

GENERIC · NETWORK

U350F

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U350F

Control Module Cooling Fan Circuit Range/Performance

U350F indicates that a control module responsible for monitoring or operating a cooling fan has detected a circuit fault where the fan's electrical behavior falls outside the expected range or performance window. The module compares commanded fan operation against feedback such as current draw, voltage drop, or fan speed, and sets this code when the circuit does not respond as designed.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Network	Generic (all makes)	Medium	Intermediate	Network communication

Symptoms you may notice

- Illumination of the malfunction indicator lamp (MIL) or a message on the driver information center
- Cooling fan may run continuously at full speed regardless of engine temperature
- Cooling fan may fail to activate, leading to elevated engine coolant temperature in traffic or at idle
- Auxiliary fan or condenser fan may not operate when the air conditioning is switched on
- Intermittent fan operation that correlates with vibration, moisture, or temperature changes
- Often no symptoms besides the warning light when the fault is stored but the fan still functions normally

Common causes, most likely first

- 1 Corroded, loose, or damaged electrical connector at the cooling fan motor or fan control module
- 2 Failed cooling fan motor with excessive current draw or an open winding
- 3 Damaged wiring harness between the control module and the fan, including chafed insulation or broken strands
- 4 Faulty fan control module or relay that cannot modulate fan speed correctly
- 5 Poor ground connection for the fan circuit, causing voltage drop under load
- 6 Control module software calibration issue or internal driver fault in the module that commands the fan
- 7 Aftermarket or incorrect fan assembly with electrical characteristics outside the module's expected range



How to diagnose and fix it

- 1 Inspect the fan connector and wiring for corrosion, loose terminals, and chafing, and repair as needed
- 2 Command the cooling fan on and off with a scan tool and observe whether the fan responds and whether the code resets
- 3 Measure voltage and ground at the fan connector under commanded load to identify excessive voltage drop
- 4 Test the fan motor directly with a known-good power and ground source to confirm it spins freely and draws normal current
- 5 Check the fan control module or relay for proper operation and replace if it fails functional testing
- 6 Verify the ground circuit from the fan and control module to the chassis with a voltage drop test
- 7 After repairs, clear the code and perform a road test with the air conditioning on and engine at operating temperature to confirm the fan cycles correctly

Fan circuit faults that fool good technicians

- A fan that spins freely by hand can still set this code because the module monitors current draw and feedback signal, not just rotation, so a worn motor drawing slightly out of range will trigger the fault before the fan stops working.
- Corrosion inside the fan connector pins often causes intermittent range and performance faults that do not appear during a quick visual inspection, so a wiggle test and voltage drop measurement under load are essential.
- The code can be set by a fan control module that receives a correct command but cannot achieve the requested speed due to a partially seized fan bearing, which mimics an electrical fault and leads to unnecessary module replacement.
- Some vehicles set U350F when the cooling fan runs longer than expected after shutdown because a failing thermostat or coolant temperature sensor keeps the module commanding fan operation, so the root cause may not be in the fan circuit at all.
- A weak battery or charging system voltage that drops during fan engagement can cause the module to log a performance fault even though the fan and wiring are healthy, so always verify system voltage under load before condemning parts.

Can I keep driving with U350F?

You can usually drive the vehicle to a repair shop if the engine temperature gauge remains normal, but avoid heavy traffic, sustained idling, and towing until the fan circuit is repaired. If the temperature gauge climbs above normal or a high-temperature warning appears, stop safely and shut the engine off to prevent damage.



Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter with voltage drop and current measurement functions
- Wiring diagram for the cooling fan circuit
- Back probe pins and jumper wires
- Infrared thermometer to verify actual coolant and fan operation temperatures

Reading U350F

U	Network: communication between the vehicle's control modules.
3	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
5	Network communication.
0F	The exact fault within that area.

Often seen with

P0480 Cooling Fan 1 Control Circuit Malfunction · **P0481** Cooling Fan 2 Control Circuit Malfunction · **P0482** Cooling Fan 3 Control Circuit Malfunction · **P0483** Fan Rationality Check · **U0100** Lost Communication With ECM/PCM A

See it working

Watch the animated explainer [How a Radiator Fan Relay Circuit Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u350f/>

