

TOYOTA · POWERTRAIN

P1400

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1400 · Toyota

Sub-Throttle Position Sensor

P1400 on a Toyota indicates that the engine control module (ECM) has detected an abnormal signal from the sub-throttle position sensor, which is part of the traction control system's secondary throttle valve. The ECM compares the sub-throttle position sensor signal with the main throttle position sensor (TPS) signal and sets this code when the two do not correlate as expected during self-test or normal operation.

SYSTEM

Powertrain

CODE TYPE

Toyota specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with the traction control (TRAC) or vehicle stability control (VSC) light also on
- Reduced engine power or a limp-home mode, as the ECM limits throttle opening to protect the system
- Hesitation or stumble during acceleration, particularly when the traction control system is active
- Rough idle or unstable engine speed, though this is less common
- Often no symptoms besides the warning light, especially if the fault is intermittent

Common causes, most likely first

- 1 Faulty sub-throttle position sensor (the sensor itself fails internally or wears out)
- 2 Damaged or corroded wiring or connector at the sub-throttle position sensor or sub-throttle actuator
- 3 Open or short circuit in the sensor signal circuit (VTA2 circuit) or ground circuit
- 4 Failed sub-throttle actuator motor, which prevents the sub-throttle plate from moving and causes the sensor signal to be out of range
- 5 Sticking or carbon-fouled sub-throttle valve, causing the sensor to report an unexpected position
- 6 ECM internal fault (rare, but possible if all other components test good)



How to diagnose and fix it

- 1 Connect a scan tool and read the freeze-frame data and live sub-throttle position sensor voltage to confirm the fault and check for intermittent signals
- 2 Visually inspect the sub-throttle position sensor connector and wiring for corrosion, loose pins, or chafed insulation, and repair as needed
- 3 Measure the sensor reference voltage (typically 5V) and ground continuity at the sensor connector with a multimeter to rule out wiring faults
- 4 Check the sub-throttle valve for carbon buildup or mechanical binding, and clean the throttle body if necessary
- 5 Test the sub-throttle position sensor resistance and voltage output across its full range of motion, comparing to Toyota specifications, and replace the sensor if out of spec
- 6 If the sensor tests good, command the sub-throttle actuator with the scan tool and verify smooth operation; replace the actuator if it fails to move or is noisy
- 7 After repairs, clear the codes and perform a road test to verify the sub-throttle system operates correctly and the code does not return

Sub-throttle sensor faults often misdiagnosed

- Many technicians replace the main throttle body assembly when the real problem is the separate sub-throttle position sensor, which on many Toyota models is a serviceable component located on the traction control throttle body.
- A dirty or sticking sub-throttle valve can cause the sensor to report an implausible position, setting P1400 even though the sensor itself is electrically sound; cleaning the valve often resolves the code.
- Intermittent P1400 codes are frequently caused by a poor connection at the sub-throttle sensor connector, especially on older Toyota vehicles where the pins lose tension or corrode.
- The sub-throttle position sensor is part of the traction control system, so a fault can also trigger VSC or TRAC warning lights and disable those systems, leading owners to think the problem is in the brakes.
- A failing sub-throttle actuator motor can mimic a sensor fault because the ECM sees the sensor signal not changing as expected; always command the actuator with a scan tool before condemning the sensor.

Can I keep driving with P1400?

You can usually drive the vehicle with P1400 set, but the ECM may limit engine power and disable traction control, so avoid aggressive acceleration or towing until the fault is repaired. If the vehicle enters limp mode or the engine runs poorly, have it diagnosed promptly to prevent further damage.



Tools that help

- OBD-II scan tool with live data and bidirectional control capabilities
- Digital multimeter
- Toyota service information or wiring diagrams
- Socket set and screwdrivers for throttle body removal
- Throttle body cleaner and shop rags

Reading P1400

P	Powertrain: engine, transmission and emissions.
1	Manufacturer-specific code (Toyota): its meaning depends on the make.
4	Auxiliary emission controls.
00	The exact fault within that area.

Often seen with

P1125 Long Term Fuel Trim Add Air Bank 2 System Too Rich · **P1120** Oxygen Sensor Heater Circuit Bank 2 Sensor 1 Open · **P1121** Oxygen Sensor Heater Circuit Bank 2 Sensor 2 Short To Ground · **P1120** Accelerator Pedal Position Sensor Circuit · **P1125** Throttle Control Motor Circuit · **P1121** Accelerator Pedal Position Sensor Range Performance Problem · **P1120** Starter Switch High Input · **P1121** Neutral Position Switch Circuit Low Input AT Vehicles · **P1120** Secondary Throttle Position Sensor Circuit Fault · **P1125** Tandem Throttle Position Sensor Circuit Fault · **P1121** Throttle Position Lower Than Expected · **P1125** Throttle Position Sensor Signal Intermittent · **P1120** Throttle Position Sensor Out Of Range Low · **P1121** Throttle Position Sensor Signal Not Consistent With Mass Air · **P1121** Pedal Position Sensor A Circuit Range Performance · **P1121** Throttle Position Lower Than Expected · **P1125** Accelerator Pedal Position Sensor Fault · **P1121** Throttle Position Sensor Out of Range · **P1120** Throttle Position Sensor 1 Circuit · **P1121** Throttle Position Sensor Inconsistent with Mass Air Flow Sen · **P1120** Throttle Position Sensor Out of Range · **P1125** Throttle Position Sensor Intermittent · **P1120** Throttle Position (TP) Sensor 1 Circuit · **P1125** Accelerator Pedal Position (APP) System · **P1121** TP Sensor Circuit Intermittent High Voltage · **P1121** Pedal Position Sensor 1 Range Performance Problem · **P1120** Pedal Position Sensor Circuit · **P2103** Throttle Actuator Control Motor Circuit High · **P2135** Throttle/Pedal Position Sensor A/B Voltage Correlation

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/toyota-p1400/>

