



Elizabethtown Flying Service, Inc.

[REDACTED]
Addington Field
Elizabethtown, Kentucky [REDACTED]

John D. Ellis
Elizabethtown Flying Service

[REDACTED]
Elizabethtown, KY [REDACTED]

To the Attention of
Tim Monville
Sr. Air Safety Investigator
National Transportation Safety board
45065 Bles Park Drive
Ashburn, VA 20147

Mr. Monville,

The pre-purchase inspection on N30309 was performed on June 3, 2020 in the presence of Craig Weikel the prospective buyer. Also for over an hour we had Keith Peterson, the creator and maintainer of the Cardinal Flyers Online website on a video call.

My pre-buy usually starts with records research then moves to the physical inspection of the plane itself. Mr. Weikel and I looked the plane over in the morning, then spent the afternoon with Mr. Peterson on a conference video call checking items he wished to have inspected. The pre-buy covered nearly an Annual as we spent over 8 hours with the plane and I spent a couple hours with the records before opening the shop at 8 that morning. Mr. Weikel and then owner Mr. Greer had flown the airplane the weekend before, so I asked about any problems they may have had. Specifically, we checked for cracks in the stabilator mounting area, overall for corrosion, inspected a firewall repair performed in the past, pulled plugs and used a bore scope on the engine, checked the fuel vents on the trailing edge of each wing tip by blowing low pressure air through them, and used a bore scope to inspect the carry through spar for corrosion. Control surfaces were checked for play, seat tracks, condition of fluid lines and hoses, normal thorough inspection.

Mr. Weikel then purchased the airplane. This took a couple weeks or so. I placed the airplane back in its T-hangar while this was going on. After the purchase, Mr. Weikel asked me to complete an Annual on the airplane. I moved the plane back into the maintenance hangar and completed the inspection. Wheel bearings, new front tire and tube, gascolater removed and inspected, stuff that isn't typical for a pre-buy but required at Annual. Airplane remained in the maintenance hangar until it was removed so it could be delivered. Annual signed off July 10, inspection began that Monday, July 6.

As for the specific questions of fuel quantity and how I check the instruments, for an Annual I compare what is in the tanks to what the instruments show. I use clean wooden sticks sometimes, I did this time, a flashlight, and a mirror. Most of the Cessna's, you can see into the rear back corner of the fuel tanks. Twenty plus years of experience and the popularity of the Cessna airframes, a good

assessment can be made on fuel quantity and the accuracy of the gauges.

So, the best I can remember going back to the first week of June, the airplane had just under $\frac{1}{4}$ showing on the fuel gauges, both left and right. This would have been confirmed by very little showing on the stick, fuel level shallow at the point of the cap, and only an inch maybe two inches deep at the fuel drain when viewed with the mirror. Total fuel of 49 gallons, 24.5 a side, quarter of a tank would be 6 gallons. I do remember the gauges agreed with what I visually inspected in the tank, but I do not remember specifically what they read. I know around $\frac{1}{4}$, I think a little less. That would put the fuel quantity at 6 gallons a side for quarter tanks, a little less for under a quarter. As I stated to Mr. Mumfrey when asked about the fuel quantity, 6 gallons a side at best.

The tach and total time on the airplane was 2221.6 at time of the Annual. The airplane was run one more time after the inspection sheet was filled out, so 0.01 to 0.02 would have been put on the tach. Engine was run for a post maintenance check, full power run for static RPM, magneto check, carb heat, charging system, vacuum good, and so on. We taxi the plane to the back corner of the ramp for safety and noise reasons. I then taxied it back to the maintenance hangar, looked it over, and would've done the paperwork. The fuel required for this would not have been much but would have subtracted from the observed amount.



Thank You
John D. Ellis A&P, IA, DOM
Elizabethtown Flying Service
August 25, 2020