

GENERIC · POWERTRAIN

P214F

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P214F

Reductant Heater A Current Too High

P214F indicates that the engine control module has detected excessive current flow through the reductant heater circuit, which is part of the diesel exhaust fluid system. The heater is designed to thaw frozen DEF and maintain it at an optimal temperature for proper selective catalytic reduction operation, and the module monitors current to ensure it stays within a safe range.

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

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- A pending or stored P214F code with possible reduced engine power or limp mode
- DEF system-related warnings on the dashboard, such as low DEF or service exhaust system messages
- Increased DEF consumption or failure to meet emissions standards during inspection
- In rare cases, a burning smell or visible damage to the heater wiring or connector
- Difficulty starting the engine in extremely cold weather due to frozen DEF

Common causes, most likely first

- 1 Short circuit in the reductant heater element itself, causing low resistance and high current draw
- 2 Damaged or chafed wiring in the heater circuit, creating a short to ground or to power
- 3 Corroded or loose electrical connectors at the heater or control module, leading to intermittent high current
- 4 Internal failure in the engine control module or reductant control module driver circuit
- 5 Water intrusion into the heater connector or module, causing a short circuit
- 6 Aftermarket or incorrect heater replacement with wrong resistance specifications



How to diagnose and fix it

- 1 Use a scan tool to verify the code and check for any related freeze frame data or pending codes
- 2 Visually inspect the reductant heater wiring harness and connectors for damage, corrosion, or signs of overheating
- 3 Measure the resistance of the reductant heater element with a multimeter and compare to the manufacturer's specification
- 4 Check for short circuits in the heater circuit by testing for continuity to ground and to power with the component disconnected
- 5 Inspect the control module connector and pins for corrosion or damage, and perform a wiggle test while monitoring current
- 6 If the heater resistance is out of specification, replace the reductant heater assembly
- 7 If the wiring and heater are good, test the control module output with a lab scope or bidirectional scan tool, and replace the module if faulty

Reductant Heater Current Diagnostics

- A common oversight is assuming the heater element is always at fault, but a shorted wiring harness can produce the same high-current condition and is often caused by rubbing against the frame or exhaust components.
- The code can be set intermittently by a poor ground connection at the heater or module, which may not show up during a simple resistance check but will appear under vibration or temperature changes.
- Some vehicles use a smart heater with an integrated thermistor, and a failure in the thermistor circuit can cause the module to command maximum current, leading to a P214F without a heater element defect.
- Technicians sometimes replace the heater only to have the code return because the control module's internal driver is shorted, so always test the module output before condemning the heater.
- This code is often accompanied by other reductant heater codes for other circuits (B or C), which can indicate a shared power or ground issue rather than multiple failed heaters.

Can I keep driving with P214F?

You can usually continue driving with this code, but the vehicle may enter limp mode or fail to complete a regeneration, so avoid long trips and schedule service soon. Do not ignore it, as continued driving with a shorted heater can damage the control module or wiring.

Tools that help

- OBD-II scan tool with bidirectional control and live data
- Digital multimeter with resistance and continuity functions
- Lab scope for testing current ramps and module outputs
- Wiring diagram for the reductant heater circuit
- Basic hand tools for connector and component access



Reading P214F

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 1** Fuel and air metering.
- 4F** The exact fault within that area.

Often seen with

P20B9 Reductant Heater A Control Circuit/Open · **P20BA** Reductant Heater A Control Performance · **P20BB** Reductant Heater A Control Circuit Low · **P214E** Reductant Pump A Current Too High · **P2150** Fuel Injector Group 'B' Supply Voltage Circuit Low

See it working

Watch the animated explainer [How a Fuel Injector Works: Pulse Width and Spray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p214f/>

