

NISSAN · POWERTRAIN

P1760

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1760 · Nissan

Overrun Clutch Solenoid Valve Circuit

P1760 on Nissan vehicles indicates that the transmission control module (TCM) has detected an electrical fault in the overrun clutch solenoid valve circuit, which controls hydraulic pressure to the overrun clutch during engine braking and certain gear changes. The TCM monitors the solenoid's current draw and flags the code when the circuit is open, shorted, or out of expected range.

SYSTEM

Powertrain

CODE TYPE

Nissan specific

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 symptoms
- Harsh or delayed shifting, particularly when decelerating or coasting
- Failure to engage engine braking or overrun clutch, leading to a freewheeling feel
- Transmission may default to a fail-safe mode with limited gear selection
- Slipping or shuddering during downshifts
- Poor fuel economy or increased engine load at cruise

Common causes, most likely first

- 1 Faulty overrun clutch solenoid valve (internal coil failure or sticking)
- 2 Damaged or corroded wiring harness or connector at the solenoid or TCM
- 3 Open or short circuit in the solenoid control wire
- 4 Failed transmission control module (TCM) driver circuit
- 5 Low or contaminated transmission fluid causing solenoid malfunction
- 6 Internal transmission mechanical issue affecting solenoid operation (less common)

How to diagnose and fix it

- 1 Verify the code with a scan tool and check for related transmission codes
- 2 Inspect the solenoid connector and wiring for corrosion, damage, or loose pins
- 3 Measure the solenoid resistance and compare to factory specification
- 4 Check for power and ground signals at the solenoid connector with a multimeter
- 5 Test the TCM output signal to the solenoid using an oscilloscope or bidirectional scan tool
- 6 Replace the overrun clutch solenoid valve if electrically faulty
- 7 Repair or replace damaged wiring or TCM as needed, then clear codes and test-drive



Overrun Clutch Solenoid Circuit Pitfalls

- A common misdiagnosis is replacing the solenoid when the real fault is a chafed wire in the harness near the transmission mount, which can short only when the engine moves.
- The overrun clutch solenoid often shares a power feed with other solenoids, so a blown fuse or relay can set P1760 along with other solenoid codes.
- On some Nissan models, the TCM is integrated into the valve body and can be damaged by contaminated fluid, leading to false solenoid codes.
- The code can set intermittently due to a loose connector that passes a wiggle test but fails under vibration; always perform a wiggle test while monitoring solenoid current.
- A faulty brake pedal position switch or vehicle speed sensor can cause the TCM to command overrun clutch operation at the wrong time, indirectly setting P1760.

Can I keep driving with P1760?

You can usually drive the vehicle with P1760, but expect degraded shift quality and reduced engine braking; avoid heavy towing or aggressive driving until repaired, as the transmission may enter fail-safe mode.

Tools that help

- OBD-II scan tool with transmission capability
- Digital multimeter
- Oscilloscope (optional for signal testing)
- Wire repair kit and electrical contact cleaner
- Factory service information for resistance specifications

Reading P1760

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

Often seen with

P1761 Shift Lock Short To Ground · **P1762** Shift Lock Short To B+ · **P1761** Transmission Shift Solenoid 3 Mechanical Fault · **P1762** Transmission SS3 SS4 OD Band Fault · **P1762** Governor Pressure Sensor Offset Improper Voltage · **P1761** Shift Solenoid C Performance · **P1762** Overdrive Band Failed Off · **P1762** Governor Pressure Sensor Offset Improper Voltage · **P1761** Shift Solenoid Malfunction · **P0700** Transmission Control System Malfunction · **P0715** Input/Turbine Speed Sensor Circuit Malfunction · **P0720** Output Speed Sensor Circuit Malfunction



See it working

Watch the animated explainer **Four-Stroke Engine Cutaway: Intake to Exhaust** on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/nissan-p1760/>

