

SUZUKI · POWERTRAIN

P1500

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1500 · Suzuki

Engine Starter Signal Circuit Fault

P1500 on Suzuki vehicles means the engine control module (ECM) is not seeing the expected starter signal when the ignition key is turned to the start position. The ECM uses this signal to know the engine is cranking so it can adjust fuel and ignition timing, and when the signal is missing or implausible it stores this fault.

SYSTEM

Powertrain

CODE TYPE

Suzuki specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Vehicle speed,
idle control and
auxiliary inputs

Symptoms you may notice

- The engine may crank but not start, or start after a long crank
- The starter may not engage at all when the key is turned
- Intermittent no-start condition, often worse in cold or damp weather
- The check engine light is illuminated on the dashboard
- Often no symptoms besides the warning light, especially if the fault is intermittent

Common causes, most likely first

- 1 Faulty starter motor solenoid or starter assembly
- 2 Open or shorted wire in the starter signal circuit between the ignition switch and ECM
- 3 Corroded or loose connector at the starter, ignition switch, or ECM
- 4 Defective ignition switch or starter relay
- 5 Blown fuse or fusible link in the starter circuit
- 6 Failed ECM (rare, but possible if all other circuits test good)



How to diagnose and fix it

- 1 Check all fuses and fusible links related to the starter circuit and replace any blown ones
- 2 Inspect the battery terminals and starter connections for corrosion or looseness, and clean or tighten as needed
- 3 Test the starter signal wire for continuity and voltage from the ignition switch to the ECM, repairing any open or short
- 4 Test the starter relay and ignition switch operation, replacing if faulty
- 5 Perform a voltage drop test on the starter circuit while cranking to identify excessive resistance
- 6 If the starter solenoid does not click or the starter does not turn, remove and bench-test the starter, replacing if defective
- 7 Clear the code and verify the starter signal is present during cranking with a scan tool before returning the vehicle

Starter signal faults that fool technicians

- A weak battery or bad ground can cause the ECM to miss the starter signal without any faulty component in the signal circuit itself, so always load-test the battery first.
- Aftermarket alarm systems or remote starters spliced into the starter wire are a common cause of P1500 on older Suzukis, and the splice often looks fine until you wiggle the harness.
- The ECM may set P1500 intermittently if the starter signal wire is routed too close to ignition components and picks up electrical noise, so inspect for recent repairs or harness rerouting.
- On some Suzuki models, a failing clutch pedal position switch or neutral safety switch can prevent the starter signal from reaching the ECM, mimicking a starter circuit fault.
- P1500 can be stored by a momentary voltage drop during cranking even when the starter works perfectly, so check for a loose battery cable or failing ignition switch before condemning the starter.

Can I keep driving with P1500?

If the engine starts and runs normally, you can drive to a repair shop, but avoid turning the engine off in a location where a no-start would be dangerous. If the engine cranks but does not start or the starter does not engage, do not drive and have the vehicle towed.

Tools that help

- Digital multimeter
- Test light
- Scan tool with live data capability
- Basic socket and wrench set
- Battery load tester



Reading P1500

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

Often seen with

P1604 Internal Control Module Driver Error · **P1700** Vehicle Speed Sensor 2 Circuit Fault · **P1700** TCM Throttle Position Sensor Circuit Fault · **P1700** Throttle Position Sensor Circuit Malfunction AT · **P1604** Immobilizer System Fault · **P1700** Transmission Indeterminate Failure Failed To Neutral · **P1604** Loss Of IPC Serial Data · **P1700** Transmission Indeterminate Failure · **P1700** Transmission system problems · **P1604** Control Module Self Test Speed Monitoring · **P0335** Crankshaft Position Sensor A Circuit Malfunction · **P0340** Camshaft Position Sensor A Circuit Malfunction (Bank 1) · **P0562** System Voltage Low

See it working

Watch the animated explainer [How a Starter Motor Works: Pre-Engaged Starter](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/suzuki-p1500/>

