

MAZDA · POWERTRAIN

P1514

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1514 · Mazda

High Load Neutral Drive Fault

P1514 on Mazda vehicles indicates the powertrain control module (PCM) has detected an implausible signal from the neutral switch or clutch pedal position sensor during high engine load conditions, typically when the transmission is in neutral or the clutch is depressed. The PCM expects a specific voltage or switch state that does not match actual driving conditions, triggering the code when the discrepancy occurs under load.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Mazda specific	Medium	Intermediate	Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or stumbling when the transmission is shifted into neutral at a stop
- Hesitation or poor acceleration when pulling away from a stop, especially under load
- Inconsistent engine speed during deceleration or when coasting in neutral
- Occasional stalling when coming to a stop with the clutch depressed or transmission in neutral
- Reduced fuel economy due to incorrect load calculations by the PCM

Common causes, most likely first

- 1 Faulty neutral safety switch or clutch pedal position sensor providing an erratic signal
- 2 Damaged or corroded wiring harness between the switch/sensor and the PCM
- 3 Loose or dirty electrical connector at the neutral switch or clutch pedal sensor
- 4 Misadjusted clutch pedal position sensor or neutral switch linkage
- 5 Failed PCM (rare, but possible after other causes are ruled out)
- 6 Aftermarket alarm or remote start system interfering with the neutral signal circuit



How to diagnose and fix it

- 1 Inspect the neutral switch and clutch pedal position sensor connectors for corrosion, tightness, and damage; clean and reseat as needed
- 2 Check the wiring harness for chafing, breaks, or shorts between the switch/sensor and the PCM, repairing any faults found
- 3 Test the neutral switch or clutch pedal position sensor with a multimeter for proper continuity or voltage changes according to the Mazda service procedure
- 4 Verify clutch pedal free play and sensor adjustment, adjusting to factory specification if incorrect
- 5 Clear the diagnostic trouble code (DTC) and perform a road test under high load conditions to see if the code returns
- 6 If the code persists, substitute a known-good neutral switch or clutch pedal sensor and retest
- 7 As a last resort, diagnose the PCM for internal faults using factory diagnostic equipment before replacement

Neutral Switch Signal Under Load

- A common oversight is assuming the neutral switch is only active when the transmission is in neutral; on many Mazdas, the PCM also uses this signal to adjust ignition timing and fuel delivery during high load, so a marginal switch can cause driveability issues without a hard failure.
- The clutch pedal position sensor on manual-transmission Mazdas often wears internally, producing a signal that intermittently drops out under vibration, which the PCM interprets as a high-load neutral fault even though the pedal is not pressed.
- Aftermarket remote start systems that tap into the neutral safety circuit can introduce voltage backfeeds that confuse the PCM, setting P1514 without any fault in the factory components.
- A dirty or loose ground connection at the transmission bellhousing can cause the neutral switch to report an incorrect state, especially under engine torque load, mimicking a failed switch.
- P1514 can be set by a momentary glitch during a hard launch or aggressive clutch engagement, and if the code does not return after clearing, no repair may be necessary.

Can I keep driving with P1514?

You can generally continue driving with P1514, but avoid aggressive acceleration or high-load situations such as towing or climbing steep grades until the fault is repaired, as the PCM may misjudge engine load and affect performance. If the vehicle stalls or hesitates dangerously in traffic, have it diagnosed promptly.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Mazda factory service information or wiring diagrams
- Socket set and screwdrivers for switch removal
- Contact cleaner and dielectric grease



Reading P1514

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Mazda): its meaning depends on the make.
- 5** Vehicle speed, idle control and auxiliary inputs.
- 14** The exact fault within that area.

Often seen with

P1780 Engine Intervention Readable · **P1780** Park Neutral Position Switch Malfunction Only For A/T · **P1780** Transmission Control Switch Circuit Overdrive Off Switch Not · **P1780** Modulation Pressure Switchover Valve ATCC Y34 Or Upshift Del · **P1780** Transmission Control Switch Circuit, Overdrive Off Switch No · **P1780** Park/Neutral Position Switch Circuit · **P1780** Transmission Control Switch Circuit is Out of Self-Test Rang · **P1780** CAN Torque Reduction · **P0705** Transmission Range Sensor Circuit Malfunction · **P0706** Transmission Range Sensor Circuit Range/Performance · **P0715** Input/Turbine Speed Sensor Circuit Malfunction · **P0850** Park/Neutral Switch Input Circuit

See it working

Watch the animated explainer [How Misfire Detection Works: Crankshaft Speed](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/mazda-p1514/>

