

Thomas P. Turner's Mastery of Flight™

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FLYING LESSONS for January 30, 2025

FLYING LESSONS uses recent mishap reports to consider what *might* have contributed to accidents, so you can make better decisions if you face similar circumstances. In most cases design characteristics of a specific airplane have little direct bearing on the possible causes of aircraft accidents—but knowing how your airplane's systems respond can make the difference in your success as the scenario unfolds. So apply these FLYING LESSONS to the specific airplane you fly. Verify all technical information before applying it to your aircraft or operation, with manufacturers' data and recommendations taking precedence. **You are pilot in command and are ultimately responsible for the decisions you make.**

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This week's LESSONS:

Ferry Flight

As you read [this preliminary report from the National Transportation Safety Board](#), ask yourself these questions:

1. What might have motivated the pilot to attempt this flight?
2. What outside stresses may have influenced the pilot's decision to fly?
3. What "red flags" might have caused the pilot to rethink beginning the flight?
4. Once the airplane was airborne, what indications may have confirmed a "go" decision or caused the pilot to divert to land?

Read this NTSB not critically, but thoughtfully:

On December 30, 2024, about 1515 eastern standard time, a Cessna 310D, N6979T, was substantially damaged when it was involved in an accident near Peebles, Ohio. The commercial pilot was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 ferry flight.

According to the owner of the airplane, the purpose of the flight was to ferry the airplane, which he purchased in October, from Branch County Memorial Airport (OEB), Coldwater, Michigan to Alexander Salamon Airport (AMT), West Union, Ohio. The owner stated that the airplane did not have a current annual inspection, and that a ferry flight [sic] had been issued for the flight.

Presumably the owner meant a [Special Flight Permit](#), colloquially a "ferry permit." The report continues:

The owner commented that, prior to the flight, he had accomplished maintenance to the airplane and that the accident pilot was supposed to have taken the airplane around the airport traffic pattern prior to the ferry flight. The owner also commented that the accident pilot elected to fly the ferry flight with the landing gear down.

Prior to the accident flight, a fueler at OEB added fuel to the airplane in the presence of the pilot. According the fueler, the airplane received a total of 57.5 gallons of 100LL aviation fuel. When asked about the airplane's total fuel quantity at the conclusion of the fueling, he described that the

airplane had “some” fuel in it, but he was unsure of a specific quantity. When asked to describe how much fuel he added to each of the different fuel tanks, he stated that he started at the left main (wingtip) fuel tank and that he added approximately 17 gallons of fuel. He then commented that this was an older airplane that had some fuel leaks, and that the left main fuel tank could only hold 1/2 of its total capacity because fuel would leak out when the tank [sic] was filled above that point. He then added approximately 13 gallons of fuel to the left auxiliary fuel tank, which filled that tank. He did not believe that the left auxiliary tank was leaking. The fueler did not fill the right auxiliary tank because the fuel bladder had a leak. He commented that fuel would have leaked immediately from the right auxiliary tank if fuel was added to it. He then added fuel to the right main (wingtip) fuel tank. The right main tank received about 27 gallons of fuel, which filled that tank.

It’s pertinent to note that, in the C310D, the large tip tanks are the main tanks and the fuel tanks contained within the wings are the auxiliaries. The report continues:

The pilot planned for a second pilot to follow him in another airplane during the accident flight, and for that second pilot to pick him up after the ferry flight was completed. According to the second pilot, on the day of the accident, both pilots met at OEB and completed preflight inspections of their respective airplanes. About 1330, the second pilot watched the accident airplane depart OEB. He then radioed to the accident pilot to ensure everything was normal, and the accident pilot replied that the airplane was operating normally. The second pilot departed from OEB and thought that he was likely 15 to 20 minutes behind the accident airplane. Throughout the flight, the accident pilot and second pilot communicated briefly about five times stating that everything was normal. The last communication the two pilots had was when the accident pilot radioed to the second pilot that he was about “20-30 miles away from the destination airport” and that he would begin descending. The second pilot arrived at AMT and noticed that the accident airplane was not there, even though it should have arrived before him. After about 20-30 minutes of waiting, the second pilot elected to take off and retrace the flight path that he believed the accident pilot was flying. He located the accident location after about 40 minutes of flying.

A witness who lived at the property next to the accident location stated that he was in his shop when he first heard the accident airplane. He opened the door and stepped out to see the airplane directly over his head. He described the airplane’s size, given its relative distance, was about 2 inches from his vantage point and that the engines of the airplane were “cutting out.” The airplane initially turned and started to fly towards him before it turned back towards the southwest. Once the airplane was over the flat top of the hill (the accident site), both engines “quit” and the airplane “went straight down.” The witness watched the airplane descend, but lost sight of it before it contacted the trees and terrain. When the witness was asked to describe why he thought both engines lost power, he replied that he could no longer hear engine noise, but he was able to hear the airplane “whistling through the air” until it collided with the trees and terrain.

The accident site was located on top of a steep hill at an elevation of 880 ft, situated between trees along a grass pathway. The fuselage came to rest in a nose down attitude, and oriented along a 300° magnetic heading. Both wings exhibited significant aft compression damage to the leading edges. Fuel staining was evident on the bottom of the left wing, outboard of the engine nacelle. The staining originated from the midpoint, and continued aft toward the trailing edge of the wing. The left wing was displaced aft about 3ft at the remaining wing tip, and the right wing was displaced forward about 2ft at the remaining wing tip. The left engine remained attached to the engine mount and wing structure but was imbedded into the terrain at an approximate 30° angle. The two-blade metal propeller remained attached to the left engine and was buried about 3ft into the terrain. The right engine remained attached to the engine mount, but the engine mount was broken away from the right-wing structure. The main (wingtip) fuel tanks separated from the wing tips and fractured into several sections. The right engine and mount were imbedded into the terrain at a near 90° angle. The two-blade metal propeller remained attached to the crankshaft flange and was buried 4ft into the terrain. The right propeller blades were bent aft and did not display s-bending, chordwise scratching, or leading edge gouging. One of the left propeller’s blades was bent aft and the second propeller blade was missing the tip of the blade. The empennage was

lodged between trees and displaced to the left. The fuselage was partially imbedded into the terrain and the cockpit instrumentation was mostly destroyed from impact forces.

The wreckage was retained for further examination. [NTSB Report ERA25FA086](#)

To review:

- The airplane was out of annual with known discrepancies with the fuel system.
- Presumably a certificated mechanic inspected the airplane and endorsed the ferry permit stating the airplane was safe to make the planned flight, as required by [14 CFR 21.197](#). A Special Flight Permit "...may be issued for aircraft that may not meet applicable airworthiness requirements, but are capable of safe flight for the purpose of flying aircraft to a base where maintenance or alterations are to be performed."
- The aircraft wreckage appears to confirm a fuel leak in flight.
- A witness described a vertical descent into the ground after loss of engine noise. Damage is consistent with vertical impact and rotation such as occurs in a spin.

Ask yourself these questions again:

1. What might have motivated the pilot to attempt this flight?
2. What outside stresses may have influenced the pilot's decision to fly?
3. What "red flags" might have caused the pilot to rethink beginning the flight?
4. Once the airplane was airborne, what indications may have confirmed a "go" decision or caused the pilot to divert to land?

Ask yourself one more, with an honest answer:

5. Knowing only what the pilot would have known before engine start, would you have been tempted to make the flight?

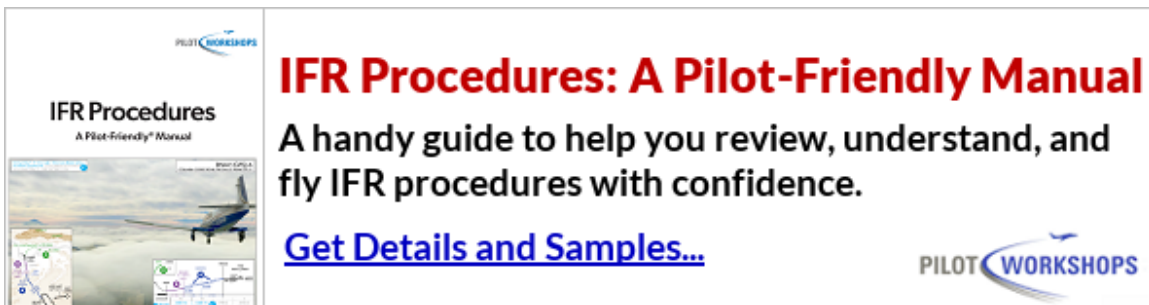
If you're willing, let us know your answers. Responses will be kept anonymous if you request.

See:

<https://thomaspturner.com/wp-content/uploads/2025/01/2024.1230-C310-OH.pdf>

<https://www.ecfr.gov/current/title-14/chapter-I/subchapter-C/part-21/subpart-H/section-21.197>

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