



Aviation Investigation Final Report

Location:	Grant-Valkaria, Florida	Accident Number:	ERA19LA015
Date & Time:	October 13, 2018, 12:05 Local	Registration:	N3HH
Aircraft:	Avid Avid Flyer	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (partial)	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot was in cruise flight when the engine lost partial power, then total power. He restarted the engine and briefly regained partial power, but shortly thereafter, the engine again lost all power. The pilot performed a forced landing to a road, during which the airplane sustained substantial damage.

A test run of the engine indicated no anomalies; however, further inspection revealed a stuck float needle in the carburetor and a clogged carburetor vent line, which could have led to an excess vacuum in the carburetor and restricted fuel flow. It is likely that this restriction caused a transient condition that resulted in the loss of engine power that was not replicated during the test run.

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 due to a carburetor malfunction, which resulted in a forced landing.

Findings

Aircraft	Fuel control/carburetor - Malfunction
Aircraft	Fuel controlling system - Damaged/degraded

Factual Information

History of Flight

Enroute-cruise	Loss of engine power (partial) (Defining event)
Enroute-descent	Loss of engine power (total)
Enroute-descent	Collision with terr/obj (non-CFIT)

On October 13, 2018, about 1205 eastern daylight time, an experimental, amateur-built Avid Flyer, N3HH, was substantially damaged when it was involved in an accident near Palm Bay, Florida. The private pilot and passenger were not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The pilot reported that the airplane was in cruise flight at 1,200 ft mean sea level when the engine rpm began to decrease; the engine then lost all power. He was able to restart the engine but could not restore full power. The engine continued to run at a low idle rpm before again losing total power. The pilot chose to perform a forced landing to a road, during which the airplane touched down “firmly”, and the landing gear collapsed, resulting in substantial damage.

A Federal Aviation Administration inspector examined the airplane and noted substantial damage to the fuselage tube structure. During a test run, the engine started and ran for several minutes around 3,500 rpm. Both magnetos produced an acceptable drop in rpm when checked.

The engine was subsequently sent to an overhaul shop, where further inspection revealed a stuck float needle in the carburetor and a clogged carburetor vent line.

Pilot Information

Certificate:	Private	Age:	26, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	BasicMed Without waivers/limitations	Last FAA Medical Exam:	July 24, 2018
Occupational Pilot:	No	Last Flight Review or Equivalent:	April 12, 2018
Flight Time:	110 hours (Total, all aircraft), 14 hours (Total, this make and model), 50 hours (Pilot In Command, all aircraft), 21 hours (Last 90 days, all aircraft), 8 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Avid	Registration:	N3HH
Model/Series:	Avid Flyer NO SERIES	Aircraft Category:	Airplane
Year of Manufacture:	1993	Amateur Built:	Yes
Airworthiness Certificate:	Normal	Serial Number:	1066D
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	May 30, 2018 Annual	Certified Max Gross Wt.:	1151 lbs
Time Since Last Inspection:	17 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	63 Hrs at time of accident	Engine Manufacturer:	Rotax
ELT:	C91 installed, not activated	Engine Model/Series:	582
Registered Owner:		Rated Power:	65 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:	MLB, 27 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	16:53 Local	Direction from Accident Site:	349°
Lowest Cloud Condition:	Scattered / 2000 ft AGL	Visibility	10 miles
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	50°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.93 inches Hg	Temperature/Dew Point:	30°C / 20°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Okeechobee, FL (OBE)	Type of Flight Plan Filed:	None
Destination:	Valkaria, FL (X59)	Type of Clearance:	None
Departure Time:	11:15 Local	Type of Airspace:	Class E

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	27.93487,-80.607877

Administrative Information

Investigator In Charge (IIC):	Hill, Millicent		
Additional Participating Persons:	Scott Strickland; FAA/FSDO; Orlando, FL		
Original Publish Date:	July 15, 2021	Investigation Class:	3
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=98489		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).