NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

July 19, 2016

ACCIDENT SITE EXAMINATION SUMMARY

WPR16FA144

This document contains 3 embedded images.

A. ACCIDENT

Location:	Logan, UT
Date:	July 18, 2016
Aircraft:	Diamond DA-40, N419FP
NTSB Investigator-in-Charge:	Maja Smith

B. SUMMARY

Examination of the accident site was conducted on July 19, 2016. All major structural components of the airplane were located at the accident site. The wreckage was recovered to a secure location for further examination.

C. DETAILS OF THE INVESTIGATION

1.0 Accident Site Examination

Initial Impact/ Main Wreckage: N41°35.87 N, W111°50.85– Elevation: 4,714 feet

Photo 1. Airplane wreckage

Examination of the accident site revealed that it was located on the side of a hill at an elevation of 4,714 ft msl. The airplane impacted terrain in a near vertical attitude and came to rest upright on a heading of about 093 degrees magnetic. A near vertical descent angle was determined by the compact nature of the wreckage footprint. The wreckage was contained to an area of 36 feet in width and 32 feet in length.

Photo 2. First point of impact

The first point of impact was identified as a crater created by the propeller impact and it was about 1.5 feet deep. A ground impression about 3 feet in length was observed about 8 feet from the first point of impact. The left door was located 87 feet away from the main wreckage and oriented on about 230 degrees magnetic bearing from the wreckage. The main wreckage consisted of the engine, cockpit, fuselage, and empennage.

The upper skin of the left wing was separated and located about 24 feet from the main wreckage. The left wingtip was attached to the upper skin portion of the wing. The rest of the left wing was fragmented; forward and aft spar exhibited multiple deformations, and the left flap and aileron were separated from the wing. The left fuel tank was resting lengthwise along the fuselage and exhibited multiple hydraulic crushing. The left main landing gear was attached to the wing.

The right wing remained partially attached to the fuselage. The leading edge of the wing was deformed and the wing exhibited aft accordion crushing. The bottom surface of the wing along the leading edge was separated and deformed downward. The fuel tank was pushed aft. The right flap and aileron remained attached to the wing. The right main landing gear was separated and crushed under the right wing.

The two-blade propeller remained attached to the spinner. One blade was bent about 30 degrees aft and slightly twisted, the other blade remained straight. Both blades exhibited chordwise scratching and nicks. The propeller spinner exhibited significant crushing.

Photo 3. Engine

The engine remained attached to the firewall and it was resting upwards on the ground. The nose landing gear was crushed under the engine. The instrument panel remained partially attached to the firewall and was mostly destroyed as a result of impact forces. The ELT light was found blinking. The avionics master switch was found in on position.

The pilot and the front passenger seats were crashed rearward into the two back passenger seats. The forward windscreen was fragmented and the frame structure surrounding the forward fuselage and the cockpit area was bent, broken and fragmented. The Hobbs meter located between the pilot's and front passenger's seat was intact and indicated 6201 hours.
The rest of the fuselage area exhibited numerous tears in the fiberglass. The VHS antenna on top of the fuselage was bent down and backwards.
The forward section of the empennage remained partially attached to the aft section. The horizontal stabilizer, vertical stabilizer, elevator, and rudder, remained attached to the aft empennage. The blue paint transfer from decals on the fuselage was visible on all surfaces of the empennage. The horizontal stabilizer exhibited a foot long tear near the leading edge and multiple smaller tears over its surface. A small amount of grass was found wedged inside a tear on top of the horizontal stabilizer.
Flight control continuity was established throughout from the cockpit controls to all moveable flight control surfaces. All push/pull tubes were connected to their respective bellcranks. The elevator push/pull tube exhibited impact damage.
The wreckage was recovered to a secure location for further examination.