can accelerate transmission wear. If the transmission begins shifting harshly or enters limp mode, have the vehicle inspected promptly.



Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter for voltage and resistance checks
- Oscilloscope for observing the torque cut signal waveform
- Electrical wiring diagram for the specific Subaru model and year
- Socket set and trim removal tools for accessing harness connectors
- Contact cleaner and dielectric grease for connector servicing

Reading P1698

P Powertrain: engine, transmission and emissions.

1 Manufacturer-specific code (Subaru): its meaning depends on the make.

6 Computer and output circuits.

98 The exact fault within that area.

Often seen with

P1699 Engine Torque Control Cut Signal Circuit High Input · **P1697** Traction Control Fuel Cut Signal High Input · **P1697** Cruise Control Distance Control Input Circuit · **P1697** Traction Control Fuel Cut Signal High Input · **P1697** PCM Failure SRI Mile Not Stored · **P1699** No CCD J1850 Messages Received From The Climate Control Modu · **P1697** PCM Failure SRI Mile Not Stored · **P1699** No CCD/J1850 Messages Received From The Climate Control Modu · **P0700** Transmission Control System Malfunction · **P0730** Incorrect Gear Ratio · **P0740** Torque Converter Clutch Circuit Malfunction

See it working

Watch the animated explainer [How a Knock Sensor Works: Spark Timing and Octane](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/subaru-p1698/>

