

GM · POWERTRAIN

P1812

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1812 · GM

Transmission Over Temperature Condition

P1812 on GM vehicles means the transmission control module (TCM) has detected that the automatic transmission fluid (ATF) temperature has exceeded a calibrated threshold, typically around 130°C (266°F). The TCM monitors the internal transmission fluid temperature sensor and sets this code when the fluid runs too hot for too long, which can lead to clutch and seal damage if ignored.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	GM specific	High	Professional	Transmission

Symptoms you may notice

- Transmission warning light or message on the dashboard, often accompanied by the check engine light
- Harsh or delayed shifts as the TCM enters a protection strategy to reduce heat
- Transmission may slip or refuse to engage certain gears when extremely hot
- Burning smell or visible fluid leaks under the vehicle
- Often no symptoms besides the warning light, especially if the overheat was brief or intermittent

Common causes, most likely first

- 1 Low or degraded transmission fluid due to a leak or neglected service
- 2 Restricted transmission cooler or coolant flow to the cooler, often from debris or a failing thermostat
- 3 Faulty transmission fluid temperature sensor or damaged wiring to the sensor
- 4 Heavy towing or hauling without auxiliary cooling, causing sustained high fluid temperatures
- 5 A stuck thermostat or cooling fan failure that raises overall engine and transmission temperatures
- 6 Internal transmission wear or a failing torque converter generating excessive heat
- 7 Incorrect fluid type or overfilled transmission causing aeration and overheating



How to diagnose and fix it

- 1 Check transmission fluid level and condition; top off or replace fluid if dark or burnt-smelling
- 2 Inspect the transmission cooler and lines for restrictions, leaks, or bent fins, and clean or replace as needed
- 3 Verify engine cooling system operation, including thermostat, water pump, and cooling fans
- 4 Scan live data for transmission fluid temperature to confirm the sensor reads accurately compared to actual fluid temperature
- 5 Test the transmission fluid temperature sensor and its wiring for resistance and continuity, repairing or replacing faulty components
- 6 If the code persists after basic checks, perform a transmission service and inspect for internal damage or a failing torque converter
- 7 Clear the code and road-test under load to confirm the fix and ensure the temperature stays within normal range

What most technicians overlook with P1812

- A restricted transmission cooler is often missed because the cooler looks fine externally; flow testing or infrared temperature checks reveal the blockage.
- The TCM may set P1812 from a momentary high temperature spike during a hard pull, even if the fluid is not permanently degraded, so always check freeze-frame data.
- A failing engine coolant thermostat can cause transmission overheating on GM vehicles because the transmission cooler relies on engine coolant flow to shed heat.
- Aftermarket transmission fluid that does not meet GM's specified specification can break down faster and trigger this code under normal driving conditions.
- The transmission fluid temperature sensor is often part of the internal wiring harness, so a replacement may require dropping the pan, which is a common misdiagnosis trap if only the sensor is suspected.

Can I keep driving with P1812?

Stop driving as soon as it is safe if the transmission warning is active, because continued operation at high temperature can destroy clutches and seals. If the light resets after cooling, drive gently and avoid towing or heavy loads until the cause is repaired.

Tools that help

- OBD-II scan tool with live data capability
- Infrared thermometer
- Transmission fluid level dipstick or scan tool for fluid level procedure
- Multimeter for sensor and wiring testing
- Cooling system pressure tester
- Transmission fluid pump or service kit



Reading P1812

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

Often seen with

P1781 Engine Torque Reduction Open Short To Ground · **P1781** Transmission 4x4 Low Switch Out Of Range Fault · **P1781** Upshift Delay Switchover Valve ATCC Y35 · **P1781** Transmission 4x4 Low Switch Out Of Range Fault · **P1781** 4x4 Low Switch is Out of Self-Test Range · **P0218** Transmission Over-Temperature Condition · **P0711** Transmission Fluid Temperature Sensor 'A' Circuit Range/Perf · **P0712** Transmission Fluid Temperature Sensor 'A' Circuit Low · **P0713** Transmission Fluid Temperature Sensor 'A' 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/gm-p1812/>

