

NISSAN · POWERTRAIN

P1656

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1656 · Nissan

Automatic Transmission System Malfunction

P1656 on Nissan vehicles indicates that the transmission control module (TCM) has detected a malfunction within the automatic transmission system, often related to the communication line between the TCM and the engine control module (ECM) or an internal TCM fault. The computer sets this code when it receives implausible signals or loses communication with the transmission control module, affecting shift quality and transmission operation.

SYSTEM

Powertrain

CODE TYPE

Nissan specific

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Computer and output circuits

Symptoms you may notice

- Illumination of the check engine light or transmission warning light
- Harsh or erratic shifting, including delayed or slipping shifts
- Transmission stuck in limp mode (fail-safe mode) with limited gear selection
- Reduced engine performance or poor fuel economy
- Sometimes no noticeable symptoms besides the warning light
- In rare cases, the vehicle may enter limp mode and limit speed

Common causes, most likely first

- 1 Faulty or degraded communication line (CAN bus) between TCM and ECM
- 2 Internal failure of the transmission control module (TCM)
- 3 Poor electrical connections or corroded wiring at the TCM or ECM connectors
- 4 Low or contaminated transmission fluid affecting solenoid performance
- 5 Faulty transmission solenoid pack or valve body issues
- 6 Software glitch or outdated TCM calibration
- 7 Ground connection issues causing voltage irregularities



How to diagnose and fix it

- 1 Perform a visual inspection of the TCM and ECM connectors for corrosion or damage
- 2 Check transmission fluid level and condition; top off or replace if necessary
- 3 Use a scan tool to retrieve TCM codes and perform a bidirectional communication test
- 4 Inspect the CAN bus wiring for continuity and shorts between TCM and ECM
- 5 Reprogram or update the TCM software if applicable
- 6 Replace the TCM if internal fault is confirmed
- 7 Clear codes and perform a road test to verify the repair

Before you replace the transmission control module

- A loose or corroded ground connection at the transmission or chassis can cause P1656 without any TCM failure.
- The code often appears after battery replacement or jump-starting due to voltage spikes that disrupt TCM communication.
- Some Nissan models require a relearn procedure after TCM replacement or battery disconnect to restore proper shift adaptation.
- P1656 can be set by a failing alternator producing erratic voltage that affects TCM operation, so check charging system first.
- A faulty crankshaft position sensor or camshaft position sensor can cause the TCM to lose engine speed signal and set this code.

Can I keep driving with P1656?

If the vehicle drives normally with only the warning light on, you can drive cautiously to a repair shop, but avoid aggressive acceleration or towing. If the transmission is in limp mode or shifting harshly, limit driving to a short distance at low speed to prevent further damage.

Tools that help

- OBD-II scan tool with Nissan-specific software
- Digital multimeter for electrical testing
- Wiring diagram for TCM and ECM circuits
- Socket set and trim removal tools
- Transmission fluid level gauge



Reading P1656

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Nissan): its meaning depends on the make.
- 6** Computer and output circuits.
- 56** The exact fault within that area.

Often seen with

P0700 Transmission Control System Malfunction · **P0705** Transmission Range Sensor Circuit Malfunction · **P0715** Input/Turbine Speed Sensor Circuit Malfunction · **P0720** Output Speed Sensor Circuit Malfunction · **U0100** Lost Communication With ECM/PCM A

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/nissan-p1656/>

