



PIF 05-04

Apr 05

FUEL PLANNING

The following are excerpts from the NTSB's investigations for five accidents. You might think these occurred over a long period of time, but all happened in the first week of April 2004.

2 Apr 04: C172. While on visual approach to the airport, the engine sputtered then lost power. The **commercial pilot's** attempts to restore engine power were not successful. The pilot maneuvered the airplane to avoid trees, and it touched down on a grass fairway and nosed over.

Cause: The pilot's inadequate in-flight planning/decision, which resulted in fuel exhaustion.

2 Apr 04: C150. The **private pilot** said that he "ran out of fuel." The pilot attempted a forced landing to an open field near the east shore of the lake. During the forced landing, the airplane's right wing struck several branches on the top of a 50-foot tree and the airplane subsequently struck the ground in a nose-down attitude. An examination of the airplane showed that both wing fuel tanks were intact. Approximately 2 cups of fuel was recovered from the tanks.

Cause: The pilot's improper in-flight planning and decision making, resulting in fuel exhaustion and the loss of engine power.

6 Apr 04: PA-24. The **airline transport pilot** executed a forced landing to a grassy area adjacent to a well-lighted street. During the landing rollout, the airplane's wing struck a tree branch. The inspection of the fuel tanks revealed the fuel tanks were dry.

Cause: The pilot's inadequate fuel calculations and the pilot's improper in-flight decision, which resulted in fuel exhaustion.

7 Apr 05: C152. After about 2.5 hours aloft, the airplane's fuel supply was exhausted, and the **student pilot** made a forced landing to a field. After touchdown, the airplane rolled about 200 feet before the nose wheel struck a mound of dirt, and the airplane nosed over.

Cause: The pilot's inadequate in-flight planning/decision, which resulted in fuel exhaustion and the loss of engine power.

7 Apr 04: PA 38. The airplane experienced a total loss of engine power and made a forced landing in a field. The **private pilot** (training for a commercial certificate) departed with full fuel in both tanks (30 gallons), which she thought would be equivalent to 5 hours 13 minutes of flight.

Cause: A loss of engine power due fuel exhaustion, which was caused by the pilot's inadequate in-flight planning/decision, inadequate in-flight fuel consumption calculations, and failure to divert to an alternate airport before the fuel situation became critical.

What can we learn from this?

The pilot in command is responsible for the safe conduct of the flight. 14 CFR part 91.151 requires enough fuel to fly to the first point of intended landing and, assuming normal cruising speed to fly 30 minutes after that (daytime) or 45 minutes after that (night time). We are more restrictive, AFMAN 34-232 para 3.16.12 requires “sufficient fuel to complete the flight to the point of intended landing, fly from that airport to an alternate (if an alternate is required), and then fly after that for at least 1 hour at normal cruise consumption.”

No pilot takes off thinking “I will run out of gas today.” We all think it will never happen to us. When we read the reports we may think “what an idiot!” Unfortunately, however, it happens far too often. Five accidents in one week, all from fuel exhaustion, is five too many – but sadly not an unusually high number for general aviation. These types of accidents are not limited to student or private pilots either. Notice pilots of all experience levels are making decisions that cause them to run out of gas before they get where they are trying to go. Stretching the fuel during flight costs money, time and embarrassment, and could cost lives. These five, at least, are fortunate to be able to tell their stories. Let us all learn from the mistakes these folks made so we don’t have to make them ourselves. Make it your goal to never have to tell the story about your own “inadequate fuel planning, which resulted in fuel exhaustion.”

FLY SAFE!



Maj Tom Padgett, Director of Ops & Safety, USAF AeroClubs
thomas.padgett@agency.afsv.af.mil; DSN 487-4979, (210) 652-4979