



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

June 11, 2019

Accident Site and Wreckage Examination Summary

WPR19LA167

This document contains 9 embedded images.

A. ACCIDENT

Location: Deer Valley, Arizona
Date: June 11, 2019
Aircraft: N576CM; Mooney M20V
NTSB Investigator-in-Charge: Andrew Swick

On June 11, 2019, about 1451 mountain standard time, a Mooney M20V airplane, N576CM, collided with a streetlight poles and a Jersey barrier during a forced landing, near Deer Valley Airport (DVT) Deer Valley, Arizona. The private pilot was seriously injured. The airplane was recently purchased by the pilot. The airplane was registered and operated by the pilot under the provisions of 14 *Code of Federal Regulations Part 91* as a personal flight. Visual meteorological conditions prevailed and a flight plan was not filed. The flight departed Scottsdale Airport (SDL) and was destined for Carson Airport (CXP), Carson City, Nevada.



Figure 1-Accident Site, Main Wreckage (West View)

According to an ATC recording, about 7 minutes after departure, the pilot reported a “rough running engine” and subsequently declared an emergency. The pilot turned to the southwest as instructed by ATC and lined up for the approach to runway 19 at Glendale Municipal Airport (GEU), Glendale, Arizona, about 12 miles to south of his position. At about 4,700 ft msl the pilot decided that he was not going to reach GEU and turned left towards Deer Valley Airport (DVT), Deer Valley, Arizona, about 8 miles to the east.

Preliminary radar revealed that after departing from SDL to the northwest, the radar track reached an altitude of 9,100 ft msl, about 8 miles northwest of DVT. The track then turned south and descended to about 4,700 ft msl before turning to the east. The track continued on its eastern track before it ended near the accident site, about 2 miles west of DVT.

According to a witness that helped extricate the pilot from the wreckage, he stated he saw the airplane as it approached the street and avoided high tension wires on the south side of the street, by banking to the left. The airplane then impacted a light pole, separating the right wing, and somersaulting across the south side of the street, impacting a street barrier, sliding about 50 ft before coming to rest inverted. Postimpact fire ensued, and the witness approached the airplane to help with extricating the pilot.

B. PARTICIPANTS

Andrew Swick-NTSB IIC
Jack Vanover-NTSB (onsite)
Thomas Dickerson-FAA IIC
Robert Collier-Mooney Aircraft
Chris Lang-Continental Motors Group

C. SUMMARY

Examination of the accident site was conducted on June 11, 2019. All major structural components of the airplane were located at the accident site. The wreckage was recovered to a Air Transport for further examination. On June 12, 2019, the engine was separated from the main wreckage. The engine was documented and prepared for shipment. The propeller was removed from the engine in preparation of a manufacturer’s examination. On June 13, 2019, the airframe was examined by the IIC and no anomalies were noted. No NVM was found during the examination.

D. DETAILS OF THE INVESTIGATION

1.0 Accident Site Examination

The accident site revealed a debris field that was about 370 feet long in an east to west direction, with debris in both east and westbound lanes of Deer Valley Road, about 1-1/2 miles west of DVT.



Figure 2-Accident Site, Main Wreckage (East View)

The first identified point of contact (FIPC) was a 30 ft tall street light pole on the south side of the eastbound street. The right wing separated from the airplane and was found in the westbound lane about halfway down (eastbound) the debris field. A second light pole about 125 ft from the FIPC, on the south side of the street, was separated from the ground and entangled with the main wreckage. The main wreckage came to rest inverted and was on the south side of the street curb, about 275 ft from the FIPC. The main wreckage had with post-crash fire damage to the cabin and left wing. The vertical stabilizer and rudder were crushed to one side. All flight controls were accounted for and flight control continuity was attained. The propeller assembly remained attached to the engine and showed some rotational signatures during impact. The engine had thermal damage to the induction tubes, fuel pump aneroid housing, oil sump, hydraulic lines and magnetos. Engine control continuity was established from the cabin controls to the engine components.

During the recovery efforts, the left wing was cut without the IIC knowing. The wing fuel tank exploded with 5 people surrounding the airplane. The saw operator had 2nd degree burns to his left arm. The fire department was called and distinguished the fire. The wing ignited two more times during the recovery process.



Figure 3-Accident Site, Recovery Efforts

The wreckage was recovered to a secure location for further examination.

2.0 Follow-up Examination

The ELT continued to operate till the morning of June 12, 2019. The ELT was located by cutting into the side of the fuselage and removing it from its bracket. The ELT was in the 'ARM' position and the batteries were removed from the unit.

The engine was separated from the main wreckage. The left exhaust pipe was cut in preparation of shipment to the manufacturer. The controller and rear engine driven alternator were found in the main wreckage.



Figure 4-Engine Examination

The fuel selector valve was found in the main wreckage. The fuel selector was found in an open position.



Figure 5-Followup Examination-Fuel Selector Valve

The flaps appeared to be in the up position and the landing gear was in the down and locked position. The elevator trim jack screw was photographed and it is unknown to its position. The cabin area was mostly consumed by postimpact fire. The instrument panel was not identified and the PFD and MFD were not found.



Figure 6-Followup Examination-Main Wreckage

3.0 Logbook Information

According to the logbooks, the airplane's last signed off from Mooney was on April 13, 2019. On April 26, 2019 the airplane had the 310 HP conversion STCSA02483CH completed:

MAKE: P/B MODEL: M20V S/N: 33-0015 REG. NO: N676CM WORK ORDER: 2947/04-2019	Don Maxwell Aviation Services, Inc. [Redacted] [Redacted]	DATE: 4/26/19 TIME: 14:00 TACH: 0
Airframe Entries (1) Install 310 Hp Conversion per STCSA02483CH. R&R cowling Removed and replaced prop gov. w/ PN: C-290-03/T20. Backed out prop low pitch setting 2 turns for 2700 RPM. Adjust fuel flow for 36 GPH @ 2700IAW STC SA02483CH and Minnis Authorization letter dated 4-26-2019. (2) Installed Reiff Preheat SL-6 System. (3) Installed JPI Slim Line Primary Tach		
Don Maxwell: 1734050 A&P DATE: 4/26/2019	SIGNED: [Signature] [Redacted]	Work Order: 2947-04-2019 Printed by EBis 3 (datamedia.com)

Figure 7-Logbook Entry-STC

And the last entry was on May 31, 2019, where an oil change was conducted. The airplane had 61.7 hours at this time.

Submitted by: Andrew Swick