

GENERIC · POWERTRAIN

P2061

OBD-II TROUBLE CODE

P2061

Reductant Injection Air Pump Control Circuit High

P2061 means the engine computer has detected an abnormally high voltage on the control circuit for the reductant injection air pump, which is part of the diesel exhaust fluid (DEF) dosing system on many modern diesel vehicles. The computer expects the control wire to switch between low and high states, but it is seeing a sustained high voltage that indicates a short to power or an open circuit in the pump control path.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Fuel and air metering and auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Reduced engine power or limp mode if the fault triggers a derate strategy
- A message on the dash indicating a problem with the emissions system or DEF
- Possible rough running or poor fuel economy if the reductant injection is disabled
- In some cases, the vehicle may enter a countdown to no-start if the fault is ignored

Common causes, most likely first

- 1 Short to power in the reductant injection air pump control wire
- 2 Open circuit in the control wire between the pump and the engine control module (ECM)
- 3 Failed reductant injection air pump relay or fuse
- 4 Corroded or damaged connector at the air pump or ECM
- 5 Faulty reductant injection air pump itself (internal short)
- 6 Failed ECM driver for the air pump control circuit



How to diagnose and fix it

- 1 Check the air pump fuse and relay, replacing any blown fuse or faulty relay
- 2 Inspect the wiring harness and connectors at the air pump and ECM for corrosion, chafing, or loose pins
- 3 Disconnect the air pump and measure resistance on the control circuit to check for a short to power or open
- 4 Use a scan tool to command the air pump on and off while monitoring the control circuit voltage
- 5 If the circuit tests good, test the air pump by applying power and ground directly to confirm it operates
- 6 If the pump fails the direct test, replace the reductant injection air pump
- 7 If all components test good, diagnose the ECM control driver or replace the ECM as a last resort

Don't overlook the DEF system wiring

- A common mistake is replacing the air pump when the real problem is a chafed control wire shorting to a nearby power wire in the harness.
- The code can set intermittently due to vibration or heat, so a wiggle test of the harness while monitoring live data is often necessary.
- Some vehicles use a shared power supply for multiple reductant components, so a fault in one can affect the air pump circuit.
- A weak or failing battery can cause voltage spikes that mimic a short to power, so always check battery health first.
- The ECM may set this code if the air pump control circuit is open, not just shorted, so don't assume a short without testing.

Can I keep driving with P2061?

You can usually drive the vehicle short distances, but avoid heavy loads or long trips because the emissions system may enter a derate or no-start countdown. Have the fault diagnosed promptly to prevent further damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Test light
- Basic hand tools



Reading P2061

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 0** Fuel and air metering and auxiliary emission controls.
- 61** The exact fault within that area.

Often seen with

P2060 Reductant Injection Air Pump Control Circuit Low · **P2062** Reductant Supply Control Circuit/Open · **P2063** Reductant Supply Control Circuit Low · **P20B9** Reductant Heater A Control Circuit/Open · **P20BA** Reductant Heater A Control Performance

See it working

Watch the animated explainer [Engine Cooling System Trainer: How Engines Stay Cool](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2061/>

