



P1791 · Honda

TCM A/T Vehicle Speed Sensor Circuit Fault

P1791 on Honda vehicles means the Transmission Control Module (TCM) has detected an abnormal signal from the vehicle speed sensor circuit that it uses to determine road speed. The TCM compares this signal against other speed inputs and sets the code when the expected pulses are missing, erratic, or implausible, which can affect shift timing and torque converter lockup.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Honda specific	Medium	Intermediate	Transmission

Symptoms you may notice

- The Check Engine Light or Transmission Control Module warning light illuminates on the dashboard.
- The transmission may shift harshly or at the wrong points because the TCM loses accurate road speed data.
- The speedometer may read zero, jump erratically, or stop working if the same sensor feeds the instrument cluster.
- The torque converter clutch may fail to lock up, causing higher engine rpm at highway speeds.
- The transmission may enter limp mode and stay in a single gear until the fault is repaired.
- Often no symptoms besides the warning light, especially if the fault is intermittent.

Common causes, most likely first

- 1 A failed or contaminated vehicle speed sensor (VSS) on the transmission housing.
- 2 Damaged, corroded, or loose wiring and connectors between the VSS and the TCM.
- 3 A faulty TCM that is not processing the speed signal correctly.
- 4 Metal debris or a damaged reluctor ring inside the transmission interfering with the sensor signal.
- 5 Poor ground connections at the transmission or TCM that corrupt the speed signal.
- 6 Aftermarket electrical accessories or a recent radio or alarm installation that disturbed the speed signal wiring.



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm when and under what conditions P1791 sets.
- 2 Inspect the VSS connector and the harness for corrosion, chafing, or loose pins, and repair as needed.
- 3 Check the sensor's resistance and AC voltage output while spinning the wheels or driving on a lift.
- 4 Verify the speed signal at the TCM connector with a multimeter or oscilloscope to rule out wiring between the sensor and the module.
- 5 Remove the VSS and inspect the sensor tip and reluctor ring for metal shavings or physical damage.
- 6 Replace the VSS if it fails electrical or signal testing, then clear the code and road-test the vehicle.
- 7 If the signal is good at the sensor but missing at the TCM, test the TCM power, ground, and internal signal processing before replacement.

Speed sensor faults that mimic transmission failure

- A loose or corroded ground at the transmission case can corrupt the VSS signal and set P1791 even when the sensor itself tests good on the bench.
Aftermarket stereos, remote starters, or alarm systems tapped into the speed signal wire are a frequent cause of this code on older Hondas.
- The VSS on many Honda transmissions also feeds the speedometer, so a dead speedometer with P1791 points strongly at the sensor or its wiring rather than the TCM.
- Metal debris on the sensor magnet from a wearing transmission can cause an intermittent signal that only sets the code during certain driving conditions.
Do not replace the TCM until the speed signal has been verified at the TCM connector, because a bad sensor or harness is far more common than a failed module.

Can I keep driving with P1791?

You can usually drive the vehicle to a repair shop, but avoid sustained highway speeds and heavy acceleration because shift quality and torque converter lockup may be affected. If the transmission is stuck in limp mode or the speedometer has failed, keep the trip short and have it diagnosed promptly.

Tools that help

- OBD-II scan tool with Honda-specific software
- Digital multimeter
- Oscilloscope for signal waveform testing
- Jack and jack stands or a vehicle lift
- Basic hand tools for sensor and connector access



Reading P1791

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

Often seen with

P0500 Vehicle Speed Sensor Malfunction · **P0715** Input/Turbine Speed Sensor Circuit Malfunction · **P0720** Output Speed Sensor Circuit Malfunction · **P0721** Output Speed Sensor Range/Performance · **P0722** Output Speed Sensor Circuit No Signal

See it working

Watch the animated explainer [How a Padlock Works: Pin Tumbler Lock in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/honda-p1791/>

