



National Transportation Safety Board Aviation Accident Preliminary Report

Location:	Green Cove Springs, FL	Accident Number:	ERA19FA183B
Date & Time:	05/29/2019, 1045 EDT	Registration:	N203DD
Aircraft:	Vans RV4	Injuries:	1 Serious
Flight Conducted Under:	Part 91: General Aviation - Personal		

On May 29, 2019, about 1045 eastern daylight time, an experimental amateur built Vans RV-4, N319RL, and a second, experimental amateur built Vans RV-4, N203DD, collided in midair about near Green Cove Springs, Florida. N319RL was destroyed and N203DD sustained substantial damage. The air transport pilot of N203DD was seriously injured and the commercial pilot of N319RL was fatally injured. Both airplanes were registered to and operated by the pilots under the provisions of Title 14 *Code of Federal Regulations* Part 91 as personal flights. Day visual meteorological conditions prevailed and neither flight was operated on a flight plan. The local flights both originated from Haller Airpark (7FL4), Green Cove Springs, Florida, about 1030.

The pilots of both airplane were friends, and in a postaccident interview the pilot of N203DD reported that the purpose of the flights was for the pilots to perform maneuvers north of 7FL4, their home airport. He stated that both airplanes departed in formation and headed north of 7FL4. The pilot of N203DD, began to trail N319RL while checking the airspeed of his airplane. About 10 minutes after the completion of the maneuvers, the pilot of N203DD radioed the pilot of N319RL and said he was returning to the airport. The pilot of N203DD reported that did not receive a response and started a left turn in the opposite direction to head back towards the airport. As the pilot of N203DD descended through 2,000 ft. he suddenly saw N319RL pass under his airplane just before the collision. He said that they were so close he could see the pilot of N319RL, seconds before the collision. After the collision the pilot of N203DD looked back and could see N319RL falling to the ground. He said that after the collision "he knew his propeller was out of balance because the airplane began to vibrate violently." He knew he could not make it back to the airport so he conducted a forced landing in a cow pasture.

The pilot of N203DD held a airline transport pilot certificate with a rating for airplane multi-engine land and commercial pilot privileges for airplane single-engine land. His most recent Federal Aviation Administration (FAA) third-class medical certificate was issued on November 1, 2017, with a limitation requiring the use of corrective lenses. The pilot reported his civil flight experience included 17,062 total and 25 hours within the last six months of his medical examination.

The pilot of N319RL held a commercial pilot certificate with ratings for airplane single-engine and multi-engine land and instrument airplane. His most recent FAA third-class medical certificate was issued on October 10, 2018, with a limitation requiring the use of corrective lenses. The pilot reported his civil flight experience included 3,800 total and 60 hours within the last six months of his examination.

Examination of the wreckage area revealed that N319RL came to rest 4 miles northwest of 7FL4. The wreckage of N203DD came to rest 2 miles east-northeast of N319RL, and about 5 miles north of 7FL4.

The airframe of N203DD was generally painted yellow. During the wreckage examination of the airplane, red paint transfer marks were found on a six-inch-deep 17-inch-wide semi-circle on the leading edge of the left wing. There was also a red paint transfers on the bottom outboard section of the right wing leading edge. Examination of the main landing gear revealed the left main gear strut was broken, but still attached to the fuselage. The left main landing gear tire was broken on the hub and remained attached to the axle. There was a skid mark on the tire and the strut fairing and wheel pant was not recovered. Examination of the propeller revealed both blades were bent and one blade displayed a two inch semi-circular gouge on the leading edge of the blade.

Examination of the flight controls revealed continuity from all flight controls to their respective control surfaces. Examination of the engine revealed valvetrain continuity to the accessory section and compression. Spark was observed on all ignition leads. Trace amounts of fuel was observed with in the fuel system.

The airframe of N319RL was generally painted red. During the wreckage examination of the airplane, yellow paint transfers were found on the lower part of the rudder. A 3-foot tire skid mark was found on top of the empennage and ended at the vertical stabilizer. The vertical stabilizer was fragmented and broken away from the fuselage. Pieces of the vertical stabilizer skin and rudder was located at the wreckage site. The upper section of the rudder was fragmented and only the lower part of the rudder remained attached at the attachment fitting and the rudder control cables. The horizontal stabilizers and the elevators were broken, fragmented and remained partially attached by the skin of the fuselage. The airplane impacted the ground nose first and was accordion crushed aft. All control surfaces were accounted for at the accident site. Flight control continuity was established to the push pull tubes. The control tubes reveal overstress breaks within the fuselage and wings. Examination of the engine revealed the crankshaft was impact damaged and bent. The propeller remained attached to the crankshaft flange and showed signs of rotational scoring. Valvetrain continuity was observed but the compression could not be obtained due to the bent crankshaft. The engine accessories, magnetos, vacuum pump and fuel pump were crushed aft. The ignition system wiring was destroyed. No fuel was noted in the fuel system. The instrument panel was destroyed.

The recorded weather conditions reported at Palatka Municipal Airport (28J), Palatka, Florida, located 13 nautical miles southwest of the accident site reported at 1515, was: wind from 180° at 9 knots, visibility 10 statute miles, and clear, temperature 33° C, dew point 17° C, altimeter 30.00 inches of mercury.

Aircraft and Owner/Operator Information

Aircraft Make:	Vans	Registration:	N203DD
Model/Series:	RV4 Undesignat	Aircraft Category:	Airplane
Amateur Built:	Yes		
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	K28J, 196 ft msl	Observation Time:	1515 UTC
Distance from Accident Site:	13 Nautical Miles	Temperature/Dew Point:	33° C / 17° C
Lowest Cloud Condition:	Clear	Wind Speed/Gusts, Direction:	9 knots / , 180°
Lowest Ceiling:	None	Visibility:	10 Miles
Altimeter Setting:	30 inches Hg	Type of Flight Plan Filed:	None
Departure Point:	Green Cove Springs, FL (7FL4)	Destination:	Green Cove Springs, FL (7FL4)

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	29.957778, -81.727222

Administrative Information

Investigator In Charge (IIC):	Eric Alleyne
Additional Participating Persons:	Ric Riccardi; FAA/FSDO; Orlando, FL
Note:	The NTSB traveled to the scene of this accident.