



eyes can tell you what's changing around you outside the aircraft.

Firefighting Flight: The iPad That Stopped the Pedals

Sometimes, technology's danger isn't in the data—it's in the hardware itself. During a wildfire mission, a CH-47D Chinook helicopter crew was conducting long-line water drops over rugged terrain. The cockpit was busy but routine, with both pilots focused on the mission. Then, without warning, the helicopter began to yaw uncontrollably.

The co-pilot tried to correct with the pedals, but they wouldn't move freely. The yaw increased, and the crew quickly realized they were losing control. Seconds later, the helicopter struck the Salmon River. Both pilots died in the crash.

When investigators recovered the wreckage, they found the culprit: the company-issued iPad used for mission planning and mapping. The device had fallen and become wedged between the co-pilot's left pedal and the airframe, physically preventing the pedals from re-centering. Gouge marks on the iPad matched the pedal assembly exactly.

NTSB concluded that, because of cockpit layout, seat restraints and the pilots' helmets, neither crewmember could reach down and free the jammed iPad in time. It was a heartbreaking reminder that even a useful piece of technology can become a hazard if it's not properly stowed.

Human Factors Takeaway: *If anything is not secured, it's a potential hazard—no matter how essential it is to the mission.*

Lessons Across Every Mission

These three cases share a common thread: The technology performed exactly as intended—or at least as designed—but the way it was used, placed or relied upon set the stage for trouble.

So, how do we avoid the trap?

- 1 **Treat technology as an aid, not a crutch.** Every pilot learns to cross-check instruments, maintain outside scanning and communicate clearly.



That doesn't change just because the screen looks impressive. The basics are what save us when technology doesn't.

- 2 **Train for distraction.** Many operators train for equipment failure—but how often do we train for “technology overload”? Practice scenarios where multiple systems demand your attention at the same time. Decide in advance what deserves priority.
- 3 **Know what “normal” looks like.** Systems onboard can show trends and patterns over time. Learn the baselines so that when something looks off, you can react before the problem grows.
- 4 **Learn from others' mistakes.** The NTSB database isn't just for investigators. Use real-world cases in safety briefings. When people see how easily a good crew can be caught off guard, it drives the lesson home.

Technology will only grow more advanced from here, and that's a good thing. But whether you're flying for firefighting, wildlife enforcement, law enforcement or EMS, remember that no tool replaces judgment, situational awareness and solid crew coordination.

The pilots and crews who stay safest are the ones who balance old-school skills with new-school tools—using technology to back them up, not bail them out.