



P1682 · Honda

A/T FI Signal A High Input

P1682 on a Honda means the powertrain control module (PCM) has detected an abnormally high voltage on the automatic transmission fluid pressure signal circuit, often called the A/T FI signal. The PCM expects a voltage within a specific calibrated range, and a sustained high reading tells it the signal wire is shorted to power or the sensor's internal circuit has failed.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Honda specific	Medium	Intermediate	Computer and output circuits

Symptoms you may notice

- The check engine light or automatic transmission warning light illuminates steadily.
- Harsh or delayed shifting because the PCM substitutes a default pressure strategy.
- The transmission may stick in a single gear or enter limp-home mode.
- A noticeable flare or slip during upshifts as line pressure control is compromised.
- Often no symptoms besides the warning light, especially if the fault is intermittent.
- Poor fuel economy or elevated engine rpm at highway speed if the transmission holds a lower gear.

Common causes, most likely first

- 1 A short to voltage on the A/T FI signal wire between the transmission pressure sensor and the PCM, often from chafed insulation against a hot or sharp engine component.
- 2 A failed automatic transmission fluid pressure sensor whose internal electronics output a fixed high voltage.
- 3 Corroded, pushed-back, or water-intruded pins in the transmission solenoid connector or the PCM connector.
- 4 A faulty PCM driver circuit that misreads or falsely pulls the signal line high, though this is less common than wiring faults.
- 5 Contamination or debris blocking the pressure sensor port, causing the sensor to read an incorrect high pressure and output a high signal.
- 6 A poor ground for the transmission sensor reference circuit, which skews the voltage the PCM sees on the signal line.



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P1682, then clear the code and verify whether it returns immediately or only under specific driving conditions.
- 2 Inspect the transmission pressure sensor connector and the PCM connector for corrosion, bent pins, or loose terminals, and repair any damaged pins before replacing parts.
- 3 Back-probe the A/T FI signal wire at the PCM and measure voltage with the key on and engine off; compare the reading to the Honda service specification for that sensor.
- 4 Disconnect the sensor and check the signal wire for a short to battery voltage or a short to the reference voltage wire using a multimeter, repairing the harness as needed.
- 5 Check the sensor ground circuit for excessive resistance and confirm the reference voltage is within specification at the sensor connector.
- 6 If the wiring and grounds test good, replace the automatic transmission fluid pressure sensor and clear the code, then road-test through all gears.
- 7 If the code persists after sensor replacement and wiring verification, perform a PCM pin-fit and driver circuit test, and replace the PCM only after confirming the fault is internal.

What Honda techs check before replacing the sensor

- A chafed A/T FI signal wire near the exhaust heat shield or transmission mount is a frequent cause on older Hondas, and the short often appears only when the engine bay is hot or the car is moving.
- A high signal voltage can be set by a sensor that is mechanically fine but has a contaminated pressure port, so cleaning the port and refreshing the fluid can resolve the code without a new sensor.
- Technicians sometimes replace the pressure sensor only to find the PCM connector has a pushed-back terminal that intermittently touches the signal wire to a neighbouring power pin.
- P1682 is often stored alongside shift solenoid or line pressure codes, and diagnosing those first can reveal that the high signal is a symptom of a broader transmission harness problem.
- A weak battery or poor engine ground can cause the PCM to log false high-voltage signals on sensor circuits, so verify charging system health before condemning the transmission electronics.

Can I keep driving with P1682?

You can usually drive the vehicle to a repair shop, but avoid aggressive acceleration and highway merging because the transmission may shift harshly or hold a gear unexpectedly. If the transmission enters limp-home mode or the warning light flashes, stop driving and have the vehicle towed to prevent internal damage.



Tools that help

- OBD-II scan tool with Honda-specific live data and freeze-frame capability
- Digital multimeter with back-probe pins
- Honda service information or wiring diagram for the A/T FI signal circuit
- Terminal pick and connector pin-fit test kit
- Transmission fluid pressure gauge set for verifying actual line pressure

Reading P1682

- P** Powertrain: engine, transmission and emissions.
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- 1** Manufacturer-specific code (Honda): its meaning depends on the make.
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- 6** Computer and output circuits.
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- 82** The exact fault within that area.

Often seen with

P0700 Transmission Control System Malfunction · **P0715** Input/Turbine Speed Sensor Circuit Malfunction · **P0720** Output Speed Sensor Circuit Malfunction · **P0740** Torque Converter Clutch Circuit Malfunction · **P0845** Transmission Fluid Pressure Sensor/Switch 'B' Circuit

See it working

Watch the animated explainer [How a Catalytic Converter Works: 3D Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/honda-p1682/>

