

Safety Update

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Scud Running

Recent National Transportation Safety Board (NTSB) and Joseph T. Nall reports continue to identify the third leading cause of general aviation fatal accidents as Visual Meteorological Conditions (VMC) Flight Continuing into Deteriorating Weather Conditions—more commonly known as “Scud Running.”

Summer Haze over the Great Smokey Mountains

Some years ago in North Carolina, the Charlotte FAAS Team organized an interactive aviation safety program that addressed the dangers of Scud Running. Using the exact track of a recent Controlled Flight Into Terrain Accident (CFIT) fatal accident in



Summer haze over the Great Smokey Mountains.

the Great Smokey Mountains, the aircraft’s identical flightpath was carefully loaded into a RedBird Simulator.

The FAAS Team hosted a hands-on workshop and invited non-instrument rated private pilots to fly the exact route with the identical visibility and weather conditions to experience scud running. It’s interesting to note that NTSB data documents instrument rated pilots also falling victim to scud running when they continue into worsening conditions instead of immediately returning to VMC weather or promptly getting an air-file. All of the participating pilots crashed CFIT within a few short and intense minutes. Even after watching the previous pilot fly and trying to pick up clues of what to avoid when their turn came, each pilot still crashed. This was a humbling experience for everyone. Seven of the eleven private pilots committed to begin their instrument training. Three pilots vowed on the spot to never scud run again. The last pilot sold his airplane and bought a BassBoat.

Soon the hazy days of summer will present “go/no go” decisions for many non-instrument rated private pilots and non-current instrument pilots as well. So, the SC FSDO FAAS TEAM invites all South Carolina flight schools, chief pilots and CFIs to join with us. Please reach out to your rental clients and student base. Develop and create your own scenarios on your in-house flight school simulators. Everyone benefits.

Together, let’s make the month of July an Annual CFIT Aviation Safety Awareness Month throughout South Carolina beginning in 2023!



FAA
Aviation Safety

Controlled Flight Into Terrain

Technological advances in situational awareness have dramatically reduced the number of General Aviation Controlled Flight Into Terrain (CFIT) accidents over the past 20 years. Nevertheless, CFIT accidents continue to occur, and at least half of them are fatal. This fact sheet will help acquaint readers with the precursors of CFIT accidents and highlight some

technological and safety risk management solutions.

What is CFIT?

CFIT is defined as an unintentional collision with terrain (the ground, a mountain, a body of water, or an obstacle) while an aircraft is under positive control. Most often, the pilot or crew is unaware of the looming disaster until it is too late. CFIT most commonly occurs in the approach or landing phase of flight.

Accidents where the aircraft is out of control at the point of impact are not known as CFIT. Rather, they are considered uncontrolled flight into terrain. Similarly, incidents resulting from deliberate acts, such as terrorism or suicide by the pilot, are also not considered to be CFIT.

In a typical year, there are about 40 CFIT accidents, about half of which are fatal.

Why Does it Happen?

Pop Quiz: CFIT accidents occur primarily at night. True or False? Surprisingly, the answer is false. It's logical to think that CFIT accidents usually involve inexperienced pilots in dark night and/or instrument meteorological conditions. Or you might suppose that most arise from the painful pattern of what accident reports describe as "continued VFR flight into IMC." However, the General Aviation Joint Steering Committee (GAJSC) observed that a clear majority of the CFIT accidents in a typical year occur in daylight, and with visual conditions.

So how does CFIT happen? How could anyone continue controlled flight into terrain that you can easily see and avoid? One major factor is the loss of situational awareness — failing to know at all times what the aircraft's position is, how that position relates to the altitude of the surface immediately below and ahead, and how both relate to the course being flown.

Another big factor in CFIT accidents is wire strikes. You might think most wire strikes are confined to agricultural flying, but more than half do not involve this type of operation. Accident data also shows that wire strikes often occur below 200 feet above ground level. If you've got to fly low, give yourself some room. A little extra altitude – even 500 feet – will keep you above 90-percent of the wires.

Other top causes of CFIT are IFR procedural mistakes (e.g., flight below minimum enroute altitude, descent below MDA) and unrealistic aircraft performance expectations (e.g., high density altitude, tailwinds on approach). To avoid these pitfalls, make sure you're in compliance with all aspects of the clearances you accept and the procedures you fly. Equally important is to thoroughly research the environment you plan to operate in, especially at high altitudes and/or with short or obstructed runways.



How Can I Avoid CFIT?

Safety Risk Management (SRM) is a vital part of warding off a possible CFIT accident. It involves knowing what you're getting into and understanding what capabilities and resources you have that will ensure a flight is completed safely. This starts at preflight. Make use of a Flight Risk Assessment Tool (FRAT) and the PAVE acronym (Pilot, Aircraft, EnVironment, and External Pressures) to help you build a personalized risk assessment before a flight.

During flight, you also need to stay vigilant to any changing conditions, like deteriorating weather, fuel status, and the onset of fatigue. Be ready and willing to adjust your plans. Don't let Plan Continuation Bias (aka Get-there-itis) or external pressure lure you into making a poor decision. Having a Plan B at the ready can make a route change much easier to rationalize and accept.

There are a host of technological programs, applications, and devices that can aid pilots in situational awareness and risk assessment (e.g., moving maps with terrain overlays). In fact, pilots have access to more information than ever before and that has already contributed to a 20-year reduction in CFIT accidents. But all that information comes in many different forms so pilots must be thoroughly familiar with and proficient in device operation and information interpretation. Technology can also lead to unwanted distractions so remember to always Fly the Aircraft First!



Tips and Best Practices

Keep your skills sharp between flights by flying simulators or flight training devices. Many feature realistic graphics so you can get a look at unfamiliar destination environments. And you can practice instrument procedures before you have to fly them for real. But remember, simulation is not adequate preparation for flights to unfamiliar and/or challenging environments. Therefore, you should also make it part of your plan to get regular proficiency training with a flight instructor. Of course, we recommend FAA WINGS Pilot Proficiency Training, but no matter what program or instructor you choose, try to include scenario-based training.

Finally, be sure to give yourself some breathing room. That means at least a mile from airspace and 2,000 feet vertically from terrain you're trying to avoid. And since weather is very dynamic, you may consider even greater clearance distances to avoid any unexpected IMC.

Resources

- [Advisory Circular 61-134, GA CFIT Awareness](#)
- [CFIT Video — What More Can We Do?](#)

-Leo Berube