

National Transportation Safety Board

Office of Aviation Safety

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WPR24FA104

AIRCRAFT AND ENGINE ON-SCENE EXAMINATION SUMMARY NOTES

March 9, 2024

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A. ACCIDENT

Location: Cave Junction, Oregon
Date: March 7, 2024
Time: 1124 Pacific standard time (PST)
1824 coordinated universal time (UTC)
Airplane: N4443G

B. AIRCRAFT AND ENGINE ON-SCENE EXAMINATION SUMMARY

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C. SUMMARY

On March 7, 2024, about 1124 Pacific standard time, a Kolb Firestar KXP, N4443G, was substantially damaged when it was involved in an accident near Cave Junction, Oregon. The pilot was fatally injured. The airplane was operated as a Title 14 Code of Federal Regulations Part 91 personal flight.

Witnesses reported that the airplane departed midfield about 1122 for a local flight after the pilot installed an overhauled engine. The airplane departed to the north and about 500 ft above the ground, turned left to the northwest and continued to turn left in about a 30-40° bank turn until it established a southeast heading. The witness then saw the airplane nosed down slightly and lose about 100 ft and shortly after, saw the airplane in a 90° nosed down dive towards the ground. The witness lost sight of the airplane prior to impact. See figure 1.



Figure 1. Birdseye view of map showing witness location in relation to main wreckage.

The airplane was recovered to a hangar for further examination. Examination of the engine and airframe did not reveal any pre-impact mechanical anomalies or failures.

D. DETAILS OF THE INVESTIGATION

1.0 Accident Site

The main wreckage is located about 0.14 nm northwest from the end of runway 36. The airplane came to rest in an open, muddy field with a directional heading about 125°. The first identified point of contact (FIPC) was a tree with broken branches about 40 ft northwest of the main wreckage; the branches were found adjacent to the tree. The airplane's left wing and nose section contacted the ground first, followed by the right-wing leading edge, as evidenced by ground scars; the airplane impacted terrain in about a 40° angle. Shortly after impact, the airplane slid about 30 ft and came to rest oriented in about a 100° heading. The two blade sections that were recovered were the furthest identifiable components, coming to rest about 50- and 60-feet northeast of the main wreckage, respectively. All major structures required for flight were accounted for at the main wreckage. See figure 2.



Figure 2. View of main wreckage

2.0 Airframe Examination

The airplane and engine examination took place on November 8, 2024, at a local hanger. See figure 3.



Figure 3. View of airplane layout in hangar.

2.1 Fuselage

The fuselage cage and supporting steel structures were crush aft consistent with impact. The tailboom structure had sheared rivets at its attachment point located in the aft section of the fuselage. Control continuity was established from the cockpit to all major flight control surfaces.

2.2 Empennage

The tailboom structure fractured and separated about 4 feet aft the attachment points in the aft fuselage, consistent with impact. The empennage came to rest oriented in about a 280° heading. The rudder was unremarkable. The left horizontal sustained leading-edge compression and the left elevator was unremarkable. The right horizontal and elevator was unremarkable.

2.3 Wings

The aluminum left and right wing remained attached to the fuselage cage. Multiple wing truss ribs sustained damage consistent with impact but remained

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attached to its anchor point throughout the wing. The left and right aileron remained attached to the respective anchor point. The aileron control tubes were traced, and its hardware was secured to its perspective attachment point in the left and right upper tubular truss.

2.4 Landing Gear

The main landing gear remained attach to the fuselage frame, with which was bent consistent with impact. Each left and right main tire remained attached to its respective wheel hub. The tail wheel was secured to its attachment point.

2.5 Cockpit

The four-point harness was found intact. All end points remained in its belt receptacle. The left lower strap was cut by rescue personnel adjacent its anchor point. The battery was found damage consistent with impact. Both positive and negative wires were secured to its respective battery terminal. The airspeed indicator was found separated within the debris field and the needle was stuck indicating about 95 miles per hour.

2.6 Fuel/Fuel System

Fuel odor was present at the main wreckage site. The fuel tank was void of fuel and was breached on its side wall. See figure 4. The external mounted fuel filter was intact and connected to the fuel tank by fuel hoses.



Figure 4. View of fuel tank.

3.0 Engine Examination

Engine: Rotax 447, Serial No. 3910959 (See figure 5)

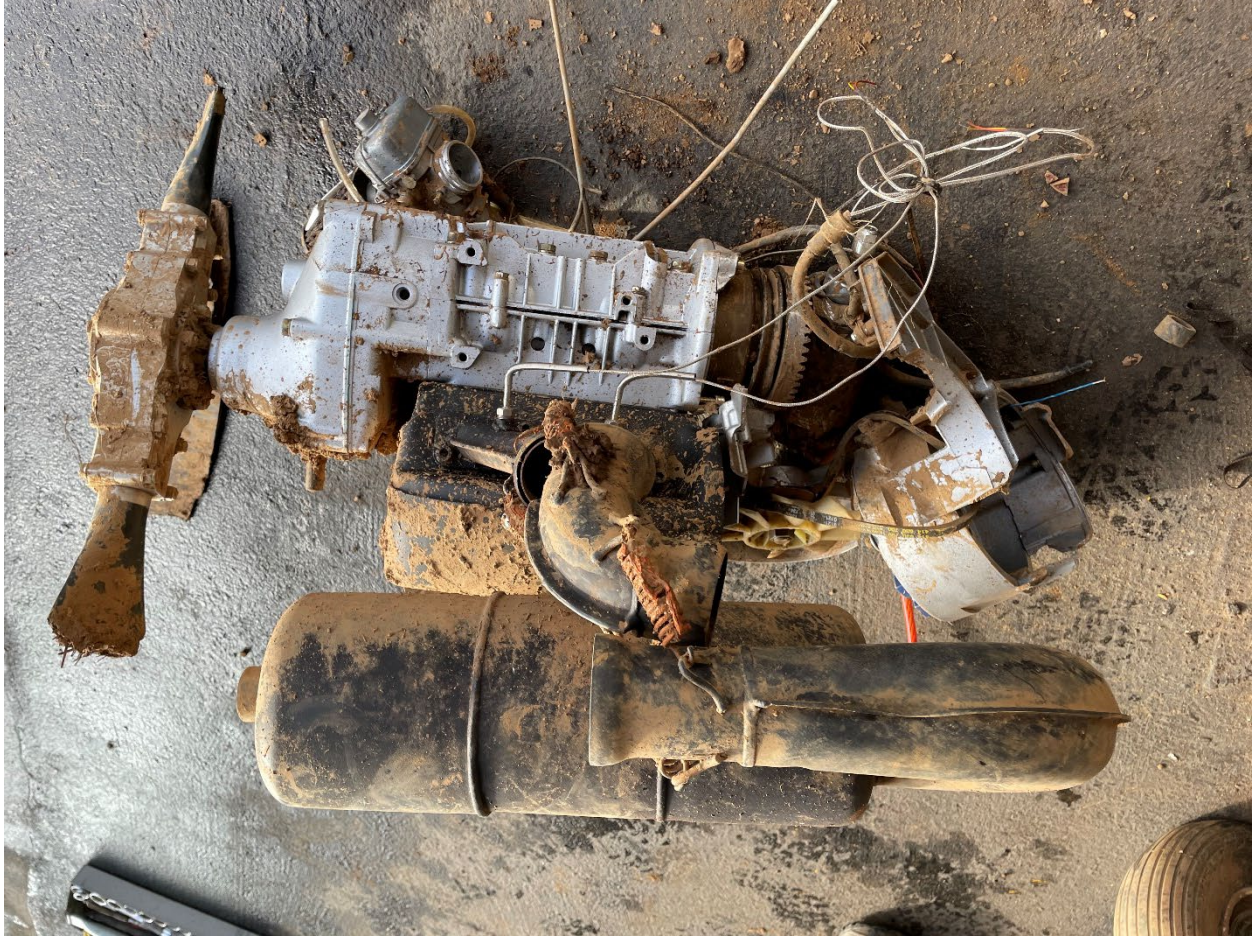


Figure 5. View of engine at examination.

The engine was separated from its engine mounts and found adjacent the main wreckage. The engine case was found with minor damage. The voltage regulator was impact damaged and was separated from its mounting pad. The CDI ignition system and carburetor remained attached to its mounting pads with minor damage. The exhaust was impact damaged and remained partially attached to the engine.

The BING carburetor was separated from its mounting pad and remained intact. The carburetor fuel filter was found unremarkable. The air filter was impact damaged and remained attached to the carburetor. The filter internally was found unremarkable.



Figure 6. View of carburetor and air filter.

Two spark plugs remained attached to it corresponding cylinder. See figure The aft spark plug was impact damage. Examination of the spark plugs revealed no anomalies and carbon found was consistent with normal operations. Valve control continuity was established by manually rotating the propeller.



Figure 7. View of cylinders and corresponding spark plugs

4.0 Propeller Examination

The propeller blades were fractured about 4 inches from its root. The propeller hub remained attached to the crankshaft.

5.0 Aircraft Information

The airframe and engine logbooks were not present during the airframe examination.

6.0 Meteorological Information

Witnesses reported that weather conditions were clear and calm and that it was the nicest day that they had.

Submitted by:

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