



Aviation Investigation Final Report

Location:	St. Petersburg, Florida	Accident Number:	ERA21LA104
Date & Time:	January 17, 2021, 09:30 Local	Registration:	N82746
Aircraft:	Piper PA28	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (total)	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

According to the flight instructor, after departing the airport and climbing out over the ocean, she and the pilot-rated student were discussing climbing higher when the engine lost total power. The instructor attempted to restart the engine by turning on the fuel pump, carburetor heat, and switching the fuel selector, without success. She searched for a place to land and performed a forced landing to a beach. During the landing roll, the right wing struck a pole in the sand, resulting in substantial damage. An examination of the engine revealed that the B-nut was loose on the engine driven fuel pump between the electric fuel pump. When the electric fuel pump was turned on, fuel leaked out of the line where the B-nut was loose. A mechanic tightened the line, and fuel flowed without issue. There were no other anomalies with the engine during the examination that would have precluded normal operation. Given this information, it is likely that a loss of fuel pressure/flow to the engine occurred as a result of the loose B-nut, which resulted in the total loss of engine power.

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 as a result of the loose fuel line B-nut connected to the engine driven fuel pump.

Findings

Aircraft

Fuel distribution - Malfunction

Factual Information

History of Flight

Maneuvering	Loss of engine power (total) (Defining event)
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Flight instructor Information

Certificate:	Commercial; Flight instructor	Age:	28,Female
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	December 26, 2019
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	December 3, 2019
Flight Time:	984 hours (Total, all aircraft), 267 hours (Total, this make and model), 794 hours (Pilot In Command, all aircraft), 52 hours (Last 90 days, all aircraft), 6 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Student pilot Information

Certificate:	Private	Age:	49,Male
Airplane Rating(s):	Single-engine sea	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	October 22, 2019
Occupational Pilot:	No	Last Flight Review or Equivalent:	November 22, 2019
Flight Time:	498 hours (Total, all aircraft), 42 hours (Total, this make and model), 450 hours (Pilot In Command, all aircraft), 3 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N82746
Model/Series:	PA28 181	Aircraft Category:	Airplane
Year of Manufacture:	1980	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	28-8190054
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	November 25, 2020 100 hour	Certified Max Gross Wt.:	2550 lbs
Time Since Last Inspection:	92 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	15189 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	C91 installed, not activated	Engine Model/Series:	O-360-A4M
Registered Owner:	ST PETE AVIATION SERVICES LLC	Rated Power:	180 Horsepower
Operator:	ST PETE AVIATION SERVICES LLC	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	SPG	Distance from Accident Site:	
Observation Time:	14:53 Local	Direction from Accident Site:	
Lowest Cloud Condition:	6000 ft AGL	Visibility	10 miles
Lowest Ceiling:	Overcast / 6000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	70°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.08 inches Hg	Temperature/Dew Point:	14°C / 10°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	St. Petersburg, FL (SPG)	Type of Flight Plan Filed:	None
Destination:	St. Petersburg, FL (SPG)	Type of Clearance:	None
Departure Time:	08:30 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	27.766788,-82.770986

Administrative Information

Investigator In Charge (IIC):	Kemner, Heidi
Additional Participating Persons:	Randy Ryhal; FAA FSDO; Tampa, FL
Original Publish Date:	August 20, 2021
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=102528

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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](#).