

# CALLBACK



From NASA's Aviation Safety Reporting System

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## Taking a Stand for Safety

Some of the most difficult judgment calls in aviation occur on the ground, before a flight. Pressured by schedule, passengers, and other considerations, pilots may be tempted to suspend the good judgment they have gained from experience and training to undertake questionable or unsafe flights. We hear from several pilots who explain to ASRS why they regretted not taking a stand for safety.

From a new-hire corporate First Officer:

■ *The Captain [who was] also Chief Pilot...would not put on more fuel at my request. We both were aware of the forecast conditions at our destination, and were both also aware that these conditions required additional fuel to be added to remain within legal IFR reserve fuel minimums.*

## Canyon Calisthenics

The next incident, recounted by the pilot of a high-performance single-engine aircraft, made white-knuckle flyers out of several veteran pilots. It occurred just after a routine passenger pick-up at an airport in the West whose elevation is almost 4,000 feet AGL.

■ *The incident began at [an] airport on [the] lake. I was part of a group of five similar airplanes there to pick up a group of river rafters... The load I was given was five men, two of them quite large, and quite a lot of baggage. There were no scales in the plane so there was no way to know exactly what the load was. However, it was clear that it came very close to max weight. I refused some of the bags and put them aboard another plane. I loaded up the passengers and proceeded to depart. The takeoff was normal and although I could feel the weight of the plane, it did climb out normally.*

*The weather was hot with high winds and turbulence as is usual for this location. There were also updrafts and downdrafts. On climb-out I flew into one of these downdrafts and the plane began to sink. I was flying over the river which has steep canyon walls. In this downdraft I could not climb out of the canyon. I knew that eventually the downdraft would abate and I could climb out, but my*

## Flying Outside the Book

And from a pilot who was persuaded by a company salesman to bend weight-and-balance rules to sew up a sale:

■ *...The salesman, myself, and the [new aircraft] owner were flying [on a long cross-country]. With 3 people and full fuel this aircraft is approximately 50 pounds over gross takeoff weight. We departed with an additional 8 bags and one set of golf clubs, which clearly put us over gross weight. I know better, but rationalizing the*

*However, the Captain was still unwilling to purchase the fuel... I am new with this company and was afraid to make waves with my boss as he has a poor record with pilot personnel. I should have made a stand and deplaned the aircraft, but did not. We landed with about 35 minutes of fuel at our destination after shooting an ILS to 500 feet and 1-1/4 mile visibility...*

*I made contact with his superiors and informed [them] of the event. They assured me that they would stand behind me in all situations of this nature... and also informed me that this **will not** happen again... I have learned that I should and will take whatever actions [are] necessary to avoid*



*putting my certificate...the passengers' safety or the aircraft in jeopardy.*

*passengers were beginning to panic. Two of them were pilots themselves. The passenger sitting behind me took the initiative without my orders to open the pilot-side door and throw out all the bags into the river below, a load of perhaps 150 pounds. I did not resist this move as to do so may have increased their panic. Eventually the downdraft abated and the plane climbed out of the canyon and up to a safe altitude, then landed safely.*

*In retrospect I believe there are a number of ways the incident could have been avoided. I could have been more conservative on the load and refused more bags... I was over-confident about the capabilities of the plane. Also, unconsciously I was relying on the judgment of two of the other pilots present... Both of these pilots had much more experience at this location than I did. I could also have...allowed for the possibility of downdrafts.*

It's possible that the open aircraft door and resultant drag worsened the downdraft situation. Our reporter might have prevented the passenger panic and subsequent baggage barrage by briefing on the local flight conditions prior to departure.



*salesman's statement, "I fly with 5 people and full fuel...and it is fine," I proceeded... When I had the plane at approximately 400 feet AGL I ran out of nose-down elevator trim. I called Tower and requested that we come around to land... This was my first experience outside of the college training environment which consists of good habit patterns and flying by the book. Unfortunately, I did not follow good judgment. Upon my return, I told the salesman he needed to get someone else.*

ASRS Recently Issued Alerts On...
MD-80 autospoiler malfunction
A camcorder battery fire in an overhead cabin bin
B737-800 leading edge devices malfunction
Unshielded transponder testing at an airport repair facility
Alleged navigation interference by a passenger DVD player

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July 1999 Report Intake	
Air Carrier / Air Taxi Pilots	2078
General Aviation Pilots	729
Controllers	65
Cabin/Mechanics/Military/Other	166
<b>TOTAL</b>	<b>3038</b>

# Lessons in Situational Awareness

Situational Awareness—or “SA” as human factors specialists like to call it—is a term referring to pilots’ ability to “keep the big picture” in flight operations. This includes awareness of the aircraft’s location and attitude, its proximity to physical hazards and obstructions, weather and environmental factors, engine and systems status, task priority within the cockpit, and many other factors.

Loss of situational awareness is often associated with poor weather, aircraft emergencies and other extreme situations. But more insidiously, loss of situational awareness also occurs in good visual conditions during routine operations. An air carrier Captain describes a case in point:

■ *While being vectored on a downwind leg to Runway 01L, Tower asked if we had the field in sight, which we did. At that time we were cleared for a visual approach to Runway 01L and a left turn back to the field was initiated to result in a final of approximately 6 miles. When approximately 60° from the runway heading, Tower reported traffic (a B-757) joining a final for runway 01R. While looking for the traffic the First Officer, who was flying the aircraft, took his eyes off the field and shallowed his bank... When I realized he was not just squaring off his final but was going to overshoot the runway I told him he was going to overshoot and ordered a*

*turn back to our runway. He seemed disoriented and was slow in responding, resulting in a significant overshoot approaching the approach corridor for Runway 01R. A TCAS II-Resolution Advisory resulted with a “monitor vertical speed” command which was complied with. Tower questioned if we had the traffic in sight which we answered in the affirmative. We corrected back to the 01L centerline and landed with no further incident.*

*In talking to the First Officer after the landing, he indicated that he lost sight of the runway in the left turn. Also that he never actually saw the B-757. Although I indicated that I saw the traffic and pointed it out, the First Officer did not see it, but I assumed he did. I also assumed that he had the runway in sight, so I was unaware that he had lost situational awareness.*

*The lesson to me is to never assume another crew member is seeing the same thing I am and to work to communicate what I am seeing even when weather is good and “easy” visual approaches are being conducted.*

We trust this incident taught the First Officer the importance of communicating clearly with other crew when he does not have other traffic and the runway in sight.

## The Importance of Homework

Lack of preparation for flight into marginal conditions can contribute to a loss of situational awareness that in turn can build to a near-catastrophe. The pilot of a private jet who was the victim of a critical instrument failure, explains.

■ *Localized area of moderate / heavy rain near and over destination airport. Center controller reported, “it’s only heavy rain, there’s nothing in it.” This was consistent with the pattern of the previous day or two. Carried out normal VOR approach using Autopilot / Flight Director. At Missed Approach Point began to climb on autopilot. Encountered very heavy rain, moderate turbulence. At approximately 700 feet MSL (250 feet above minimums) ADI failed with loss of all Autopilot / Flight Director functions. Pilot had difficulty maintaining precise control over aircraft using backup*

*instruments due to turbulence and loss of position and altitude guidance.*

*Contributing factors: 1) backup instruments not set up for missed approach; 2) pilot did not study and prepare adequately for missed approach; 3) lack of situational awareness when talking with controller due to lack of familiarity with nearby landmarks, fixes and waypoints.*

*Corrective actions: Training should include setting up backup navigation indicators for approach / missed approach in anticipation of primary ADI / HSI failure. Pilots need to thoroughly memorize and set up missed approach [procedure] because an emergency or equipment failure does not leave time to read it while executing. ▲*

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**“This is the sort of English up with which I will not put”** – Attributed to Sir Winston Churchill

Recently ASRS received a refreshing international flight operations report in which an ATC instruction was rendered in plain English, understood by the U.S. crew, and complied with promptly. No apparent problem, one would think—but read on.

■ *We were approaching [airport in England] on a relatively clear morning. We held for about 10 minutes and then made an approach under Approach Control radar vectors and Tower control. An aircraft in position was cleared for takeoff and we were cleared to “land after” the departing aircraft. I decided not to make a go-around. We were stable and landed*

*after he broke ground. We made a normal roll-out and taxied in. Tower commented “good job.” Later we found out a newspaper called it a near miss.*

*Therefore, even though the “land after” clearance works well over there, in the same situation, I would go around next time.*

In this judgment dance between the pilot and controller, we still don’t know who was leading. What’s certain is that “land after” is not recognized by the International Civil Aviation Organization (ICAO) as accepted ATC terminology. ▲