

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



CEN23FA060

POSTACCIDENT ENGINE EXAMINATION

April 26, 2023

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A. ACCIDENT

Location: Yukon, Oklahoma
Date: December 5, 2022
Time: 2116 CST

Airplane: Beech F33A, N9142Q

B. POSTACCIDENT ENGINE EXAMINATION

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C. SUMMARY

On December 5, 2022, about 2116 central standard time, a Beech F33A, N9142Q, was destroyed when it was involved in an accident shortly after takeoff from the Clarence E Page Municipal Airport (RCE), Yukon, Oklahoma. The pilot and two passengers were fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

According to preliminary Automatic Dependent Surveillance-Broadcast (ADS-B) flight track data, the airplane had departed the Stillwater Regional Airport (SWO), Stillwater, Oklahoma, at 1848, and arrived at RCE at 1915. It remained on the ground for about 2 hours, and then at 2115, the airplane began a takeoff from runway 35L. The data showed that the airplane lifted off and began to climb, reaching an altitude of about 425 ft above ground level (agl), before it descended to about 275 ft agl while it turned slightly to the left. The airplane then began to climb and turned back to the right, reaching a peak altitude of about 450 ft agl before descending. The right turn continued to the end of the data and the airplane was about 230 ft agl when the final data point was recorded. The initial impact point was about 90 ft and 125° from the final data point. The main wreckage came to rest about 95 ft and 110° from the initial impact location.

The airplane impacted the ground adjacent to the runway and a taxiway about 1,300 ft south, and 200 ft east of the departure end of runway 35L. It came to rest facing 255°. The initial impact location had material from the right wing tip tank and the right

outboard wing was bent upward about 45 degrees. The grass area where the accident occurred had a large burn area and the entire cabin section of the airplane had been almost completely consumed by the postimpact fire.

D. DETAILS OF THE EXAMINATION

1.0 Engine Examination

The engine had been relocated to a salvage facility where the examination took place. The engine was initially upside down on a cart for the examination. The engine exhibited significant fire damage with more significant damage to the rear and right side of the engine. The bottom spark plugs were removed and noted to be of the "fine-wire" type and all 6 exhibited normal combustion coloration. The propeller, fuel pump, starter drive, and vacuum pump were removed from the accessory case to facilitate rotation. The fuel pump and vacuum pump drive couplings were intact. The engine rocker covers were removed, or broken out, so that the valves could be observed. The engine rotated smoothly with no unusual drag during rotation. Movement of all the intake and exhaust valves was noted during rotation. Compression on cylinders 2 through 6 was confirmed by placing fingers into the open spark plug holes during rotation. The valves for cylinder number 1 exhibited significant corrosion attributed to storage after the accident. Visual inspection of the top of the number 1 cylinder did not reveal any anomalies. The engine was then turned over, right side up. The left magneto was impact separated from the engine. The right magneto was still attached. The left magneto would not turn. The right magneto turned but would not produce spark. Both magnetos were opened and both exhibited melting of internal components that would prevent normal operation. The forward engine case through bolt was observed to be missing a nut on the left side. The missing nut did not prevent normal rotation of the engine and did not appear to contribute to the accident.

Submitted by:

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