

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



CEN21FA364

FIELD EXAMINATION REPORT

August 11, 2021

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A. Accident

CEN21FA364
Melbourne, Arkansas
August 9, 2021
115 CDT

B. Investigative Team

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National Transportation Safety Board
Denver, Colorado

Investigator: Recardo Asensio
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Wichita, Kansas

Investigator: Les Doud
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C. Summary of Investigation

On August 9, 2021, about 1115 central daylight time (CDT), a Cessna 210H airplane, N5940F, was destroyed when it was involved in an accident near Melbourne, Arkansas. The private pilot sustained fatal injuries. The personal cross-country flight was conducted under the provisions of Title 14 Federal Code of Regulations Part 91.

The intent of the flight was to fly about 60-miles from Melbourne Municipal Airport (42A), Melbourne, Arkansas, to Heber Springs Municipal Airport (HBZ), Heber Springs, Arkansas. The pilot was returning to his home base in Heber Springs after conducting business in Melbourne. A witness, who was located at the airport, reported that he observed the pilot preflight the airplane and taxi to runway 21 for takeoff. The witness observed the airplane on its takeoff roll and the airplane went out of his sight after liftoff near the departure end of the runway. He stated that the airplane seemed to have an extended takeoff roll. A few minutes later, local sheriff and fire department personnel responded to report of an airplane accident about 3/4-mile southwest of the departure end of runway 21. First responders reported that the airplane was fully engulfed in fire upon their arrival.

A review of Automated Dependent Surveillance-Broadcast (ADS-B) data showed that the airplane lifted off the departure end of runway 21. The data did not show the flight path to the accident site.

Witnesses, who were located beyond the departure end of the runway, reported that the airplane was flying low and seemed to be turning just before the crash.

There were no radio or distress calls heard from the pilot. At the time of the accident, the airport's UNICOM radio receiver was not manned, nor did it possess the capability to record.

The airplane was recovered to Dawson Aircraft, Clinton, Arkansas, for further examination.

D. Airframe and Engine Examination

1.0 Accident Site

The accident site was located about 3,500 ft from the departure end of the runway on a magnetic heading of 188-degrees. The airplane was located at the base of a tree in a field.

Examination of the airplane at the accident site showed that the airplane impacted several large 80-ft-tall trees prior to coming to rest on the ground. Pieces of the right elevator and right horizontal stabilizer were found embedded in tree branches, about 20 ft above the ground. The fuselage, wings, and engine were laying on the ground, adjacent to a large tree. Most of the airframe was consumed by a post-impact fire. The engine was found separated from the fuselage and located about 4 ft from the main wreckage. It was mostly intact and had minor fire damage. Several cut branches were observed in the trees, consistent with propeller blade strikes.

2.0 Airframe Examination

The airplane's fuselage, aft of the firewall to the empennage to include the cabin and baggage compartment was melted and consumed. The airplane's inboard wings were melted. The main landing gear were retracted, crushed upward and were charred and consumed. The nose gear was separated and charred. The actuator was in the retracted position. The outboard wing sections were bent aft, broken, melted, and consumed by fire. The empennage was broken downward, melted, and consumed by fire. Flight control continuity was confirmed from all control surfaces to the cockpit. The flap actuator was found in the fully extended flaps position (30-degrees). The elevator trim actuator was measured at a 2" extension, which equates to a 20-degrees nose down position.

3.0 Engine Examination

The engine was separated from the firewall and rested inverted on the ground. All of the airplane's front cowling, and most of the airplane's left and right-side

cowling was with the engine. The propeller remained attached at the flange. An examination of the engine showed no preaccident anomalies.

4.0 Propeller Examination

The propeller was found attached to the engine. The spinner was intact. Two of the three blades were bent and twisted outward. The third blade was bent forward slightly. All the blades showed S-bending, chordwise rubs and scratches, and leading-edge nicks. The propeller was disassembled and examined. There were no visible discrepancies on the propeller components examined that would have prevented or degraded normal operation.

5.0 Aircraft Information

The airplane's year of manufacture was 1967. The airplane was individually owned, had a standard type certificate, and was being operated in the normal category.

E. Aircraft Performance

Per the Turbo System Centurion Owner's Manual, at a gross weight of 3,400 lbs. (maximum gross weight), the airplane's stall speed at zero degrees of bank with the landing gear and flaps retracted is 74 MPH. With the landing gear down and the flaps full down (30°) the stall speed reduced to 63 MPH. If 30° of bank is introduced, the gear down, full flap down stall speed increases to 68 knots. If the bank is increased to 60°, the gear down, full flaps down speed increases to 89 MPH.

The Before Take-Off checklist states that Wing Flaps should be set between zero degrees (Flaps up) and 20° (Maximum Performance Take-Off configuration). Nowhere in the Take-Off discussion is the use of anything greater than 20° flaps discussed.

In a balked landing (go-around) climb, the Owner's Handbook states that wing flaps should be reduced to 20° immediately after full power is applied. After all obstacles are cleared and a safe altitude and airspeed are obtained, the wing flaps should be retracted.

The only times that the use of full flaps is cited in the Owner's Handbook is for short field landings and the emergency procedure for landing with a defective nose gear.

The elevation at 42A was 708 ft. Runway 21 was 4,003 ft long by 75 ft wide. The temperature was 89.6°F (32°C), dew point 75°F (24°C), and the altimeter was 30.01 in HG. Based on this information, the airplane at 3,400 lbs. with 20° of flaps extended and zero headwind would have a takeoff ground run of about 920 ft and the distance needed to clear a 50 ft obstacle would have been 1,708 ft.

Submitted by:

Alex Lemishko
Investigator-in-Charge