



## P1631 · Kia

# Alternator T Open Or No Power Output 1.8L

P1631 on a Kia with the 1.8L engine means the engine control module (ECM) is not receiving the expected alternator 'T' terminal signal, which is the alternator's internal feedback that it is producing power. The ECM sets this code when that terminal is open-circuited or when the alternator is not outputting voltage despite the engine running.

| SYSTEM     | CODE TYPE    | SEVERITY | FIX DIFFICULTY | AREA                         |
|------------|--------------|----------|----------------|------------------------------|
| Powertrain | Kia specific | Medium   | Intermediate   | Computer and output circuits |

## Symptoms you may notice

- Battery warning light illuminated on the dashboard
- Dimming headlights or interior lights, especially at idle
- Battery repeatedly going flat or needing jumps
- Electrical accessories such as radio or power windows operating sluggishly
- Often no symptoms besides the warning light if the alternator still charges intermittently
- Engine may idle rough or stall if battery voltage drops too low

## Common causes, most likely first

- 1 Broken or corroded wire between the alternator T terminal and the ECM
- 2 Failed alternator internal regulator or open T terminal circuit inside the alternator
- 3 Loose or dirty battery terminal connections causing low system voltage
- 4 Blown fuse or fusible link in the alternator charge circuit
- 5 Serpentine belt slipping or worn, preventing proper alternator rotation
- 6 Faulty ECM driver circuit for the T terminal signal (rare)

## How to diagnose and fix it

- 1 Check battery terminals and the battery state of charge; clean and tighten as needed
- 2 Inspect the serpentine belt and tensioner for wear or slippage
- 3 Measure voltage at the battery with the engine running; should be 13.5–14.5 volts
- 4 Disconnect the alternator T terminal connector and inspect for corrosion or damage
- 5 With key on, check for reference voltage at the T terminal wire from the ECM; repair open or short as needed
- 6 Test the alternator output directly at the B+ terminal and perform a full charging system test
- 7 If wiring and belt are good but no T signal exists, replace the alternator and clear the code



## Don't replace the alternator before checking this

- A loose or corroded battery terminal can mimic a failed alternator by dropping system voltage and setting P1631 even when the alternator is healthy.
- The T terminal wire often breaks inside the loom near the alternator due to heat and vibration, so a visual inspection of the connector alone is not enough.
- Some Kia 1.8L models use a fusible link in the underhood fuse box that feeds the alternator sense circuit; a blown link sets this code with no charging fault at all.
- A slipping serpentine belt can cause intermittent P1631 without any noise if the belt only slips under load or when cold.
- This code does not always mean the alternator is dead; it can set if the ECM loses the feedback signal while the alternator still charges normally.

## Can I keep driving with P1631?

You can drive a short distance to a repair shop if the battery warning light is on but the engine runs normally, but avoid long trips or heavy electrical loads. If the lights dim or the engine starts to stumble, stop and have the vehicle towed to prevent a no-start or stall.

## Tools that help

- Digital multimeter
- Battery terminal cleaner
- Serpentine belt inspection tool or mirror
- OBD-II scan tool
- Wire probe and jumper leads

## Reading P1631

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

## Often seen with

**P1630** Accelerator Pedal Position Sensor 1 Signal Too Low · **P1632** Accelerator Pedal Position Sensor 1 Power Supply Malfunction · **P1630** Traction Control System · **P1630** Drive Authorization Signal · **P1630** Alternator Regulator 1 Control Circuit · **P1632** Battery Voltage Detection Circuit for Alternator Regulator · **P1632** Battery Voltage Detection Circuit for Alternator Regulator 1 · **P1630** System Voltage Too High/Low · **P1632** Anti-Theft Fuel Disable Signal Received · **P1632** Throttle Valve Adaptation Condition Not Met · **P0562** System Voltage Low · **P0563** System Voltage High · **P0620** Generator Control Circuit Malfunction



### See it working

Watch the animated explainer [How the PCV System Works: Crankcase Ventilation](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/kia-p1631/>

