

NISSAN · POWERTRAIN

P1706

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1706 · Nissan

Park Neutral Position PNP Switch

P1706 on Nissan vehicles indicates that the transmission control module (TCM) or engine control module (ECM) has detected an implausible signal from the park/neutral position (PNP) switch, also called the transmission range sensor. The computer expects specific voltage combinations from the switch for each gear selector position, and when the pattern does not match the expected value for the indicated range, it stores this code and may default to a fail-safe mode.

SYSTEM

Powertrain

CODE TYPE

Nissan specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Transmission

Symptoms you may notice

- The check engine light or transmission warning light illuminates on the dashboard.
- The engine may crank but not start because the starter inhibit circuit does not receive the correct park or neutral signal.
- The reverse lights may fail to come on when reverse is selected, or they may stay on in other gears.
- The transmission may shift harshly or stay in a single gear (limp mode) because the TCM cannot confirm the selected range.
- The gear position indicator on the instrument cluster may be blank, flashing, or show the wrong gear.
- Often no symptoms besides the warning light, especially if the switch fault is intermittent.

Common causes, most likely first

- 1 A faulty park/neutral position switch (transmission range sensor) due to internal wear or contamination.
- 2 Corroded, loose, or damaged electrical connector at the PNP switch or along the wiring harness.
- 3 Broken or chafed wires in the circuit between the PNP switch and the TCM or ECM.
- 4 Improper adjustment or misalignment of the switch on the transmission case.
- 5 Transmission fluid leaking into the switch connector, causing signal shorts.
- 6 A failed TCM or ECM, though this is less common and should be diagnosed last.



How to diagnose and fix it

- 1 Connect a scan tool and read all stored codes and freeze-frame data to confirm P1706 is the only transmission-related code.
- 2 Inspect the PNP switch connector and wiring for corrosion, looseness, or damage, and clean or repair as needed.
- 3 Check the switch adjustment according to Nissan service information, ensuring the switch aligns with the gear selector detents.
- 4 Backprobe the PNP switch connector and verify the voltage signals in each gear position match the manufacturer's chart.
- 5 If signals are incorrect, remove the switch and inspect for mechanical wear or fluid intrusion; replace the switch if faulty.
- 6 Clear the codes and perform a road test to verify the fix and ensure no other codes return.
- 7 If the code persists after switch replacement, check continuity of each wire from the switch to the TCM/ECM and repair any open or short circuits.

Before you replace the PNP switch

- A loose or corroded connector at the switch is just as likely to set P1706 as a failed switch, so always inspect the plug and pins before condemning the part.
- On many Nissan models, the PNP switch also controls the reverse lights and starter inhibit circuit, so a no-crank or no-reverse-light complaint often accompanies this code.
- After replacement, the switch must be adjusted properly; if it is even slightly off, the code can return immediately and the engine may not start in park or neutral.
- Transmission fluid leaking through the switch seal can contaminate the connector and cause intermittent signals that mimic a failing TCM.
- Do not overlook the possibility of a faulty TCM ground or power feed, which can cause the same implausible signal without any fault in the switch itself.

Can I keep driving with P1706?

You can usually drive the vehicle, but the transmission may be in limp mode with reduced performance, and the engine may not restart if you stall it. Avoid long trips and have the fault diagnosed promptly, especially if the engine cranks but does not start or the reverse lights are inoperative.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Jack and jack stands or ramps
- Basic hand tools (socket set, screwdrivers)
- Nissan service information or wiring diagram



Reading P1706

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

Often seen with

P1710 Back-Up Signal For Speed Sensor Circuit Malfunction · **P1710** Transmission Control Module Solenoid Internal Ground Circuit · **P1710** Transmission system problems · **P0700** Transmission Control System Malfunction · **P0705** Transmission Range Sensor Circuit Malfunction · **P0706** Transmission Range Sensor Circuit Range/Performance · **P0850** Park/Neutral Switch Input Circuit

See it working

Watch the animated explainer [Master the Four-Stroke Engine Cycle](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/nissan-p1706/>

