

# National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



ERA23FA008

## **WRECKAGE EXAMINATION**

October 7, 2022

## **A. ACCIDENT**

Location: Newport News, Virginia  
Date: October 6, 2022  
Time: 1507 EDT  
1907 UTC  
Airplane: Cessna 172, N97883

## **B. WRECKAGE EXAMINATION**

|                   |                                              |
|-------------------|----------------------------------------------|
| IIC               | Leah D. Read<br>NTSB<br>Alton Bay, NH        |
| Party Coordinator | Jay Veneable<br>FAA/FSDO<br>Richmond, VA     |
| Party Coordinator | Kurt Gibson<br>Textron Aviation<br>Tampa, FL |
| Party Coordinator | Mike Childers<br>Lycoming<br>Atlanta, GA     |

## **C. SUMMARY**

On October 6, 2022, at 1507 eastern daylight time, N97883, a Cessna 172, was substantially damaged when it impacted terrain on takeoff from the Newport News/Williamsburg International Airport (PHF), Newport News, Virginia. The flight instructor was fatally injured, and the student pilot and the pilot rated passenger were seriously injured. The flight was being conducted as a Title 14 Code of Federal Regulations Part 91 instructional flight.

A review of airport surveillance video revealed that after the airplane departed runway 20, it entered a steep (nose-high) pitch attitude and climbed to an altitude of about 50-100 ft before the left-wing stalled. The airplane then entered a descending left-hand turn before it impacted terrain west of the runway.

A witness, who was a flight instructor, was taxing south on Taxiway Alpha when he observed the accident airplane in a "crazy" nose-high pitch attitude (about 30 degrees nose up) on takeoff. The airplane reached a height of about 200 ft above the

ground, when the left wing stalled and dropped. The witness thought the instructor of the accident airplane tried to recover from the stall because the airplane's wings leveled out momentarily before the left wing dropped again, and the airplane hit the ground on its belly. The witness described what he observed as a "power on stall."

#### **D. DETAILS OF THE EXAMINATION**

The airplane came to rest in a ditch on a magnetic heading of about 090 degrees. All major components of the airplane were located at the accident site and there was no postimpact fire. The engine was pushed into the firewall, and the fuselage, both wings, and the empennage sustained substantial damage. The tail control surfaces exhibited minor to no damage. Flight control continuity was established for all major flight control surfaces to the cockpit. Flap cable continuity was established for both cables; one of the flap cables was continuous to each flap bellcrank, the other cable was fractured consistent with tension overload. The flap actuator was in the fully retracted position, and the elevator trim tab actuator was found in the 5-degree tab up position.

The left front seat was intact and remained secured to its respective seat rails. Both seat-locking pins were in place. The 3-point seat/shoulder harness assembly was found buckled and secure to its respective structural attach points. The belt had been cut by rescue personnel.

The right front seat was intact but had been removed by rescue personnel. The seat's two locking pins were displaced slightly aft but were not fractured. The 3-point seatbelt/shoulder harness assembly was found unbuckled and secure to its respective structural attach points. The belt had been cut by rescue personnel.

Neither of the front seats had a Cessna secondary seat stop kit installed. The pilot seat appeared to have a 3rd party secondary seat stop installed; however, the stop latch was not installed and was not located at the time of the examination.

The rear bench seat was intact and secure to its floor attach points. The two rear seat 3-point seatbelt/shoulder harness assemblies were found unbuckled and functioned normally when manually clasped. The No. 4 seatbelt assembly was secure to its respective structural attach points. However, the No. 3 shoulder harness remained attached to its structural attach point, but the structure had been pulled from impact.

Examination of the fuel system revealed that both wing fuel tanks were breached from impact and contained an unmeasured amount of fuel. Both fuel caps were secure to each wing. Air was blown through the fuel/vent lines and no blockages were noted. The fuel selector was on "both" and a small amount of 100LL

fuel was observed in the airframe fuel filter bowl. Some debris was noted in the bowl, but the filter screen was absent of debris.

The engine was separated from the airframe and examined. When the engine was manually rotated via the propeller, valve train continuity and compression were established on each cylinder. A lighted borescope was used to examine the interior of each cylinder and no anomalies were noted. All eight spark plugs were removed from the engine and appeared to have normal wear per the Champion Check-A-Plug chart.

Both magnetos remained attached to the engine and no damage was noted. Both magnetos produced spark from all ignition towers when rotated by hand.

The carburetor remained attached to the engine and no external damage was noted. The throttle cable remained attached to the carburetor throttle control arm and the arm was positioned in a mid-range position. The cockpit throttle control knob was also observed in a mid-range position.

The mixture control cable remained attached to the carburetor mixture control arm and the arm was observed in a full rich position. The cockpit control knob was also observed in a full rich position.

The carburetor heat cable remained attached to the carburetor air box control arm and the arm and valve were observed in the carburetor heat cold position. The cockpit control knob was also observed in the cold position.

The carburetor was removed and partially disassembled. 100LL fuel was observed in the carburetor bowl. The fuel was absent of water and debris. The carburetor fuel inlet screen was also absent of debris.

Oil was observed in the engine. The oil suction screen and the oil filter element were absent of debris.

The two-bladed propeller remained attached to the engine crankshaft flange and was not removed. The propeller spinner was crushed inward. One propeller blade was bent aft about 20 degrees about 12-inches outboard of the hub. The other blade was not damaged.