

Distractions and Their Impact on Safety

By: Capt Bill Trussell, CFI, IA, MEI

Very often it is instructional to learn from accidents or near accidents, especially in aviation. The industry as a whole and interested specialty groups have been reviewing accident details for decades looking for clues on how to reduce the recurrence of accidents. The FAA as well as CAP actively look for ways of preventing recurring incidents that cause injury or damage to aircraft and property on the ground, or worse. Our purpose in this article is to discuss the role that distractions can play in safety and in this case how they contribute to aviation accidents.

The FAA and the aviation industry at large have formed several task forces over the years to look into the role that distractions play in loss of control accidents. Distractions can also be responsible for vehicle accidents and other activities with a higher safety impact.

Perhaps one of the best examples of how distractions can influence the successful outcome of an aircraft operation is the December 1972 Eastern Airlines Flight 401, a Lockheed L-1011, that was scheduled to fly from JFK in New York to Miami International Airport in Florida. After extending the landing gear on final approach to Miami International Airport, the first officer noticed the nose wheel down & locked light was not illuminated. The approach was aborted and the aircraft entered a 2,000 foot holding pattern west of the airport, the crew engaged the autopilot while all 4 cockpit occupants participated in trouble shooting the problem. When the autopilot was engaged it was inadvertently placed in Control Wheel Steering (CWS) mode. In this mode the airplane would maintain the attitude last commanded by the pilot.

One of the pilots – most likely the Captain – bumped into the control column as he turned to speak with the flight engineer. The airplane was placed in a shallow descent that was sustained all the way to the ground. Complicating matters was that the “ground” was covered with the Everglades swampland and the flight was being conducted at night. With no flight crew member tasked with monitoring the flight status, each one of the four flight crew members on the flight deck failed in their duty to detect the descent. This situation was a lot worse due to the distraction that the landing gear status presented. This accident has been replayed in movies and television for reasons other than preventing the accident from occurring again.

Every pilot has been taught at several points in their careers to obey the following priorities, in this order:

Aviate – maintain aircraft control at all times.

Navigate – manage navigation systems and tasks including fuel reserves.

Communicate – with passengers and ATC.

Given that Loss of Control is the number one cause of fatal aircraft accidents, following this task priority is paramount. Losing control of an aircraft is a guaranteed bad outcome. The same can be said for other situations in life, driving a car, operating a water vehicle, even riding a bike!

Considering that CAP does not operate large turbine powered aircraft, what about a scenario closer to home? While the safety record for CAP is quite good, the value of examining a possible scenario that could result in a distraction to the flight crew is worth considering. The FAA encourages successful pilots to consider, “what would I do if?” before and during flight, while after each flight they consider, “what could I have done better?”

So here is one scenario to consider, a partial power loss immediately after takeoff.

We often practice a full power loss during the takeoff roll. Landing straight ahead on the remaining runway, or simply applying the brakes and stopping are good things to perform routinely. While it is best to train in proficiency and through practice – preferably with a CFI, power loss is often not so simple. What are we going to do if we lose a cylinder but still have some power to maneuver?

If there is time available and some altitude to provide some options, we can try to diagnose and correct the problem. The emergency checklist will provide some guidance for things to check such as Mixture – Rich, Fuel Pump – On, Fuel – On Proper Tank. But if we can't restore full power? What is next?

We land - keeping the aircraft under positive control throughout. But having partial power provides more options, right? Do you return to the airport or maneuver to land on another runway? While this decision process is going on, your mental process being applied to the situation is now a distraction. Can you keep everything under control during this critical time? Is another pilot on board to help with your efforts to land safely? Do you know how to use that resource effectively? When was the last time you practiced such a scenario? Encountering this situation for real is not the time to wish you had practiced such a situation and evaluated your response to it.

In all this confusion and troubleshooting have you ensured you are using what power you have remaining to sustain your altitude or climb if possible? What a shame it would be to ignore flying the aircraft and wasting the power remaining if a climb was possible. A good flight instructor will introduce you to this type of scenario during a flight review or proficiency flight prior to a Form 5 while maintaining safe operating conditions. This will allow you to learn your response and encourage you to follow the priorities you were taught.

If you think this scenario is far fetched and will never happen to you, think again.

Capt Bill Trussell, CFI, IA, MEI

Squadron Commander, DE-019

Assistant Stan/ Eval Officer, DE Wing

FAA Safety Team Representative

CAP Instructor Pilot, Check Pilot