



Michael J. Hodges
Aviation Accident Investigator / Investigator-In-Charge
Office of Aviation Safety, Central Regional Office

Date: August 9, 2023

Subject: CEN23LA351

Contact: Steven White
Aviation Safety Inspector - Airworthiness
FAA Lubbock FSDO

The NTSB investigator-in-charge spoke with Steven White over the telephone.

Steven travelled to Holliday, Texas, on August 9, 2023, to examine N2005J (a Taylorcraft Aviation Corporation F21 airplane equipped with a Lycoming Engines O-235 series reciprocating engine). The airplane was examined at the accident site, a remote area on private property with grass and trees. The tailwheel-equipped airplane came to rest upright in the field.

All the major structural components of the airframe were found at the accident site. There was no evidence that the airplane impacted an obstacle (such as a tower, powerline, tree, building, etc.) during the accident sequence.

There were no signs of a fire occurring with the airframe, the engine, or in the field.

The airplane sustained substantial damage to both wings and the fuselage.

The main landing gear separated during the accident sequence. The tailwheel was found intact.

The two front seats and restraint systems were found intact with no issues noted.

Flight control continuity was established for the airframe.

The fuel tank caps for the left, right, and header fuel tanks were found secured. The condition of all the fuel tank caps and their respective seals appeared to be in an airworthy condition. The left fuel tank appeared to be empty. The right fuel tank appeared to be full of fuel. The header tank appeared to be full of fuel. Both wing fuel tanks feed into the header fuel tank, that feeds into the engine. All three fuel tanks were found intact. The fuel tank selector was found in the header tank position. The fuel tank selector was manipulated by hand with no issues noted.

The fuel in the airframe appeared to be consistent with avgas, a light blue color in appearance. There were no signs of fuel contamination observed.

There were no signs of a fuel leak or spillage on the ground such as with vegetation blighting. There were no odors of fuel at the accident site.

The airframe and engine fluid lines were all found intact. There were no signs of any fluid leaks on the airframe and on the engine.

A carburetor air temperature gauge was not observed installed in the cockpit.

Airframe to engine control continuity was established.

The engine mount was found intact.

The engine cowlings were opened to examine the engine. The engine case, cylinders, and all accessories appeared to be intact.

The engine oil dipstick was found intact and was installed, the engine had an adequate amount of oil onboard, and no oil leaks were observed coming from the engine.

The propeller was found intact and was attached to the crankshaft. Both propeller blade tips were found bent rearward. The spinner appeared to be undamaged and was found attached to the propeller.

The propeller was able to be fully rotated by hand multiple times. During the hand rotation of the propeller, the impulse coupling for the magnetos was heard multiple times.

The magnetos and associated ignition harnesses were found intact. All eight spark plugs (the four on the top of the engine and the four on the bottom of the engine)

were all found installed and the ignition harnesses were found connected to the spark plugs.

All the rocker box covers were removed. The propeller was rotated by hand multiple times and corresponding equal movement for all the rocker arms, for all cylinders for the intake and exhaust portions, was observed.

The spark plugs were not removed from the engine.

The engine fuel filter bowl was removed and a liquid consistent with avgas was identified in the bowl. There were no signs of contamination in the bowl.

The carburetor sustained severe impact damage and was not able to be examined.

The engine air intake system had impact damage with no issues noted.

The engine exhaust system was found intact with no issues noted.

There was confirmation of an adequate amount of fuel onboard the airplane that was being supplied to the engine.

There were no onboard data recording devices found. There were no fuel records or fuel receipts found onboard.

The maintenance records were not with the airplane. Per the accident pilot, they are located at his home residence.

The pilot's operating handbook was not with the airplane. Per the accident pilot, he has an electronic version that he utilizes.

There did not appear to be any large bags or packs found in the airplane.

There were no preimpact mechanical malfunctions or failures noted with the airframe and the engine.

Nothing Follows

From: [REDACTED]
To: [REDACTED]
Subject: Re: CEN23LA351 (N2005J, Taylorcraft F21) - Accident Update
Date: Monday, March 11, 2024 14:02:50

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Mr. Hodges,

1. The engine never fully stopped, it was just not responsive to any input I gave.
2. There were no coughing or sputtering noises to my recollection.
3. No I was not using carburetor heat at all cause I was on roughly a mile final and I was carrying some power in if I remember correctly.
4. There was no carburetor temperature gauge of any kind.
5. I did check the weather ahead of time but I did not note that information down anywhere.
6. The only previous issue I had ever had was a throttle cable issue(the throttle got stuck at 2200 RPM). I suspect that it got stuck again but this time at idle instead.
7. I believe the throttle cable was the cause. I had a similar issues about 6 months before the accident. It was fixed by a mechanic and we found that the throttle cable had been slipping. We replaced some rubber clamps that held the throttle cable to the carb after. But when coming into land in August and trying to add power and not getting a response, the movement of the throttle cable felt the same way it did 6 months prior (the throttle was moving both times without a response of any kind).

Feel free to call too if you have any other questions

Duncan

On Mar 11, 2024, at 12:21 PM, Michael Hodges [REDACTED] wrote:

Hi Duncan,

I hope you are doing well sir.

I am following up on the accident with N2005J (Taylorcraft F21).

The airplane was examined, and nothing stood out regarding mechanical malfunctions or failures.

I have a few follow-up questions please:

1. When the engine stopped producing power, did the engine fully cease operating (a total loss of engine power), or was it still operating and just didn't seem to respond to your input?
2. Did you hear any "coughing" or "sputtering" noises emit from the engine?
3. Were you using carburetor heat at all during the flight? If so, when were you using it?
4. Was there a carburetor temperature gauge installed in the cockpit (to help address potential carburetor ice)?
5. For the closest meteorological observation facility, the density altitude was showing about 4,313 ft. Prior to the flight, did you do any preflight performance planning regarding density altitude? If so, can you please send me those documents?
6. Prior to the accident, have you had any previous mechanical issues with the airplane?
7. Lastly, do you have any idea on what may have caused the engine to not produce any power like you reported?

Thank you for the help and have a good week.

Mike

Mike J. Hodges, MS
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"Don't let yesterday use up too much of today." – Will Rogers

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Michael J. Hodges
Aviation Accident Investigator / Investigator-In-Charge
Office of Aviation Safety, Central Regional Office

Date: March 11, 2024
Subject: CEN23LA351
Contact: Duncan Severance
N2005J, Owner and Pilot

The NTSB investigator-in-charge spoke with Duncan Severance over the telephone.

Duncan was present with Steven White, aviation safety inspector, from the Federal Aviation Administration (FAA), when N2005J (a Taylorcraft Aviation Corporation F21 airplane equipped with a Lycoming Engines O-235 series reciprocating engine) was examined at the accident site. The airplane was examined in a field, near Holliday, Texas, on August 9, 2023.

The airplane had a history of the throttle, particularly the throttle cable, "slipping" since Duncan purchased the airplane, but the exact cause of the "slipping" was never determined by a mechanic. The throttle was worked on by a mechanic several months prior to the accident, and that work information is listed in the airplane maintenance records. That maintenance work seemed to take care of the "slipping" issue.

During the examination with the FAA, nothing of concern was noted with the throttle, including the throttle cable. The throttle was found installed, intact, and there were no signs of any missing hardware with the throttle. The carburetor was found destroyed from the impact damage.

Duncan thinks that perhaps the throttle cable, for undetermined reasons, caused the engine to not respond during the accident flight, but he did not notice any mechanical malfunctions or failures with the airframe or the engine during the examination at the accident site.

When Duncan purchased the airplane in September 2022, the airframe and the engine last had an annual inspection performed on November 5, 2011. Duncan had an annual inspection performed on the airframe and the engine on October 28, 2022. The airplane had not been maintained for quite some time when he purchased it.

Duncan sold the engine and various parts of the airframe in November 2023.

Nothing Follows