



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

February 20, 2022

ACCIDENT SITE EXAMINATION SUMMARY REPORT

WPR22FA100

This document contains 5 embedded photos.

A. ACCIDENT

Location: White Hills, Arizona
Date: February 19, 2022
Aircraft: N787NV; Vans RV-7
NTSB Investigator-in-Charge: Andrew Swick

B. SUMMARY

Examination of the accident site was conducted on February 19-20, 2022. All major structural components of the airplane were located at the accident site. Radar track data revealed a track consistent with the accident airplane which departed from Boulder City Municipal Airport (BVU), Boulder City, Nevada, then tracked east above the highway west of the Triangle Airpark (AS50), White Hills, Arizona. The track then made a slight right turn before sharply descending to the left near the accident site. Security video from a nearby gas station showed the airplane descending in a nose down attitude while parts are separating from the airplane before impacting the ground.



Figure 1-Accident site, left side view of the main wreckage.

C. DETAILS OF THE INVESTIGATION

1.0 Accident Site Examination

Main Wreckage: N51° 42.925', W114° 28.901' - Elevation: 2,413 feet

The accident site was on the Triangle Airpark (AZ50), White Hills, Arizona. The debris field was about 1,500 ft long and on a directional heading of about 345-degrees. The debris field was located along the northside of the highway and onto the airport property.

On the south end of the debris field and just a few feet from the side of the highway, was a damaged section of coved fiberglass fairing and a large section of the right side rudder surface skin. About 500 ft further the left wing tip fairing was found in three separate sections. Several clean rags were found in this area. About 200 ft further in the debris field, broken plexiglass was found scattered. Another 100 ft further was the sliding canopy structure that was bent and most of the plexiglass had separated. Near the canopy was the left horizontal and its elevator counterweight. About 340 ft further and on the northeast side of the hangar near the first identified point of contact (FIPC) with the ground, was a lower seat cushion. The other lower seat cushion was found near the FIPC. A flashlight that was found between the two adjacent hangars in the debris field. Loose tools were found on the left side of the hangars. Two unidentified objects were located with a drone, on the hangar roofs. Those objects were never gathered during the relocation of the wreckage.



Figure 2-Google Earth view of the airport and accident site.

The FIPC with the ground was a large crater in hard dry soil near a hangar. Extending from the crater to the south was a shallow trough of disturbed dirt approximately 12 ft in length, consistent with a wing strike. The crater was about 1-1/2 ft deep and about 5 ft in diameter. Oil saturated soil and fiberglass fragments were found in the crater. HR was found from the crater to the furthest point in the debris field, about 200 ft. To the left in the debris field from the FIPC, the right aileron and several unidentified metal fragments and sections of fiberglass fairings. Down the center of the debris field from the FIPC, was the propeller assembly, metal and fiberglass fragments and the main wreckage. The propeller assembly remained intact and had impact damage to both blades. One blade was bent aft and had multiple bending. The hub had impact damage. The other blade was intact and had scuff marks. The spinner separated and was not identified in the debris. To the right in the debris field from the FIPC, the canopy structural beam and unidentified parts were found. Wheel pant fragments were found between the propeller assembly and the main wreckage.



Figure 3-Accident site, FIPC, debris field and main wreckage.

The main wreckage was found about 100 ft from the FIPC. Most of the wing skin and all of the fairings separated from both wings, revealing a bent main spar and crushed internal wing structure. Wing torque tubes and linkage had impact damage. The left wing flap remained attached to the wing and had impact damage. The left aileron and right flap were found near the main wreckage and was impact damaged. The aft fuselage was buckled and remained partially attached to the wing structure. The right horizontal stabilizer and elevator remained attached to the aft fuselage structure. The lower side of the rudder remained attached to its lower attachment hinge and both control cables and their hardware remained attached to the rudder.



Figure 4-Accident site, view of the debris field and main wreckage near the FIPC with the ground.

The Lycoming YIO-360-M1B engine and instrument panel were crushed and distorted and remained attached by various wiring. The propeller governor, alternator and several other components separated from the engine. The lower oil sump section separated revealing its internal surface. A cylinder head separated from its cylinder bore. A valve from the separated cylinder head was found near the main wreckage. The cockpit engine controls (throttle, mixture and propeller) remained attached.



Figure 5-Accident site, right side view of the engine, firewall and engine mounting structure.

The wreckage was relocated to Air Transport, in Phoenix, Arizona, where a follow-up examination will take place. Lycoming Engines will be present for the follow-up examination.

Submitted by:

Andrew Swick
Aviation Accident Investigator