

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



CEN23FA038

EXAMINATION SUMMARY

March 7, 2023

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A. ACCIDENT

Location: Decatur, Texas
Date: November 18, 2022
Time: 1510 central standard time
Aircraft: Cessna 421C, N6797L

B. EXAMINATION SUMMARY

Investigator-in-Charge (IIC)	Timothy Sorensen Aviation Accident Investigator National Transportation Safety Board Denver, Colorado
Party Coordinator	Kurt Gibson Air Safety Investigator Textron Aviation Wichita, Kansas
Participant	Kevin Stahl Sr. Advanced Design Engineer Textron Aviation – McCauley Propeller Systems Wichita, Kansas

C. ACCIDENT SUMMARY

On November 18, 2022, at 1510 central standard time, a Cessna 421C airplane, N6797L, was destroyed when it was involved in an accident near Decatur, Texas. The pilot was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 positioning flight.

D. DETAILS OF THE EXAMINATION

Propeller examinations were conducted on March 7th under direct oversight of the NTSB IIC with the assistance of Textron Aviation.

E. EXAMINATION SUMMARY¹

Left Propeller / McCauley Propeller Systems

Model: 3FF32C501A/90UMB-0

Hub: s/n 806464

Blade #1: s/n K1349X9²

Blade #2: s/n K115293³

Blade #3: s/n K136871

Blade #1 was bent forward near the tip and exhibited extensive chordwise scratches. Blade #2 was bent forward about 15° near the blade tip and was twisted toward low pitch. The blade exhibited trailing edge gouges near the blade tip with spanwise scratching on the aft face of the blade. Blade #3 was bent aft approximately 100° over the outboard one-half span. It exhibited chordwise scratching over the outboard one-quarter span. The extent of the blade damage appeared consistent with low rotational energy at impact.

The hub was intact, and all blades were retained. Blades #1 and #3 were loose in the hub consistent with impact. The piston was positioned near the feather position. The piston, springs, and pitch change links were intact. However, the pitch change link common to blade #1 was slightly deformed consistent with the impact forces. The blade latches and stops (arrowheads) were also intact. The counterweights appeared undamaged and were secure. The root face of blade #1 exhibited a witness mark consistent with contact from the adjacent blade actuation pin during the accident sequence. Based on the witness mark location, the left propeller assembly was at or near the feather pitch stop during the impact sequence.

Right Propeller / McCauley Propeller Systems

Model: 3FF32C501A/90UMB-0

Hub: s/n 806364

Blade #1: s/n K133443

Blade #2: s/n K134896

Blade #3: s/n K136909

Blade #1 was bent aft approximately 30° over the outboard three-quarters span. The blade exhibited chordwise scuffing and leading-edge abrasion. Blade #2 appeared undeformed with minor leading-edge abrasion due to normal operation. Blade #3 was bent aft about 45° over the outboard one-half span. The blade exhibited chordwise scratching and trailing edge abrasion and damage.

¹ Directions related to accident site placement and component damage/deformation are with respect to an intact propeller installation unless otherwise noted.

² The digit noted with an "x" was obscured by an impact witness mark.

³ The final digit was not clear but appeared to be "3".

The hub was intact, and all blades were retained. Blades #1 and #3 were loose in the hub consistent with impact. The piston was positioned near the low pitch position. The piston, springs, and pitch change links were intact.⁴ The blade latches and stops (arrowheads) were also intact. The counterweights appeared undamaged and were secure. The root face of blade #1 exhibited a witness mark consistent with contact from the adjacent blade actuation pin during the accident sequence. Based on the witness mark location, the right propeller assembly was on or near the low pitch stop position during the impact sequence.

----- end of summary -----

⁴ One pitch change link was cut to facilitate disassembly.