

WRECKAGE EXAMINATION
NTSB Accident Number
ERA22LA274

ACCIDENT

Location: Brevard, NC
Date: June 16, 2022
Time: 1745 EDT
Aircraft: Cessna 172M
Registration: N5064H

PARTICIPANTS

Daniel Boggs
Air Safety Investigator
National Transportation Safety Board
Eastern Region Aviation

Ernest Hall
Air Safety Investigator
Cessna

HISTORY OF FLIGHT

On June 16, 2022, at 1745 eastern daylight time, a Cessna 172M, N5064H, was substantially damaged when it was involved in an accident near Brevard, North Carolina. The pilot and two passengers were seriously injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

According to the pilot, they were flying over a camp dropping candy from the airplane. He stated that they were “a couple hundred feet” above ground level. He next remembered waking up in the hospital.

According to the passenger, after they dropped the candy from the airplane, they flew around the camp and took some pictures. The passenger remembered they were descending, and he made a comment to the pilot that they are getting close to the treetops and he needed to apply power and pull up. The pilot stated he was working on it. The next thing he remembered was hitting some trees and waking up next to the airplane on the ground. He also stated the engine was running the entire time.

PERSONNEL INFORMATION

N/A

AIRCRAFT INFORMATION

Cessna 172M, rented

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METEOROLOGICAL INFORMATION

No weather concerns

COMMUNICATIONS

None...

FLIGHT RECORDERS

N/A

WRECKAGE AND IMPACT INFORMATION

Postaccident examination of the airplane by a Federal Aviation Administration (FAA) inspector revealed that tail section was partially separated from the fuselage and the wing was separated from the fuselage, resulting in substantial damage. The instrument panel instruments were all dislodged from the housing and scattered around the cabin.

The wreckage was further examined at the recovery facility. the aircraft was in six sections:

- Engine and propeller
- Firewall to just forward of the cockpit seats
- Cockpit seats aft to the aft baggage (F.S. 108.00")
- Tail section from F.S. 108.00" aft to F.S. 228.68" which included the vertical stabilizer with attached rudder and the LH horizontal stabilizer with attached elevator
- RH horizontal stabilizer with attached elevator/trim tab
- LH wing with a section of the rear door post structure and a section of the top cabin
- RH wing with the top section of the cockpit and cabin section

AIRFRAME

The left wing remained attached to its attachment points to the fuselage. The leading edge exhibited an aft diagonal buckling/crushing from the wing root to the pitot tube. Just inboard of the pitot tube, the leading edge exhibited approximately an 8" diameter tree impact mark. The leading edge approximately mid-span exhibited about a 1 ½" diameter tree impact mark.

The right wing remained attached to its attachment points to the fuselage. The leading edge exhibited approximately a 4" diameter tree impact mark about 3' 5" from the wing tip.

The RH horizontal stabilizer was separated approximately 6" outboard from its attachment points. The elevator with attached trim tab remained attached to the horizontal stabilizer rear spar which separated from the rest of the horizontal stabilizer.

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All primary (elevators, ailerons, and rudder) flight control surfaces with their appropriate trim tabs and flaps were accounted for at the wreckage examination. Continuity of all primary flight control cables were confirmed from the cockpit to their respective flight control surface. Continuity was confirmed by either visual and/or pulling the cable at one end to see the other same cable end and/or control surface move.

The 3-position flap switch mounted in the instrument panel was found in the middle position.

The flaps remained attached to their respect wing and bellcrank. The flap motor/actuator remained attached to the RH wing. The flap motor/actuator extension was measured and found to be approximately 5", which corresponds to approximately 30° flap position.

The elevator trim actuator exhibited impact damage. The actuator trim extension rod was separated from the trim actuator body. The chain remained attached to the actuator sprocket/gear. The cockpit elevator trim indicator, the needle was found outside the pedestal trim indicator window.

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The LH main fuel tank gauge exhibited impact damage and the needle was found approximately at the $\frac{3}{4}$ full position. The RH main fuel tank gauge was not observed.

The fuel selector valve handle was found in a position between the BOTH and LH main tank. The fuel selector valve was removed from the aircraft. The valve was found in a non-detent position between the BOTH and RH main tank.

ENGINE

The engine remained attached to the firewall and front section of the fuselage. The engine was removed and hung from a forklift for examination. The propeller remained attached to the engine and tree bark was noted in the bent spinner dome. Both blades exhibited bent tips and one blade had "S" bending. Both magnetos were separated from the engine. The magnetos were spun with an electric drill and produced sparks on all leads. The top spark plugs were removed and exhibited normal wear. Thumb compression was established on all cylinders when the propeller was rotated by hand. Engine continuity was established through the engine and accessory case. A lighted boroscope was used to examine the cylinders, pistons, and valves. The carburetor was disassembled, and no anomalies noted. No preimpact anomalies were noted that would have precluded normal operation.



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MEDICAL AND PATHOLOGICAL INFORMATION

N/A

WITNESS STATEMENTS AND CONTACT INFORMATION

None...

ADDITIONAL INFORMATION

N/A