

FAA's Airworthiness Directive issued to avoid power loss

2 May 2015, by Nancy Owano



Credit: Wikipedia

A fix for a software problem that could possibly result in power loss in Boeing 787s has been ordered. Federal Aviation Administration officials adopted a new airworthiness directive (AD), effective as of Friday, for Boeing 787 airliners to follow until the flaw is fixed. "We are issuing this AD to prevent loss of all AC electrical power, which could result in loss of control of the airplane."

Boeing discovered the software error that could result in a total loss of [power](#). Jad Mouawad, airline correspondent for *The New York Times*, elaborated: "Boeing found during laboratory testing that the plane's power control units could shut down power generators if they were powered without interruption for 248 days, or about eight months. The findings were published in an airworthiness directive."

The document said, "We are adopting a new airworthiness directive (AD) for all The Boeing Company Model 787 airplanes. This AD requires a repetitive maintenance task for electrical power deactivation on Model 787 airplanes."

Boeing, according to *The New York Times*, said the problem had occurred only in [lab](#) simulation

and no airplane had experienced it. Also, wrote Mouawad, "The plane maker said that power was shut down in all airplanes in service in the course of the regular maintenance schedule, and that it would be rare for a plane to remain with power on without interruption for eight months."

All Boeing 787 operators will be required to periodically deactivate the electrical system, wrote Stephen Trimble in *Flightglobal*. He said, according to the company, Boeing was working on a [software](#) update to fix the problem, which should be ready in the fourth quarter.

The document said the directive was prompted by the determination that a Model 787 airplane powered continuously for 248 days can lose all alternating current (AC) electrical power due to generator control units (GCUs) simultaneously going into failsafe mode.

"This condition is caused by a software counter internal to the GCUs that will overflow after 248 days of continuous power. We are issuing this AD to prevent loss of all AC [electrical power](#), which could result in loss of control of the airplane."

Mouawad went into further detail: "The 787 has six electrical generators. Two 250-kilovolt-ampere units are mounted on each of the two engines, and two 225-kilovolt-ampere units are used as backup generators. The generators provide power for a variety of functions on the aircraft, including running the plane's avionics, pressurizing the cabin and de-icing wing parts. Each generator is linked to a control [unit](#)."

The directive said that "The manufacturer is currently developing a GCU software upgrade that will address the unsafe condition identified in this AD. Once this [software](#) is developed, approved, and available, we might consider additional rulemaking."

More information: [s3.amazonaws.com/public-inspec ... r.gov/2015-10066.pdf](https://s3.amazonaws.com/public-inspection.docket.faa.gov/2015-10066.pdf)

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