# CALLBACK

From NASA's Aviation Safety Reporting System

Issue 446 March 2017


# No Place for Complacency

"Defined as overconfidence from repeated experience on a specific activity, complacency has been implicated as a contributing factor in numerous aviation accidents and incidents. Like fatigue, complacency reduces the pilot's effectiveness in the flight deck. However, complacency is harder to recognize than fatigue, since everything is perceived to be progressing smoothly."[1]

Complacency plagues more aviation professionals than just pilots. It can occur to anyone while accomplishing the most routine function or the most complex task in any sector of aviation operations. Because immunity from complacency simply does not exist, proactive techniques and procedures are necessary to mitigate its detrimental effects.

ASRS receives numerous reports suggesting that complacency is a significant factor in reported incidents across various aviation professions. *CALLBACK* examines a cross section of those reports and shows how complacency can combine with other factors to create undesirable circumstances that would be better avoided.

## Fueling Complacency

This C182 pilot experienced an embarrassing loss of engine power. The pilot attributed his loss of power and subsequent off-field landing to pilot complacency when he overlooked a portion of the checklist procedures.

■ *[I] began to experience engine roughness followed quickly by a complete loss of power.… I had already closed the IFR flight plan and was…inbound to land. The engine lost power at 1,500 feet AGL, about 4 miles from [the airport] with 18 knots of headwind. Given the proximity to the ground and distance to the runway, [I] reversed course…and began searching for a place to land. Seeing that there was no immediate traffic on the highway, I decided to land [there], and the landing proceeded without incident.*

*Upon inspection of the aircraft, the cause was discovered for my loss of power. It was…fuel starvation. The fuel selector switch had been set to the right tank, and the previous flight had been conducted while on only one tank. The chain of events…was set in motion by the complacency of the Pilot in Command (PIC) and failure to properly…abide by checklist procedures in the cockpit. Familiarity with the aircraft led to a level of complacency on my part…[with] the fuel selector switch and checklist flow during preflight. My belief that the selector switch was always on BOTH allowed the checklist item to go unnoticed. The…flight [was] conducted with the aid of the autopilot, which prevented me from noticing the aircraft flying more and more out of trim while one [fuel] tank was being exhausted. Approaching the airport and disconnecting the autopilot, [I] noticed the trim situation, which was promptly overshadowed as the engine lost power. Ground proximity, aircraft configuration, airspeed, and the urgency of the situation prevented me from attempting corrective measures that might have restored engine power.*

## Dueling Complacency

A Tower Controller's complacency, compounded by a pilot's perfectly timed mistake, resulted in a ground conflict that could have had more serious consequences.

■ *The Ground Controller advised me that an aircraft had taxied out and taken a wrong turn and that an aircraft would be holding short of the runway, waiting to cross. At that time a Bonanza advised me that he was holding short of the runway, ready for departure. I advised Ground Control that the aircraft that taxied the wrong way could wait until the Bonanza departed. I had a Cessna that was on short final for a touch and go. Once I had sufficient spacing, [I issued], "Bonanza, Runway 3, cleared for takeoff." The Bonanza read back the runway and "Cleared for takeoff."*

*During this time of day, the sun was setting to the southwest, and we had the double shades pulled, making it difficult to see the approach end of the runway. My attention was focused to the approach end of the runway, looking for the Bonanza to depart, when I noticed an aircraft pass the tower departing the opposite direction runway [Runway 21].*

*I felt that complacency on my part was to blame. I should have observed the Bonanza at the approach end of the runway instead of taking his word for it. The pilot couldn't read a compass, read a runway sign depicting which way the runway goes, or familiarize himself with an airfield layout. This is a situation that I will probably never see again.*

## Automating Complacency

A G-V pilot was surprised when his automation did not capture the altitude as it always had. Contemplating the incident, he discovered the underlying problem.

■ *I was given a clearance to cross an arrival intersection at 14,000 feet. I reset the altitude alerter to 14,000 feet and*

*selected VPATH for the vertical mode of operation. The autopilot was [engaged in] the descent mode.… The Pilot Not Flying (PNF), was out of the seat to use the lavatory prior to landing. All was in order, so I looked at the FMS to review the ATIS information and to further review the arrival.… During this time my attention was diverted from the primary flight display. The automation did not…capture the assigned altitude. It kept descending until I looked and saw the altimeter at 13,300 feet. I immediately disconnected the autopilot and autothrottles and corrected the aircraft back to 14,000 feet as assigned. As I was leveling at 14,000 feet, the PNF returned to his station and asked me what had happened. A short exchange took place, and we pressed on with the flight. No instruction or challenge was made by ATC, and no conflict was indicated by the TCAS.*

*For a long…time after this flight concluded, I evaluated the performance of my duties.… I failed to adequately monitor the specific flight path of the aircraft during a critical time in the flight. I got complacent…, and I believe it was because for so many years of operating this equipment, never had the automation failed to perform as it had been set up. I believed that it would do as always.… I allowed myself to occupy my attention with other aspects of the flight. Worse, I allowed this to happen when the other pilot was away from his station. I did not discipline myself to avoid distraction from the primary duty.… Complacency contributed directly to this deviation and…has no place on the flight deck.*

## Functional Complacency

During the initial takeoff on what seemed to be a routine day, a B767-300 First Officer made a simple, but significant error. Making no excuses, he describes how complacency was the most probable culprit.

■ *After becoming airborne on our initial takeoff, the Captain called, "Gear up." Inexplicably, I raised the flap handle instead of the gear handle. Over the next several seconds, the flaps retracted while I confirmed lateral navigation (LNAV) at 400 feet AGL, selected vertical navigation (VNAV) at 1,000 feet AGL, and responded to Tower's call to change to Departure Control. During this time, the flaps were retracting, and the minimum airspeed indicator "hook" increased until the stick shaker activated. When this happened, I looked at the flap indicator, realized my error, and extended the flaps to takeoff position (Flaps 5). Simultaneously, the Captain reduced the climb angle, I raised the gear handle, the aircraft accelerated, and the stick shaker stopped. The rest of the departure was normal.*

*I screwed up.… No excuses. I have no idea why I reached for the flaps instead of the gear. I have successfully raised the gear—without error—for decades and buckets of hours. Slow down. Don't rush. Fight complacency. Don't think it can't happen to you!*

## Procedural Complacency

This Mechanic erred while performing a procedure on a CRJ-700 engine. Only after extensive damage was done to the engine during run-up testing, did he realize the mistake and distinguish between the apparent and root causes.

From the right seat Mechanic's report:

■ *I had performed a Fan Blade Pin change on the Right Engine in accordance with the appropriate work card.… We taxied the aircraft to the testing ramp, and after the required time had elapsed, we began the test by increasing the engine speed to full power. All indications up to this time had been normal.… After several seconds at full power, the vibration began to very quickly increase to 1.1.… Upon arrival [back] at the hangar, it was discovered that extensive damage had occurred within the engine. I very quickly…discovered that a ratchet I had been using to perform the pin change was missing. I then went to the acting Supervisor's office and reported the damage and my missing tool.*

*Several factors may have contributed to this incident. It was very early in the morning on my first day back to work after three days off. This is a job I have performed often, and overconfidence or complacency may have figured in.*

From the left seat Mechanic's report:

■ *The procedure was not followed.*

## Combating Complacency

This Flight Attendant, who recognized an ongoing situation where complacency could generate a real hazard, attempted to mitigate the threat by making the hazard known. We applaud both the Flight Attendant and the effort.

■ *This report is to highlight my concern about personnel who are not active working crew members on a flight (jumpseaters), but take it upon themselves to arm and disarm aircraft doors. I have personally had this situation happen, and I have witnessed it happening to fellow working crew members.*

*My intent…is to bring to the attention of the company… an action that should be discouraged and discontinued due to its ability to impact the safety and security of an armed aircraft door.… I think a note or bulletin needs to be sent out to each and every flight attendant explaining proper procedures so that complacency does not breed an opportunity for a fatal outcome.*

1. *Aviation Instructor's Handbook (FAA-H-8083-9A), 2008, p. 9-11.*

| ASRS Alerts Issued in January 2017 | |
|---|---|
| **Subject of Alert** | **No. of Alerts** |
| Airport Facility or Procedure | 3 |
| **TOTAL** | **3** |

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| January 2017 Report Intake | |
|---|---|
| Air Carrier/Air Taxi Pilots | 5,043 |
| General Aviation Pilots | 1,102 |
| Controllers | 504 |
| Flight Attendants | 404 |
| Military/Other | 350 |
| Dispatchers | 229 |
| Mechanics | 181 |
| **TOTAL** | **7,813** |