

CHRYSLER · POWERTRAIN

P1740

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1740 · Chrysler

TCC Or OD Solenoid Performance

P1740 on Chrysler vehicles means the Transmission Control Module (TCM) has detected a performance problem with either the Torque Converter Clutch (TCC) solenoid or the Overdrive (OD) solenoid circuit. The TCM commands these solenoids to engage and disengage the torque converter clutch and overdrive gear, then monitors the resulting engine speed and transmission behavior for expected changes. When the actual response does not match the commanded state within a calibrated window, the TCM stores this code and may illuminate the check engine light.

SYSTEM

Powertrain

CODE TYPE

Chrysler specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Transmission

Symptoms you may notice

- Check engine light or transmission warning light illuminated on the dashboard.
- Harsh or delayed shifting, especially when the transmission attempts to engage overdrive.
- The torque converter clutch may fail to lock up, causing higher engine RPM at highway speeds.
- Shuddering or vibration during light acceleration when the TCC tries to engage.
- Transmission may stick in a lower gear or refuse to enter overdrive, reducing fuel economy.
- Often no symptoms besides the warning light, especially if the fault is intermittent.

Common causes, most likely first

- 1 Faulty TCC solenoid or OD solenoid, worn internally or electrically open/short.
- 2 Deteriorated or contaminated automatic transmission fluid (ATF) causing solenoid sticking.
- 3 Damaged wiring harness or corroded connector at the transmission solenoid pack.
- 4 Restricted transmission filter or low fluid level affecting hydraulic pressure to the solenoids.
- 5 Failed transmission control module (TCM) or poor ground connection for the solenoid circuit.
- 6 Valve body wear or sticking valves that prevent proper hydraulic apply of the TCC or OD clutch.



How to diagnose and fix it

- 1 Check transmission fluid level and condition; top off or replace fluid and filter if contaminated or low.
- 2 Inspect the wiring harness and connectors at the transmission solenoid pack for chafing, corrosion, or loose pins.
- 3 Use a scan tool to command the TCC and OD solenoids on and off while monitoring engine RPM and transmission data to confirm the fault.
- 4 Measure resistance of the TCC and OD solenoids at the solenoid pack connector and compare to factory specifications.
- 5 If resistance is out of spec or solenoids fail the command test, replace the faulty solenoid(s) or solenoid pack.
- 6 Inspect the valve body for wear or sticking valves if solenoids and wiring test good but the fault persists.
- 7 After repairs, clear the code and perform a relearn or adaptation drive cycle to verify the fix.

Don't overlook the solenoid pack connector

- A common misdiagnosis is replacing the TCM when the real problem is a corroded or loose pin in the transmission solenoid pack connector, which can mimic a failed solenoid.
- P1740 can be set by a simple low fluid level or a clogged filter, so always verify fluid condition before condemning electrical components.
- The TCC and OD solenoids share a common ground and power feed on many Chrysler transmissions, so a single wiring fault can set this code for both circuits.
- Intermittent P1740 codes often appear after the transmission reaches operating temperature, when solenoid resistance changes or fluid viscosity thins out.
- A sticking valve body can cause the same performance symptoms as a bad solenoid, so hydraulic pressure testing is sometimes necessary to isolate the root cause.

Can I keep driving with P1740?

You can usually drive the vehicle with P1740, but avoid heavy acceleration and highway speeds that force overdrive engagement, as the transmission may shift harshly or fail to lock the torque converter. Prolonged driving with a faulty TCC or OD solenoid can lead to transmission overheating and further damage, so schedule diagnosis soon.

Tools that help

- OBD-II scan tool with bidirectional control and live data capability
- Digital multimeter for resistance and voltage checks
- Transmission fluid level dipstick and fluid pump
- Socket set and Torx bits for solenoid pack removal
- Factory service information for solenoid resistance specifications and torque values



Reading P1740

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Chrysler): its meaning depends on the make.
- 7** Transmission.
- 40** The exact fault within that area.

Often seen with

P1765 Hydraulic Pressure Sensor 2 Adaptation At Limit · **P1765** Linear Shift Solenoid Circuit Fault · **P1765** Transmission 3-2 Timing Solenoid Valve · **P1765** Trans 12 Volt Supply Relay Control Circuit Open Or Shorted · **P1765** Trans 12 Volt Supply Relay Control Circuit Open Or Shorted · **P1765** CAN Throttle Valve · **P0740** Torque Converter Clutch Circuit Malfunction · **P0741** Torque Converter Clutch Circuit Performance or Stuck Off · **P0750** Shift Solenoid 'A' · **P0755** Shift Solenoid 'B'

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/chrysler-p1740/>

