



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

Event Date: May 29, 2021

Field Notes

WPR21FA211

This document contains 15 embedded photos.

A. ACCIDENT

Location: Eden, Utah

Date: May 29, 2021

Aircraft: Cessna 172 / N1727T

NTSB IIC: Stephen Stein

B. EXAMINATION PARTICIPANTS:

Name: Fabian Salazar

VIIC

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Sr. Air Safety Investigator

Textron
Wichita, Kansas

Troy Helgeson

Sr. Air Safety Investigator

Lycoming
Denver, Colorado

C. SUMMARY

Due to extensive thermal damage, very little of the airplane was examined. The left wing, control cables, engine and propeller were the only major components that remained. All other major components were consumed by a post-impact fire.

D. DETAILS OF THE INVESTIGATION Airframe Examination

WRECKAGE AND IMPACT INFORMATION

The airplane came to rest on a heading of 355° magnetic, in a stand of pine trees located on mountainous terrain on Powder Mountain ski lodge property, near Eden, Utah. The accident site was on a ski run named Lefty's, and above the South Fork of Wolf Creek. The first point of impact was observed to be to an aspen tree located about 30 feet, and about 265° magnetic from the wreckage. The first point of impact was about 5 feet above the ground. The first contact with the ground was at the wreckage site, under the nose of the airplane.

There was no debris area. Some components that separated from the airplane were pieces of wing tip and windscreen shards.

AIRFRAME

Fuselage. All but the left wing was consumed by fire. The post-impact fire was of an intensity that the aluminum airframe was either melted or burned to ash. Molten aluminum was found in the branches of some of the trees consistent with the empennage initially being propped up by some trees.

Cockpit Documentation. Most of the cockpit was consumed. Some metal components remained and are noted below. No instruments, radios, switches or circuit breakers remained that could be read or identified. Portions of some instruments were found but could not be read.

The throttle/mixture quadrant was consumed.

Airplane Data plate was discovered in the wreckage.

Three black boxes, identified as the Garmin Integrated Avionics Units for the Garmin 1000, were found in the wreckage. The boxes exhibited thermal damage and did not appear likely candidates for downloading.

Both front seat belt latches were found unsecured to the second half of the seat belt. The left front seat belt latch was located near the left seat pan. The right seat belt latch was found about 30 feet downhill from the fuselage.

Both front metal seat pans and frames were found in their normal position in the fuselage. The seat material had been consumed. The rear metal seat pan was found in its normal position in the fuselage. The rear seat material had been consumed.

The fuel selector valve was located and exhibited thermal damage. The selector valve position could not be determined.

Right Wing. The right wing, except for a small portion of the wing tip, was burned to ash. The control cables remained. The aileron and flap were burned to ash. The flap actuator exhibited threads present, consistent with a position of full up. A portion of the leading edge remained and exhibited a circumferential indentation and contained a brownish material consistent with contact with a pine tree located southwest of the wreckage about 15 feet above ground level.

Left Wing. The left wing remained and was found in a position, relative to the burned fuselage, that was consistent with it remaining attached to the fuselage after impact. The root of the wing was thermally damaged consistent with the fuselage burning away from the wing. The left strut remained attached to the wing but was thermally separated from the fuselage. The leading edge, from the strut inboard, exhibited minor damage. The leading edge, from the strut outboard exhibited substantial damage. The wing, from the wing tip to the landing light, was bent upwards

90° and exhibited a ten-inch-long indentation, approximately four inches deep, and contained brownish material consistent with contact from the aspen tree, located at the first point of impact. The aileron remained attached and was bent 90° along the same location as the wing. The flap remained attached and was thermally damaged at the root. The left fuel cap was secured and thermally damaged. The wing tip had separated from the wing. A small portion of the left-wing tip, including the position light, was located near the left wing.

Empennage. Most of the empennage was consumed including all the control surfaces. Remnants of the empennage remained and were suspended from a tree by the control cables, and electrical wires.

Main Landing Gear (MLG). The MLG was thermally damaged but found near their attachment point of the fuselage. The tires were consumed. The wheels were thermally damaged. The brakes remained attached to the wheels, but the brake lines were consumed. The nose wheel strut separated from the fuselage, and remained near its mount underneath the engine. The nose wheel was consumed with only the axle and wheel bearings remaining.

Engine nacelle. The top of the engine nacelle remained but was thermally damaged. The sides and bottom of the nacelle were consumed.

Propeller. The propeller remained attached to the engine. One propeller blade exhibited thermal damage with the tip of the blade being consumed. The blade was bent aft about 80°, near the mid-point. The other blade exhibited a minor aft bend and did not exhibit any additional damage. There was no thermal damage to this blade. The spinner exhibited crushing and was near the base of a tree that, while burned, exhibited an impact mark consistent with contact from the spinner. A second tree, adjacent to and left of the tree with the spinner contact, had a mark consistent with contact from a propeller blade. There was a ground scar beneath the right side of the engine, below the propeller blade, that was consistent with propeller contact with the ground.

Flight Control Continuity. Flight control continuity was established by examining the steel control cables that remained. There were some control cable detachments due to thermal damage.

Ailerons. The control cables for the ailerons were continuous to the control yoke, except for one balance cable that exhibited broom straw separation consistent with overload.

Elevators. The control cables for the elevators were continuous to the control yoke.

Rudder. The control cables for the rudder were continuous to the rudder pedals.

ELT. The ELT was consumed.

Engine. The engine remained attached to the damaged engine mounts and the mount was partially attached to the firewall. The engine exhibited thermal damage but did not display large cracks or breaches of the case. All components attached to the rear of the engine received thermal damage. The fuel servo remained attached to the case. The engine would not rotate.

PHOTO EXHIBIT

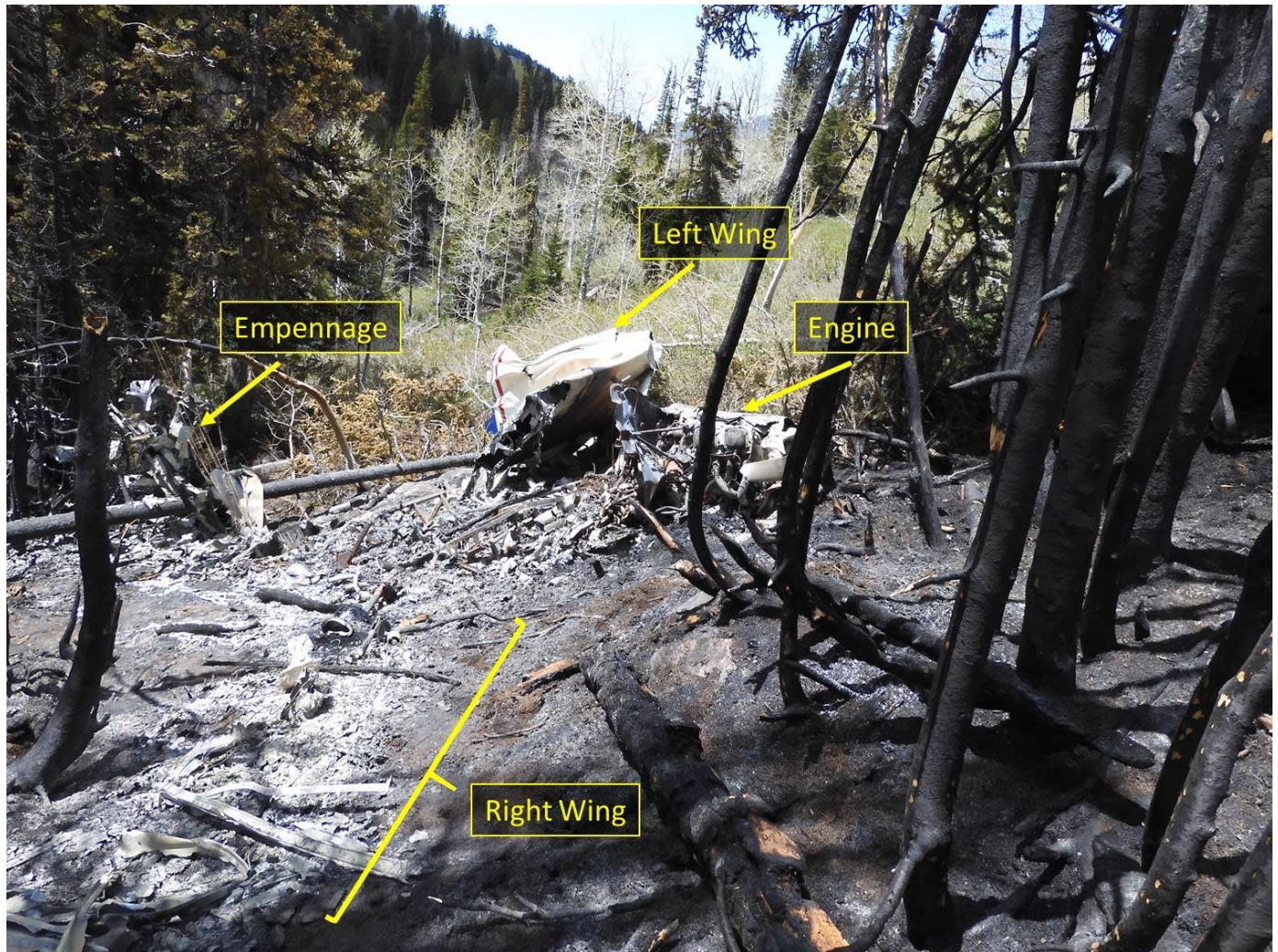


Figure 1. Right-side view of N1727T



Figure 2. Right View



Figure 3. Right View



Figure 4. Rear View

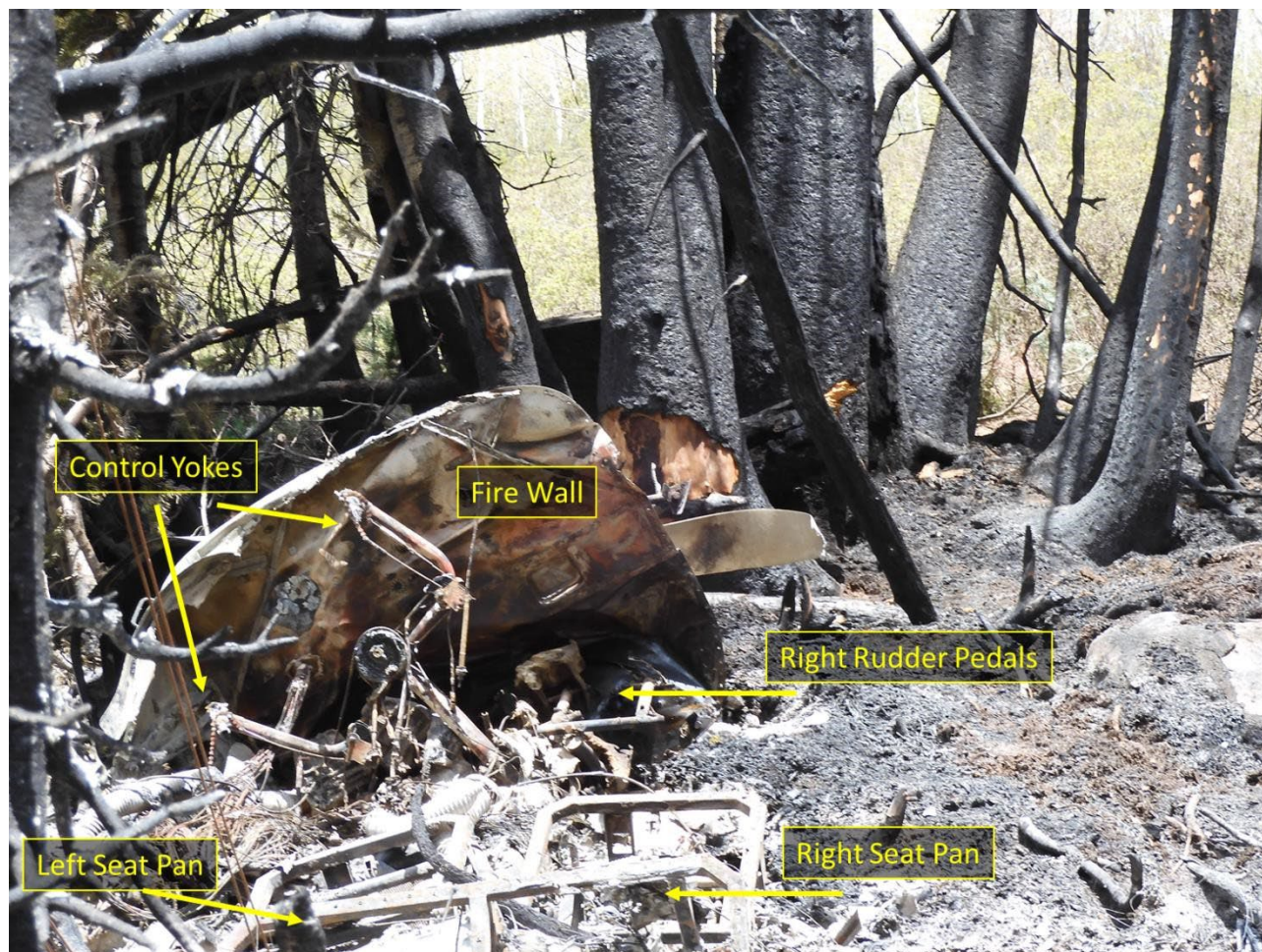


Figure 5. Cockpit View



Figure 6. Empennage View



Figure 7. Left-Side View



Figure 8. Left Wing



Figure 9. Left Wing Leading Edge



Figure 10. Left view of Engine Nacelle



Figure 11. Engine Fuel Servo



Figure 12. G1000 Display



Figure 13. Garmin Integrated Avionics Units (GIAUs)



Figure 14. Underside of the engine showing the nose wheel strut.



Figure 15. Remnant of the right-wing leading edge.