

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



CEN24FA212

WRECKAGE EXAMINATION

June 10, 2024

TABLE OF CONTENTS

A. ACCIDENT.....	3
B. PARTICIPANTS.....	3
C. SUMMARY	4
1.0 HISTORY OF FLIGHT.....	4
2.0 WITNESSES.....	5
3.0 AIRCRAFT INFORMATION.....	5
4.0 WRECKAGE AND IMPACT INFORMATION.....	6
4.1 Accident Site.....	6
4.2 Airframe	6
4.3 Engine	7
4.4 Propeller.....	9

A. ACCIDENT

Location: Arvada, Colorado
Date: June 7, 2024
Time: 0930 Mountain Daylight Time
1530 Universal Coordinated Time (UTC)
Airplane: Beech V35A Airplane, N150WR

B. PARTICIPANTS

Investigator in Charge (IIC)	Alexander Lemishko NTSB Denver, Colorado
NTSB Investigator	Brad Miller NTSB Denver, Colorado
NTSB Investigator	Cory Maxon NTSB Denver, Colorado
Party to Investigation	Michael Coryer FAA FSDO Denver, Colorado
Party to Investigation	Rodney Doll FAA FSDO Denver, Colorado
Party to Investigation	Ryan Roth Textron Wichita, Kansas
Party to Investigation	Paul Beavers Textron Wichita, Kansas
Party to Investigation	J Ferrell Continental Engines Williamsport, Pennsylvania

C. SUMMARY

1.0 HISTORY OF FLIGHT

On June 7, 2024, about 0930 mountain daylight time, a Beech V35A airplane, N150WR, was destroyed when it was involved in an accident near Arvada, Colorado. The pilot and 2 passengers sustained serious injuries. One passenger was fatally injured. The flight was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

According to Automated Dependent Surveillance - Broadcast (ADS-B) data, the airplane departed Centennial Airport (APA), Englewood, Colorado, about 0930. The intended destination was Northern Colorado Regional Airport (FNL), Fort Collins, Colorado. About 10 minutes after departure from APA, the pilot radioed that he was having engine oil pressure problems and wanted to divert to Rocky Mountain Metropolitan Airport (BJC), Broomfield, Colorado. While enroute to BJC, the pilot attempted a forced landing to a roadway in a densely populated urban area in Arvada, Colorado. Several witnesses in the area saw and heard the airplane. They stated that the airplane was flying low, and the engine did not sound normal. The witnesses described what they thought was white smoke coming from the airplane.

Examination of the accident site showed that the airplane's left wingtip impacted a 30-ft tall tree adjacent to the roadway. Parts of the left wingtip were found in the roadway near the tree. Evidence at the accident site showed that the airplane contacted the roadway, gear up, and slid down the road until it collided with a parked vehicle and came to rest upright in the front yard of a private residence. Ground scars on the roadway were consistent with contact and scraping from the bottom of the fuselage. The distance traveled from the initial impact with the tree to the final resting place was about 400 ft. See Figure 1.



Figure 1. Accident Site Diagram (courtesy of Denver Police Department)

The airplane structure was mostly consumed by a postimpact fire. The instruments in the cockpit were destroyed by fire and could not be evaluated. Onsite examinations of the airframe showed that the landing gear and flaps were retracted. Because of the

severe fire damage, the engine and airframe were transported to a secure facility for more detailed examinations. No cable separations indicating preimpact cable failure were found for any of the flight control systems. No preimpact anomalies or structural failures were found with the airframe.

Damages to the propeller blades showed evidence consistent of some degree of rotation at the time of impact. Examination of the engine revealed that the engine was partially attached to the engine mounts and firewall. The engine case was intact with no obvious holes or preimpact damage. The oil cap was on and secure. The oil quick drain was found in the closed position and was securely mounted to the oil pan with safety wire present. The propeller was rotated by hand slightly to the left and right. No further rotation was attempted to preserve any internal failure evidence.

The turbocharger oil supply (pressure side) line fitting that connected the oil line to the top of the turbocharger assembly was missing one attachment bolt. The other attachment bolt was found loose. The bolts for the attach fitting for the turbocharger oil return line that exited the bottom of the turbocharger assembly were found loose. Components of the turbocharger were removed to expose the exhaust end of the turbocharger assembly. The outboard trailing edge of the hot section turbine blades were damaged, and some material was missing on the corner of several turbine blades. The turbine wheel rotated with significant resistance when rotated by hand.

2.0 WITNESSES

There were multiple witnesses to the accident. Police report # AR24-009540 from the Arvada Police Department was pending as of the date of this report. Numerous witness accounts were collected via the NTSB hotline and will be collated for the final report. Several witnesses reported a rough running engine and white smoke seen coming from the airplane.

The pilot's logbook was found in the airplane wreckage. The book was damaged by fire. Some excerpts were legible. The pilot held a private pilot certificate with an airplane single engine land rating. According to the pilot's logbook he had accumulated 179.6 hours of flight time. In the last thirty days, he logged 1.2 hours of flight time which was for his flight review.

3.0 AIRCRAFT INFORMATION

Make: Beech
Model: V35A

Serial Number: D-8911
Airworthiness Date: 1969

4.0 WRECKAGE AND IMPACT INFORMATION

4.1 Accident Site

The accident site was located on Brentwood Street, in Arvada, CO 80004. Coordinates: 39.809180° / -105.089946. Elevation 5,382 feet msl. The airplane came to rest orientated on a 235° magnetic heading.

Initial point of impact was a tree.

159 feet from initial point of impact on the left side of the road, impact damage was noted on a fence.

191 feet from the initial point of impact, markings on the road indicated ground contact had been made by the accident airplane.

499 feet from the initial point of impact, the airplane impacted a parked pickup truck and came to rest in the front yard of a residence.

4.2 Airframe

The major components of the airplane were present at the accident site. The main wreckage consisted of almost the entire airplane. A postimpact fire had occurred. The airplane structure was mostly consumed by postimpact fire. The instruments in the cockpit were destroyed by fire and could not be evaluated. Onsite examinations of the airframe showed that the landing gear and flaps were retracted. Because of the severe fire damage, the engine and airframe were transported to a secure facility for more detailed examinations. No cable separations indicating preimpact cable failure were found for any of the flight control systems. No preimpact anomalies or structural failures were found with the airframe.

The left wing remained attached to the fuselage and exhibited impact and fire damage. The outboard section of the wing was crushed aft and a portion of the outboard end of the wing had separated. The inboard section of the left wing was mostly consumed by fire. The inboard portion of the left wing's spar was deformed to

the aft. The left aileron separated from the wing and exhibited impact damage. The left flap was consumed by the fire. The fuel cap for the left wing was present and secured, the left fuel tank was breached.

The right wing remained attached to the fuselage and exhibited impact and fire damage. The top skin of the inboard portion of the wing was mostly consumed by fire. The right aileron remained attached to the wing and exhibited fire and impact damage. The right flap remained attached to the wing and exhibited fire and impact damage. The right fuel cap was present and secure; the right fuel tank was breached.

The flight control lock was not observed in the wreckage. Flight control continuity could not be established due to thermal damage and recovery cuts. All observed cable breaks were due to thermal damage or recovery cuts. Most of the aileron cables were observed with cuts made by recover personnel. A portion of the elevator down cable was not observed, with the aft elevator differential bellcrank not observed in the wreckage. The left rudder cable was discontinuous with signs of thermal damage. The forward and aft portions of the elevator trim cables were observed with recovery cuts. The singular rudder trim actuator was found loose in the tailcone, the extended measurement equates to both trim tabs being 5° trailing edge up (nose up). The aircraft is not equipped with pilot adjustable rudder or aileron trim.

The left and right v-tail stabilizers remained attached to the empennage and exhibited fire and impact damage. The left and right ruddervators remained attached to their respective stabilizer and exhibited fire and impact damage.

The landing gear box was visually examined. The position of the actuation arms on the landing gear box indicated the landing gear were retracted at the time of the accident.

The left and right fuel tanks were both breached and indicated thermal damage. Both main wing fuel tank caps were observed. The right cap's O-ring was not observed, the left cap's O-ring was unremarkable. The aircraft was equipped with 2 Flight Extender composite wing tip tanks (STC SA153EA, STC SA808SO). The fuel selector valve, handle, and strainer were not observed in the wreckage. The fuel tank gages were indistinguishable on the thermally damaged instrument panel. The fuel boost pump was not observed in the wreckage.

4.3 Engine

Manufacturer: Continental
Model: TSIO-520-DB (1)
Serial Number: 242012-R

The engine was partially attached to the engine mount and firewall. The engine case was intact with no obvious holes or preimpact damage. The oil cap was on and secure. The oil quick drain was in the closed position and was securely mounted to the oil pan with safety wire present. The propeller was rotated slightly to the left and right.

The turbocharger oil supply (pressure) line fitting that connects the oil line to the top of the turbocharger assembly was missing one attach bolt and the other was loose. See Figure 2. The bolts for the attach fitting for the turbocharger oil return line exiting the bottom of the turbocharger assembly were also loose.



Figure 2. Missing bolt.

Components were removed to expose the exhaust end of the turbocharger assembly. The outboard trailing edge of the hot section turbine blades were damaged and missing material on the corners of some of the blades. An attempt was made to rotate the turbine wheel. It would move but was binding.

4.4 Propeller

The propeller remained attached to the engine. The spinner was intact and covered with soot. Blade 1 was bent aft mid-span and had paint missing from its outboard end. Blade 2 was bent aft mid-span; the tip was curled aft; was likely rotated past its pitch stops, and the forward side of the blade tip had deep scratches in the chord wise direction and at a 45° angle. Blade 3 was rotated past its pitch stops; bent aft at the outboard end of the blade; the tip was curled aft; and the trailing edge of the blade was heavily ground down with leading edge gouging opposite the damage. See Figures 3-6.



Figure 3. Propeller.



Figure 4. Propeller blade #1.



Figure 5. Propeller blade #2.



Figure 6. Propeller blade #3.

Submitted by:

Bradley Miller
Aviation Accident Investigator