

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



CEN24FA228

ON-SCENE EXAMINATION

June 20, 2024

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A. ACCIDENT

Location: Steamboat Springs, Colorado
Date: June 17, 2024
Time: 1623 MDT
2223 UTC
Airplane: Cessna 412C

B. ON-SCENE EXAMINATION

IIC	Jason Aguilera National Transportation Safety Board Aurora, CO
Party Member	Harold Robertson Federal Aviation Administration Denver, CO
Party Member	Jason Jones Federal Aviation Administration Denver, CO
Party Member	PJ Beavers Textron Aviation Wichita, KS
Party Member	Ernie Hall Textron Aviation Wichita, KS

C. SUMMARY

On-scene investigation notes for the accident involving N245T, a Cessna 421C, which impacted terrain in Steamboat Springs, CO. Continental Engines was not able to respond to the accident site and provide support via cell phone.

D. DETAILS OF THE INVESTIGATION

1.0 Accident Site

The airplane came to rest between two mobile homes in the West Acres Trailer Park. A post impact fire ensued which destroyed the airplane. Impact signatures were consistent with a low energy impact with the airplane in a relatively level (flat) attitude. The nose of the airplane was facing about 180° magnetic heading. The airplane appeared to have impacted completely intact and there was no debris field.



Figure 1 Nose Alignment Reference

2.0 Airframe Examination

Severe fire damaged consumed major portions of the wings, fuselage, and empennage.



Figure 2 Wreckage Overview (photo from Textron Aviation)

Primary flight control continuity was confirmed from the cockpit area to the ailerons, rudder, and elevators. The right aileron cable was fractured with signatures consistent with overload. The remaining cable from the fracture to the bellcrank was located near the fractured cable. Aileron trim was set to 8° tab up. Pitch trim was relatively neutral. Rudder trim was set to 2° tab left.

2.1 Fuselage

The fuselage was heavily damaged by the post impact fire.

2.2 Empennage

A majority of the empennage was damaged by fire. The vertical stabilizer, rudder, horizontal stabilizer, and elevators were buckled, torn, and wrinkled. The rudder remained attached to the vertical stabilizer. Both elevators remained attached to the horizontal stabilizer.

2.3 Left & Right Wings

The outboard portions of both wings from the engine nacelles were destroyed by the post impact fire. The ailerons on both wings were consumed by fire. Continuity from the left aileron could be established to the cockpit but the right aileron cables both had a tensile separation aft of the wing locker. One of the separated aileron cables was located with the terminal end attached, the other, about a one-to-two-foot section, was not observed.

The flaps appeared to be in the fully extended position. Flaps are electrically controlled and mechanically positioned, and the setting is unlikely to change from the impact forces.

2.4 Landing Gear

The landing gear was found in the retracted position with all tires in their respective wheel wells. The main landing gear actuators appeared to be fully retracted. The nose gear actuator was not identified in the wreckage.

2.5 Cockpit

The cockpit was largely destroyed by fire. Most cockpit instrumentation and avionic devices were consumed by the postimpact fire.

The engine controls on the throttle quadrant, with the exception of the left throttle, were all in the aft/rearward positions.

2.6 Fuel/Fuel System

The fuel system components sustained heavy fire damage. The left selector handle was in a mid-position between Left and Right and the right selector handle was in the Left (crossfeed) position. The left and right main fuel tanks were completely thermally destroyed. The left- and right-wing locker auxiliary tanks were thermally damaged. The left and right auxiliary fuel pumps were both thermally damaged. Neither the left nor right fuel filters were observed.



Figure 3 Fuel Selectors

3.0 Engine Examination

No obvious failures were identified during a visual inspection of the upper portions of both engines. Due to the pilot's statement of a failure of the left engine,

the upper bank of spark plugs were removed from the left engine and the cylinders examined via borescope. No obvious failure were detected. Both engines will be examined at Continental's facility, so no further examination was conducted on-scene.

4.0 Propeller Examination

The left propeller assembly remained attached to the engine. The blades appeared to all be in the feathered position. The number one blade was pointing horizontal to the ground and about one foot from the hub it melted and fell to the ground. The number two blade was pointed nearly vertical and eight inches from the hub it completely melted. The number three blade was submerged into the soil and when retrieved, was found to be relatively undamaged.



Figure 4 Left Propeller

The right propeller assembly remained attached to the engine. Blade angles were not consistent. The number one blade was free to rotate in the hub with some force. At mid span there was chordwise scuff marks and the blade curled out to the tip toward the non-camber side. There were three gouges in the LE several inches from the tip. The number two blade and about eight inches of the hub adjacent to it fracture separated from the propeller assembly. The blade was buried in the ground about 3 feet. It was slightly bent in the direction opposite of rotation at ground level. The blade exhibited chordwise scratch marks on the non-camber side. Several gouges were present several inches from the tip. The number three blade was straight except for the last 6 inches where it had come into contact with a concrete block. A one-inch section was bent up at about 90 degrees the tip was thermally damaged.



Figure 5 Right Propeller

5.0 Pilot Information

Logbooks were not found on-scene.

6.0 Aircraft Information

Logbooks were not found on-scene.

7.0 Meteorological Information

Weather was reported to be visual meteorological conditions with gusty winds about the southwest. The METAR observation at KSBS was:

KSBS 172235Z AUTO 22013G19KT 10SM CLR 27/00 A2964 RMK AO1 T02671004

Density altitude was calculated to be 10,200 ft.

Submitted by:

Jason Aguilera
Senior Air Safety Investigator