

GENERIC · POWERTRAIN

P0998

OBD-II TROUBLE CODE

P0998

Shift Solenoid 'F' Control Circuit Low

P0998 indicates that the transmission control module (TCM) has detected an abnormally low voltage or current on the control circuit for shift solenoid 'F', which is one of the solenoids that manages hydraulic pressure for gear shifting. The TCM commands the solenoid on or off and monitors the circuit; when the feedback signal stays below the expected threshold for a calibrated time, it stores this code and may illuminate the malfunction indicator lamp (MIL).

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Transmission

Symptoms you may notice

- Illumination of the check engine light or transmission warning light
- Harsh or delayed gear shifts, especially when the transmission is cold
- Transmission may enter limp mode and stay in a single gear
- Slipping or flaring during upshifts or downshifts
- Often no symptoms besides the warning light, particularly if the fault is intermittent

Common causes, most likely first

- 1 Damaged or corroded wiring harness or connector at the shift solenoid 'F'
- 2 Shift solenoid 'F' coil internally shorted or open, causing low circuit resistance
- 3 Poor ground connection for the solenoid circuit
- 4 Faulty transmission control module (TCM) driver circuit
- 5 Contamination or debris in the valve body affecting solenoid operation
- 6 Low transmission fluid level or degraded fluid causing solenoid performance issues

How to diagnose and fix it

- 1 Verify transmission fluid level and condition; top off or replace fluid if necessary
- 2 Inspect the wiring harness and connector at shift solenoid 'F' for chafing, corrosion, or loose pins
- 3 Measure resistance of shift solenoid 'F' with a multimeter and compare to manufacturer specification
- 4 Check for short to ground or open circuit in the control wire from the TCM to the solenoid
- 5 Test the TCM output signal with an oscilloscope or scan tool to confirm proper command
- 6 Replace shift solenoid 'F' if resistance is out of specification or the coil is faulty
- 7 Clear the code and perform a road test to verify the repair and ensure the code does not return



What P0998 Often Hides

- A low circuit code can be set by a solenoid that is electrically good but mechanically stuck, so resistance checks alone may not reveal the problem.
- Corrosion inside a connector can increase resistance and mimic a failed solenoid, so always inspect terminals before condemning the part.
- Some vehicles use a single solenoid for multiple functions, so a fault in solenoid 'F' may affect more than one gear range.
- Intermittent faults may only appear when the transmission is hot or under load, making a wiggle test on the harness essential.
- The TCM may set P0998 as a result of a low voltage condition elsewhere in the vehicle, so check battery and charging system first.

Can I keep driving with P0998?

If the vehicle drives normally with only the warning light on, you can drive short distances to a repair shop, but avoid aggressive acceleration or heavy towing. If the transmission is in limp mode or shifting harshly, limit driving to a slow, careful trip to a service center to prevent further damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Oscilloscope (optional for signal testing)
- Wire probe set and terminal removal tools
- Vehicle-specific service information for solenoid resistance specifications

Reading P0998

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

Often seen with

P0750 Shift Solenoid 'A' · **P0755** Shift Solenoid 'B' · **P0760** Shift Solenoid 'C' · **P0997** Shift Solenoid 'F' Control Circuit Range/Performance · **P0999** Shift Solenoid 'F' 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/p0998/>

