

COCKPIT Discipline

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Violating the ‘sterile cockpit’ rule and ignoring other standard operating procedures can lead to tragedy.

BY ROBERT BARON

Nonadherence to standard operating procedures and violations of the “sterile cockpit rule” are becoming too frequent, often with tragic results.

A textbook example was the Oct. 19, 2004, crash of a Corporate Airlines Jetstream 32, which struck trees and the ground short of Runway 36 at Kirksville (Missouri, U.S.) Regional Airport after a flight from St. Louis. The airplane was destroyed; 11 passengers and both pilots were killed, and two other passengers were seriously injured.

The U.S. National Transportation Safety Board (NTSB) said, in its final report, that the probable cause of the accident was “the pilots’ failure to follow established procedures and properly conduct a nonprecision instrument approach at night in IMC [instrument meteorological conditions] ... and their failure to adhere to the established division of duties between the flying and nonflying (monitoring) pilot.”¹

Contributing factors included the pilots’ failure to make standard callouts. The report also said that their “unprofessional behavior ... and their fatigue likely contributed to their degraded performance.”

The cockpit voice recorder (CVR) transcript reveals two pilots who were so comfortable working together that their conversations were personal and humorous — and clearly not in compliance with the U.S. Federal Aviation Administration’s (FAA’s) “sterile cockpit rule,” which prohibits nonessential communication during critical phases of flight, including operations below 10,000 ft.

Why pilots routinely violate this rule is not difficult to figure out. First, pilots understand that a CVR records over itself every 30 minutes (longer, in the case of some new CVRs) and typically is not heard or transcribed unless there is an accident. Because the probability of an accident is low, pilots are confident that whatever is recorded on the

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CVR will not be heard by anyone else. Second, it is easy to forget that cockpit conversations are being recorded. A CVR is out of sight and out of mind. This “what’s said in the cockpit stays in the cockpit” mentality can lead to a temptation to continue nonessential conversations below 10,000 ft. Third, the fact that no one is in the cockpit to enforce the sterile cockpit rule leaves pilots to decide for themselves whether to comply. The low probability of disciplinary action plays into the mix.

The CVR transcript of the accident flight shows that, on the accident leg, the captain was the pilot flying, and the first officer was the pilot not flying (pilot monitoring). The first officer’s duties included monitoring the captain’s overall performance and making proper callouts as specified by the company’s standard operating procedures (SOPs). However, the crew’s joking, nonessential conversations continued until just a few minutes before impact with the ground.

For example, the accident report quoted the captain — at 1910 local time, about 27 minutes before the accident — as saying, “Gotta have fun” and criticizing other first officers he had flown with for being too serious.

“Too many of these [expletive] take themselves way too serious, in this job,” he said. “I hate it, I’ve flown with them and it sucks. A month of [expletive] agony. ... All you wanna do is strangle the [expletive] when you get on the ground.”

As the airplane descended into the clouds, the CVR recorded the captain saying, “We’re going into the crap. Look, ooh, it’s so eerie and creepy ... get a suffocating feeling when I see that.” The first officer made a barking sound followed by a groan.

About 1925, the CVR recorded a yawn from the first officer, who then said, “They have a VASI [visual

approach slope indicator] on the left hand side.” The captain responded, “Yeah. Wish we had an ILS [instrument landing system] on the front side.”

The CVR recording showed that both accident pilots deviated numerous times from SOPs — which become increasingly critical as an aircraft gets closer to the ground, especially in IMC or at night. The following are examples from the accident report:

- The first officer did not call out “100 feet above minimums.”
- As the aircraft continued its descent below the minimum descent altitude, the pilot flying said, “I can see ground there” and “what do you think?” Contrary to procedures and training, the pilot flying was looking for external visual references during the approach rather than leveling off and monitoring the flight instruments.
- After the pilot flying said he saw the ground, the pilot not flying said, “I can’t see [expletive].” Consistent with procedures, the pilot not flying was looking for pertinent ground references. However, he did not challenge the continued descent by the pilot flying.
- Company procedures called for descent rates of no more than 900 fpm below 300 ft above ground level (AGL). The accident airplane’s descent rate was consistently about 1,200 fpm until immediately before it struck the trees. The first officer failed to challenge the rate of descent.

Making standard callouts can be difficult for a first officer, even in a disciplined cockpit setting. A 1994 study found that more than 80 percent of flight-crew-

involved major accidents involving U.S. air carriers occurred when the captain was the flying pilot.² The study also found that a frequent factor in accidents involving pilot error was the failure of the first officer to challenge errors made by a flying captain.

Although other factors played a role in the accident, the mismanaged cockpit no doubt contributed to the inability of the crew to at least mitigate some of these factors. For example, fatigue could have been at least partially offset by compliance with SOPs.

Further, SOPs are critical to the safety of flight, and both pilots must understand what is expected of them and comply with the procedures. CRM (crew resource management) training addresses these issues with the hope that pilots will abide by the rules and procedures, and most important, use their best judgment in the practical environment. In this instance, however, the crew’s behavior contradicted the principles of CRM. This was a fatal error. ●

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Notes

1. NTSB. *Collision With Trees and Crash Short of the Runway, Corporate Airlines Flight 5966, BAE Systems BAE-J3201, N875JX, Kirksville, Missouri, October 19, 2004.* Aircraft Accident Report. NTSB/AAR-06/01.
2. NTSB. *A Review of Flightcrew-Involved, Major Accidents of U.S. Air Carriers, 1978 Through 1990, Safety Study NTSB/SS-94/01.* Washington, D.C. 1994. Cited in NTSB, *Collision With Trees and Crash Short of the Runway, Corporate Airlines Flight 5966, BAE Systems BAE-J3201, N875JX, Kirksville, Missouri, October 19, 2004.*