



National Transportation Safety Board Aviation Accident Final Report

Location:	Brewton, AL	Accident Number:	ERA18LA041
Date & Time:	12/05/2017, 1400 CST	Registration:	N747KM
Aircraft:	PIPER PA28	Aircraft Damage:	Substantial
Defining Event:	Fuel starvation	Injuries:	2 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot was conducting an instrument flight rules cross-country flight. While descending out of 8,000 ft, the airplane's engine lost total power. The pilot attempted to divert to a nearby airport; however, there were strong headwinds and the airplane would not glide all the way to the airport, so he attempted to land in a field. The airplane collided with treetops and a fence during the off-airport landing, which resulted in substantial damage to the airframe. Postaccident examination of the wreckage revealed that the intact left-wing fuel tank only contained about 20 fluid ounces of fuel, while the impact-breached right-wing fuel tank was about 1/2 full. The fuel selector was found in the left fuel tank position. The examination did not reveal any preimpact mechanical malfunctions or failures that would have precluded normal operation of the engine. Given this information, it is likely that the pilot exhausted the airplane's fuel supply in the left fuel tank and did not switch the fuel selector to the right tank, which resulted in the total loss of engine power due to fuel starvation.

Probable Cause and Findings

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

The pilot's inadequate fuel management, which resulted in a total loss of engine power due to fuel starvation.

Findings

Aircraft	Fuel - Fluid management (Cause)
Personnel issues	Use of equip/system - Pilot (Cause)
Environmental issues	Tree(s) - Contributed to outcome
	Fence/fence post - Contributed to outcome

Factual Information

On December 5, 2017, about 1400 central standard time, a Piper PA-28-180, N747KM, was substantially damaged during a forced landing near Brewton, Alabama. The private pilot and passenger were not injured. Visual meteorological conditions prevailed, and an instrument flight rules flight plan was filed for the personal flight that departed Dekalb-Peachtree Airport (PDK), Atlanta, Georgia, and was destined for Pensacola International Airport (PNS), Pensacola, Florida. The airplane was operated under the provisions of 14 *Code of Federal Regulations* Part 91.

According to the pilot, the airplane was in cruise flight, at 8,000 ft mean sea level, for "a couple hours" when the air traffic control (ATC) controller told him to descend to 4,000 ft and fly around some thunderstorms in that area. The pilot stated there were strong headwinds and he would have preferred to stay at the higher altitude, but complied with the direction from ATC. Subsequently, the engine experienced a total loss of power, and he notified ATC that he wanted to divert to Brewton Municipal Airport (12J), Brewton, Alabama. The pilot further stated that due to the strong headwind, he knew the airplane was not going to be able to glide to 12J, so he attempted to land in a field. During the approach to the field, the airplane collided with some tree tops and landed hard in the field. During the roll-out, the airplane contacted a fence post, which damaged the right wing.

Examination of the wreckage by a Federal Aviation Administration (FAA) inspector revealed that the airplane sustained damage to the landing gear fairings, right side of the fuselage, firewall, and right wing leading edge. There was additional damage to the horizontal stabilator, propeller and the right-wing fuel tank was breached and leaking fuel. The right-wing fuel tank was approximately 1/2 full. The left-wing fuel tank, which was undamaged, contained approximately 20 fluid ounces of fuel. One ounce of fuel was recovered from the firewall mounted fuel strainer bowl. The fuel selector valve was found in the left fuel tank position. The FAA inspector examined the engine and did not find any preimpact mechanical deficiencies that would have precluded normal operation.

History of Flight

Enroute-descent	Fuel starvation (Defining event)
	Loss of engine power (total)
Emergency descent	Off-field or emergency landing
	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Commercial	Age:	32, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Without Waivers/Limitations	Last FAA Medical Exam:	01/24/2017
Occupational Pilot:	No	Last Flight Review or Equivalent:	10/26/2017
Flight Time:	(Estimated) 300 hours (Total, all aircraft), 83 hours (Total, this make and model), 197 hours (Pilot In Command, all aircraft), 75 hours (Last 90 days, all aircraft), 51 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N747KM
Model/Series:	PA28 180	Aircraft Category:	Airplane
Year of Manufacture:	1972	Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	28-7305149
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	09/30/2017, Annual	Certified Max Gross Wt.:	2505 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	4344 Hours as of last inspection	Engine Manufacturer:	LYCOMING
ELT:	Installed	Engine Model/Series:	O-360 SER
Registered Owner:	On file	Rated Power:	180 hp
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:	KNDZ, 178 ft msl	Distance from Accident Site:	18 Nautical Miles
Observation Time:	1956 UTC	Direction from Accident Site:	178°
Lowest Cloud Condition:	Scattered / 2300 ft agl	Visibility	10 Miles
Lowest Ceiling:	Broken / 3600 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	9 knots / 19 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	190°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.07 inches Hg	Temperature/Dew Point:	26 °C / 21 °C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	ATLANTA, GA (PDK)	Type of Flight Plan Filed:	IFR
Destination:	Pensacola, FL (PNS)	Type of Clearance:	IFR
Departure Time:	1100 EST	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:	31.010833, -87.037222 (est)

Administrative Information

Investigator In Charge (IIC):	Daniel P Boggs	Report Date:	05/28/2020
Additional Participating Persons:	Ken Lancaster; FAA/FSDO; Birmingham, AL		
Publish Date:	05/28/2020		
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=96422		

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](#).