



Aviation Investigation Final Report

Location:	Delray, Florida	Accident Number:	ERA21LA393
Date & Time:	September 3, 2021, 12:50 Local	Registration:	N388RV
Aircraft:	Vans RV8	Aircraft Damage:	Substantial
Defining Event:	Fuel exhaustion	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that during the preflight inspection he was unable to measure the fuel quantity with a dipstick, due to the tailwheel airplane's tail-low attitude as it sat on the ramp. He stated that he "rocked the wing back and forth...to see the fuel sloshing around" and estimated that the left tank contained 9-10 gallons, and the right tank had "less fuel visible." The purpose of the flight was to refuel the airplane at the destination airport, where fuel was less expensive. He estimated a fuel burn of 4-5 gallons for the planned 30-minute flight.

While enroute, the pilot diverted his course to avoid rain showers that were developing before he ultimately decided to return to the departure airport. During the return, the engine began to "sputter," at which time he turned on the electric fuel pump and switched the fuel selector from the left tank to the right tank. Sometime after, the engine sputtered again, and he decided to perform an off-airport landing. During landing the airplane struck a fence rail, which resulted in substantial damage to the wings.

A post-accident examination of the airplane revealed that the damaged fuel tanks were devoid of fuel, with no indications of fuel having leaked from them, and no odor of fuel was noted at the scene.

Probable Cause and Findings

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

The pilot's inadequate preflight inspection and improper fuel planning which resulted in fuel exhaustion and subsequent loss of engine power.

Findings

Personnel issues	Fuel planning - Pilot
Personnel issues	Preflight inspection - Pilot
Aircraft	Fuel - Fluid level
Environmental issues	Fence/fence post - Contributed to outcome

Factual Information

History of Flight

Prior to flight	Aircraft inspection event
Enroute	Fuel exhaustion (Defining event)
Landing-flare/touchdown	Off-field or emergency landing

Pilot Information

Certificate:	Airline transport; Commercial; Flight instructor	Age:	80,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	Glider	Restraint Used:	Unknown
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	
Medical Certification:	Class 1 Unknown	Last FAA Medical Exam:	June 1, 2021
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	(Estimated) 24388 hours (Total, all aircraft), 72 hours (Total, this make and model), 73 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Vans	Registration:	N388RV
Model/Series:	RV8	Aircraft Category:	Airplane
Year of Manufacture:	2000	Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	80787
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:		Certified Max Gross Wt.:	1800 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	202 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:		Engine Model/Series:	IO-360-A1B6
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:	BCT, 13 ft msl	Distance from Accident Site:	7 Nautical Miles
Observation Time:	12:59 Local	Direction from Accident Site:	130°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	10 knots / None	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	220°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.99 inches Hg	Temperature/Dew Point:	31°C / 24°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	West Palm Beach, FL (LNA)	Type of Flight Plan Filed:	
Destination:	Immokalee, FL (IMM)	Type of Clearance:	None
Departure Time:	11:20 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	26.45524,-80.210727(est)

Administrative Information

Investigator In Charge (IIC):	Brazy, Douglass
Additional Participating Persons:	Jahangir Jahangirnezhad; FAA/FSDO; Miramar, FL
Original Publish Date:	June 8, 2022
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=104183

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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](#).