



Aviation Investigation Final Report

Location:	Spanaway, Washington	Accident Number:	WPR20LA014
Date & Time:	October 23, 2019, 12:00 Local	Registration:	N615RJ
Aircraft:	Vans RV 6	Aircraft Damage:	Substantial
Defining Event:	Unknown or undetermined	Injuries:	1 Serious, 1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that the initial taxi and engine run-up were normal; however, during the takeoff roll, the engine sputtered and the pilot aborted the takeoff. A subsequent engine run-up revealed no anomalies, and the pilot elected to take off again. As the airplane climbed through about 200 ft above ground level, the engine began to sputter and, shortly after, lost all power. The pilot performed a forced landing to an open field near the airport, resulting in substantial damage. The pilot reported 18 gallons of fuel onboard before departure.

Examination of the engine revealed no evidence of mechanical malfunctions or anomalies that would have precluded normal operation. The amount of fuel onboard at the time of the accident was not determined, but the fuel remaining in the wing tanks after the accident did not display evidence of contamination. The reason for the loss of engine power could not be determined based on the available information.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

A total loss of engine power during the initial climb for reasons that could not be determined.

Findings

Not determined	(general) - Unknown/Not determined
Aircraft	(general) - Unknown/Not determined

Factual Information

History of Flight

Initial climb	Loss of engine power (total)
Landing-landing roll	Collision with terr/obj (non-CFIT)
Unknown	Unknown or undetermined (Defining event)

On October 23, 2019, about 1200 Pacific daylight time, an experimental, amateur-built RV-6 airplane, N615RJ, was substantially damaged when it was involved in an accident near Spanaway, Washington. The pilot sustained minor injury and the passenger sustained serious injuries. The airplane was and operated as a Title 14 *Code of Federal Regulations Part 91* personal flight.

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The engine was examined following recovery from the accident site. The engine controls were continuous from the cockpit to the engine. The crankshaft was rotated by hand at the propeller and continuity was established through the valve train. Thumb compression was obtained on each cylinder. Both left and right magnetos produced spark at their terminal leads. The top spark plugs were removed and displayed normal operating signatures. Functional testing of the engine-driven fuel pump and throttle body injector revealed no anomalies. An unquantified amount of fuel remained in each of the wing fuel tanks and displayed no evidence of contamination. The amount of fuel onboard at the time of the accident was not determined.

Pilot Information

Certificate:	Airline transport; Commercial	Age:	75, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	September 5, 2018
Occupational Pilot:	No	Last Flight Review or Equivalent:	July 30, 2019
Flight Time:	(Estimated) 16429 hours (Total, all aircraft), 908 hours (Total, this make and model)		

Passenger Information

Certificate:		Age:	
Airplane Rating(s):		Seat Occupied:	Right
Other Aircraft Rating(s):		Restraint Used:	3-point
Instrument Rating(s):		Second Pilot Present:	
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Vans	Registration:	N615RJ
Model/Series:	RV 6 Undesignat	Aircraft Category:	Airplane
Year of Manufacture:	2006	Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	21603
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	August 14, 2019 Annual	Certified Max Gross Wt.:	1650 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	907.6 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	C91A installed, not activated	Engine Model/Series:	O-320-EXP
Registered Owner:	On file	Rated Power:	180 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KPLU, 539 ft msl	Distance from Accident Site:	4 Nautical Miles
Observation Time:	11:30 Local	Direction from Accident Site:	59°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.51 inches Hg	Temperature/Dew Point:	-13°C
Precipitation and Obscuration:			
Departure Point:	Spanaway, WA (3B8)	Type of Flight Plan Filed:	None
Destination:	Spanaway, WA (3B8)	Type of Clearance:	None
Departure Time:	11:55 Local	Type of Airspace:	Class G

Airport Information

Airport:	SHADY ACRES 3B8	Runway Surface Type:	Asphalt;Grass/turf
Airport Elevation:	445 ft msl	Runway Surface Condition:	Dry
Runway Used:	34	IFR Approach:	None
Runway Length/Width:	1800 ft / 20 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Serious	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 Serious, 1 Minor	Latitude, Longitude:	47.070278,-122.371109(est)

Administrative Information

Investigator In Charge (IIC): Smith, Maja

Additional Participating Persons: Robert Shafer; FSDO; Seattle, CA

Original Publish Date: June 1, 2022

Last Revision Date:

Investigation Class: [Class 3](#)

Note: The NTSB did not travel to the scene of this accident.

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=100483>

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).