



National Transportation Safety Board Aviation Accident Preliminary Report

Location:	Abilene, TX	Accident Number:	CEN16FA114
Date & Time:	03/01/2016, 0830 CST	Registration:	N419B
Aircraft:	OHLGREN RV 6A	Injuries:	2 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

On March 1, 2016, about 0830 central standard time, an experimental amateur-built Ohlgren RV 6A airplane, N419B, impacted terrain during takeoff from runway 35 at the Elmdale Airpark (82TS), near Abilene, Texas. The airline transport pilot and his passenger were fatally injured. The impact with terrain destroyed the airplane. The airplane was registered to and operated by the pilot as a 14 Code of Federal Regulations 91 personal flight. Day visual meteorological conditions prevailed in area of the accident site about the time of the accident, and the flight was not operated on flight plan. The flight was destined for Henderson, Nevada, and was originating from 82TS at the time of the accident.

A witness at 82TS witnessed the takeoff. The witness picked the pilot and passenger up at a local hotel and brought them to 82TS. The pilot checked weather and preflighted the aircraft. According to the witness, the airplane taxied to the threshold of runway 35 and the pilot performed an engine run-up, which sounded normal. The airport windsock indicated winds from the north-northwest. After takeoff the airplane drifted slightly right (east) in a wings level climbing attitude. A turn to the west with a bank angle of more than 30 degrees began and the aircraft nose pitched up followed by an immediate nose down spin to the left. The aircraft then was out of sight due to a rise in terrain. The witness and another airport tenant drove to the site and observed that the accident airplane impacted terrain. A witness subsequently called 911.

The 63-year old pilot held a Federal Aviation Administration (FAA) airline transport pilot certificate with a multi-engine rating. He held commercial pilot privileges for single-engine land airplanes. He held an FAA second-class medical certificate dated February 16, 2016. The medical certificate had a limitation that the pilot must have glasses available for near vision.

N419B was an amateur-built experimental airplane constructed from a Van's Aircraft Inc. RV 6A kit, which was completed in 2001 and it had its special airworthiness certificate issued on August 4, 2001. The airplane was a single engine, low-wing monoplane, configured to seat two occupants in a side-by-side seating arrangement. It employed a tricycle landing gear arrangement and was constructed primarily from aluminum alloy materials. The airplane was powered by a 180-horsepower Lycoming O-360-C1G engine with serial number L-31710-36A. The airplane was equipped with a forward opening, tip-up canopy.

The airplane was equipped with a Dynon SkyView SV-D700 display unit. According to the Dynon user's guide, the display can act as a primary flight display with synthetic vision, an engine monitoring system, and a moving map in a variety of customizable screen layouts.

At 0752, the recorded weather at the Abilene Regional Airport, near Abilene, Texas, was: Wind 340 degrees at 12 knots; visibility 10 statute miles; sky condition clear; temperature 11 degrees C; dew point 2 degrees C; altimeter 30.10 inches of mercury.

The accident airport, 82TS, was a privately owned, private-use airport. Two runways, 18/36 and 17 /35 served the airport. Runway 17/35 was a 2,950 by 30 foot asphalt runway. The airport had 100 low lead fuel service.

The airplane came to rest upright about 189 feet and 330 degrees from the departure end of runway 36. The airplane's resting heading was about 360 degrees magnetic. The airplane's propeller and propeller flange separated from its crankshaft. The propeller was found imbedded in the ground about one foot below the surface. When removed the propeller blades exhibited chordwise abrasions and leading edge nicks. The engine mounts and engine cowling were deformed rearward and crushed consistent with the nose of the airplane impacting terrain. The leading edge of both wings exhibited aftward deformation consistent with a nose low impact with terrain. The cockpit canopy was found separated from the fuselage. The canopy's latch was found in the latched position and the latching assembly was deformed consistent with impact damage. The canopy handle was missing from its canopy handle block. The center section of the canopy handle block, which holds the canopy handle, exhibited a vertical tear where the canopy handle was housed. The empennage was attached to the fuselage and wrinkle deformation was observed at the juncture of the two. The left aileron separated from its wing.

An on-scene examination of the wreckage revealed that a liquid consistent with fuel was found in the fuel line routed to the engine driven fuel pump and in the line to the carburetor. The control stick was moved and the attached aileron and elevators moved accordingly. The rod end to the left aileron moved when the control stick was moved. The control cables at the rudder pedals were manipulated by hand and the rudder moved. Flight control continuity was established.

The right magneto was found separated from its accessory pad. Both of the engine's magnetos were removed from the wreckage and their ignition leads cut near their towers. Both magnetos were rotated by hand and sparks were observed at all ignition leads. The engine driven fuel pump sustained impact damage and its base was separated from its body. The engine driven fuel pump produced a suction when its slotted shaft was manipulated with a flat-bladed screwdriver. A liquid consistent with the smell of aviation gasoline subsequently exited the engine driven fuel pump fitting. Sparkplugs were removed. One spark plug was oil fouled and the remaining plugs exhibited a brown color consistent with normal combustion. The carburetor was removed from the intake. The carburetor's mounting base was fractured. The carburetor finger screen was removed and no debris was observed in the screen. The mixture

and throttle cables were pulled in the cockpit and motion on the carburetor linkages was accordingly observed. The propeller control in the cockpit was pulled and motion on the governor linkage was accordingly observed. Engine control continuity was established.

The cover over the vacuum accessory pad was removed and a splined adapter tool was inserted in the pump drive base to turn the engine accessory gears. All cylinder rocker covers were removed. The engine produced a thumb compression at all cylinders when the adapter tool was rotated by hand. No rocker or valve movement anomalies were observed when the adapter tool was rotated. Crankshaft and camshaft continuity was established.

The Dynon display was removed from the wreckage and was retained and sent to the National Transportation Safety Board Recorder Laboratory to see if it contains recorded data in reference to the accident flight.

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	OHLGREN	Registration:	N419B
Model/Series:	RV 6A	Aircraft Category:	Airplane
Amateur Built:	Yes		
Operator:	Pilot	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	KABI, 1790 ft msl	Observation Time:	0752 CST
Lowest Cloud Condition:	Clear	Conditions at Accident Site:	Visual Conditions
Lowest Ceiling:	None	Temperature/Dew Point:	11° C / 2° C
Wind Speed/Gusts, Direction:	12 knots, 340°	Visibility	10 Miles
Altimeter Setting:	30.1 inches Hg	Type of Flight Plan Filed:	None
Departure Point:	Abilene, TX (82TS)	Destination:	Henderson, NV

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Fatal	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Fatal		

Administrative Information

Investigator In Charge (IIC):	Edward F Malinowski
Additional Participating Persons:	Corey Wehmeyer; Federal Aviation Administration; Lubbock, TX John Butler; Lycoming; Williamsport, PA
Note:	The NTSB traveled to the scene of this accident.