



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

November 3, 2017
February 15, 2018

AIRFRAME AND ENGINE EXAMINATION

WPR18FA026

This document contains 05 embedded photos.

A. ACCIDENT

Location: Murphy, Idaho
Date: November 3, 2017
Aircraft: Airplane Piper PA-18-150, Registration Number: N4393z, Serial #: 18-8682
NTSB IIC: Tealeye Cornejo

B. EXAMINATION PARTICIPANTS:

Tealeye Cornejo
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C. SUMMARY

On November 3, 2017, about 0900 mountain daylight time, a Piper PA-18-150, N4393Z, impacted mountainous terrain about 25 miles south of Murphy, Idaho. The pilot/owner was fatally injured, and the passenger received serious injuries. The airplane was substantially damaged. The airplane was registered to the owner and operated under the provision of 14 Code of Federal Regulations Part 91, as a personal cross-country flight that was departing from a private dirt strip and after an en route stop on the way to Boise Air Terminal/Gowen Field (BOI), Boise, Idaho. Visual meteorological conditions prevailed for the flight and no flight plan had been filed.

According to the witness, they normally takeoff to the north, but due to a southern wind at 5-7 knots, they took off to the south.

Mountainous terrain surrounded the accident site, with a private dirt airstrip on the valley floor. The airstrip was estimated to be 750 ft by 100 ft at an elevation of 5,194 ft. above ground level. Trees were adjacent to the dirt strip on the west side and varied in height from 75-100 ft. The airplane came to rest inverted about 1,750 ft from the south end of the airstrip.

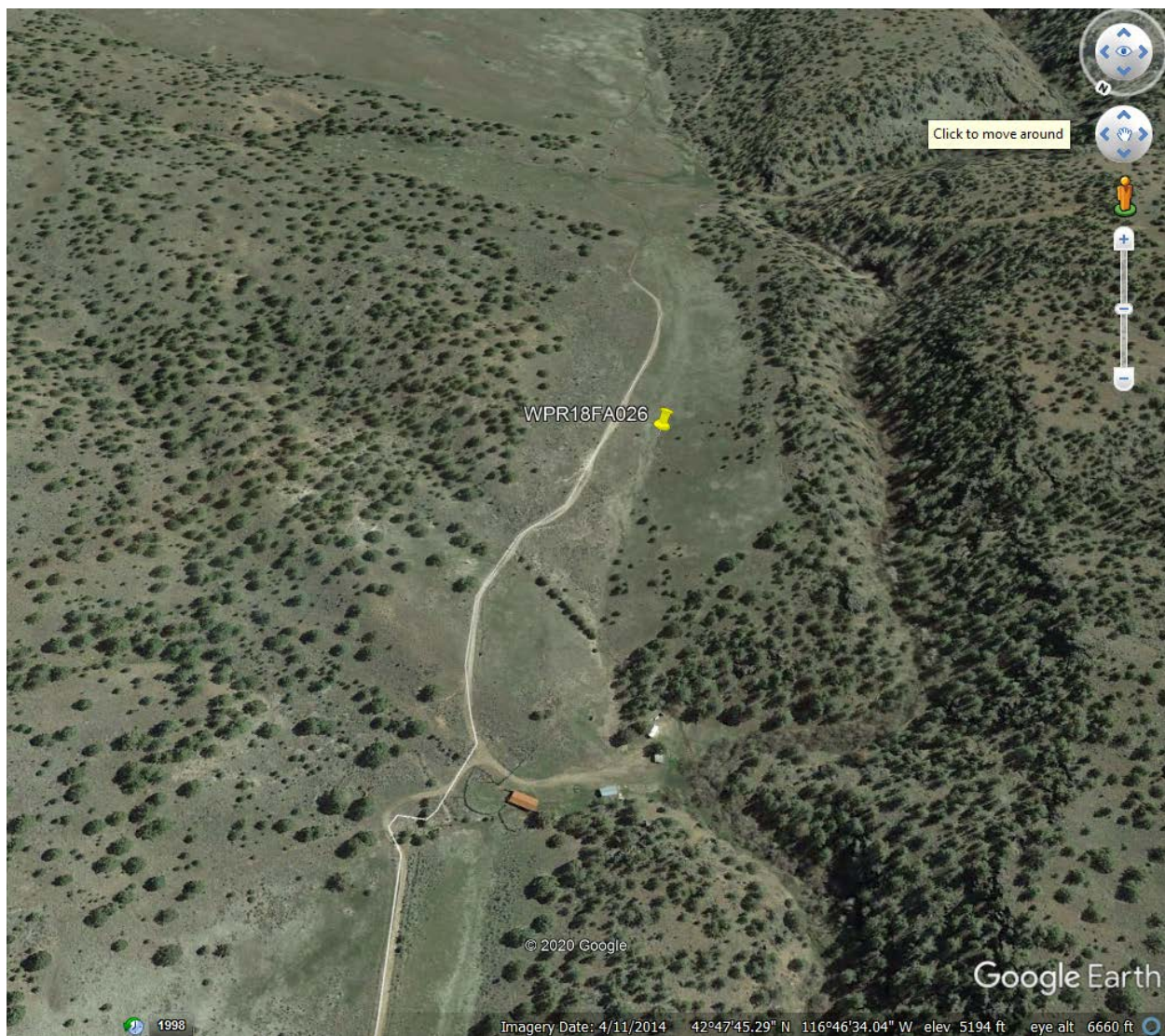


Photo 01 – Overview of accident site (Google Earth)

D. DETAILS OF THE INVESTIGATION

1.0 Airframe and Engine Examination On-Scene

The airplane came to rest inverted. The airplane wings remained attached to the airframe, and the engine remained attached to the engine mounts at the firewall.

Both wings had leading edge crush damage aft to the spar. Both wings remained attached to the fuselage. Flight control separation overloaded at the swage on the left aileron. Left aileron balance cable pulled through swage

Airframe

Flight continuity from the tail to the cockpit and each of the flight control surfaces

Both seatbelts were cut by the witness to extricate the pilot and passenger. The rear seated passenger's seatbelt pulled out from the rear cross-brace of the fuselage at the attachment point.

The pilot lap belt anchor point was on the seat frame not the fuselage

Fuel selector was selected to the OFF position.

Cockpit indicator Trim selected to full nose down

Flaps were 3rd notch – full flaps

Airspeed 56 mph

Primer, mixture – IN

VSI 1200 feet down

Hobbs meter/tach meter no located on-scene

The left-wing aileron cable

Engine

The engine remained attached via the engine mounts and firewall to the airframe. The carburetor separated at the venturi. Fuel in the top gascolator appeared to be blue in color and smelled like 100 low-lead aviation fuel. The carburetor fuel inlet screen had broken away from the carburetor but was free of debris.

Propeller

Spinner was crushed radial deformation. Both blades showed s-bending and one blade had chordwise scratches the length of the blade. Both blades bent aft with leading edge gouging and polishing.

1.1 Airframe Exam Photos



Photo 02 – Main Wreckage (Coroner)



Photo 03 – Main Wreckage (Coroner)



Photo 04 – Left Aileron Control Cable (Piper)



Photo 05- Left Aileron Control Cable (Piper)

2.0 Follow up Engine Examination

Visual examination of the engine revealed no holes in the engine case. Investigators manually rotated the propeller. Fuel was no present in any lines, the engine had oil; no evidence of a lack of engine oil, there were no observed preexisting conditions that would have precluded normal operation of the engine prior to impact.

Both magnetos remained attached to their respective mounting pads. The right magneto was rotated via a drive tool via the drive shaft and produced spark at each post. The left magneto was manually rotated via the drive shaft and produced spark at each post.

Thumb compression was obtained at all cylinders when manually rotated from the propeller hub. Each of the valves moved and the gears in the accessory section also rotated. Valve train and mechanical continuity was established.

Submitted by: Investigator Cornejo