



Aviation Investigation Final Report

Location:	Fort Worth, Texas	Accident Number:	CEN19TA073
Date & Time:	January 27, 2019, 16:34 Local	Registration:	N36PS
Aircraft:	Beech A36	Aircraft Damage:	Substantial
Defining Event:	Fuel related	Injuries:	1 Serious, 1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot stated that before departure, both fuel tanks were 3/4 full and that he maintained fuel balance by switching between the left and right tanks "several times" during the flight. As he approached his destination, he requested and received vectors for a practice instrument approach to a nearby airport but then requested termination of the approach and said he would proceed to his original destination. Shortly after the airplane climbed to 1,500 ft (900 ft above ground level), the engine lost power. The pilot switched the fuel selector "to the other tank" and attempted to restart the engine to no avail. He stated that he did not turn on the electric boost pump (as required in the emergency checklist) and that the airplane was too low to the ground for him to reference the emergency checklist. He lowered the landing gear but did not lower the flaps for landing. The airplane touched down on soft earth, and the nose gear collapsed, resulting in substantial damage to the nose. An unknown quantity of fuel was drained from the left tank, and the right tank was empty. The fuel that was sumped from the airplane's left tank appeared to be clear, bright, and free of contaminants. The fuel selector was positioned on the left tank. No mechanical malfunctions or failures were noted with the engine or fuel system that would have precluded normal operations. It is likely the engine lost power due to fuel starvation and the pilot failed to switch fuel tanks before exhausting the fuel in the right tank.

Probable Cause and Findings

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

The pilot's improper fuel management, which resulted in fuel starvation and a loss of engine power.

Findings

Personnel issues

Lack of action - Pilot

Aircraft

Fuel - Fluid management

Factual Information

History of Flight

Approach-VFR pattern final	Fuel related (Defining event)
Approach-VFR pattern final	Fuel starvation
Emergency descent	Off-field or emergency landing
Landing-landing roll	Landing gear collapse

****This report was modified on July 20, 2020. Please see the docket for this accident to view the original report.****

On January 27, 2019, at 1634 central standard time a Beech A36, N36PS, lost engine power during a practice instrument approach to Fort Worth Meacham International Airport (FTW), Fort Worth, Texas. The airline transport certificated pilot made an off-airport forced landing in a field 5 miles southeast of FTW. The pilot sustained minor injuries, and the passenger was seriously injured. The airplane sustained substantial damage to the forward portion of the fuselage. The airplane was registered to and operated by the pilot under Title 14 *Code of Federal Regulations* Part 91 as a personal flight. Visual meteorological conditions were reported at the airport about the time of the accident, and no flight plan had been filed for the flight that originated from Angel Fire, New Mexico (AXX), at 1300 and was en route to Arlington Municipal Airport (GKY), Arlington, Texas.

The pilot told the inspector that before departing AXX, both fuel tanks were 3/4 full. He also indicated this in his accident report. He said he maintained fuel balance by switching between the left and right tanks "several times" during the flight. As he approached the DFW (Dallas-Fort Worth) TCA (Terminal Control Area), he requested and received vectors for a practice ILS (instrument landing system) [runway] 34 approach to FTW. Following slower traffic, he requested termination of the approach and said he would continue on to GKY. Shortly after climbing to 1,500 feet, the engine lost power. The pilot switched the fuel selector "to the other tank" and attempted to restart the engine to no avail. He said he failed to turn on the electric boost pump (as required in the emergency checklist) and that, because of the airplane's low altitude, he did not have time to refer to the emergency checklist. He lowered the landing gear but elected not to lower the flaps for landing. The airplane touched down on soft earth, the nose gear collapsed, and the airplane nosed down.

A Federal Aviation Administration (FAA) inspector inspected the wreckage and sumped clear, bright fuel from the airplane's left fuel tank that appeared to be free of contaminants. The fuel gauges indicated slightly more than 1/4 full in the left fuel tank but the right tank was empty. Visual inspection of the tanks revealed a small, unknown fuel quantity in the left tank and the right fuel tank was empty. The fuel selector was positioned on the left tank. No mechanical anomalies were noted with the engine or fuel system that would have precluded normal operations.

Pilot Information

Certificate:	Airline transport; Commercial; Flight instructor	Age:	55, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	3-point
Instrument Rating(s):	Airplane; Helicopter; Powered-lift	Second Pilot Present:	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Gyroplane; Helicopter; Instrument airplane; Instrument helicopter; Powered-lift	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	August 27, 2018
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	September 5, 2018
Flight Time:	5290 hours (Total, all aircraft), 320 hours (Total, this make and model), 4005 hours (Pilot In Command, all aircraft), 50 hours (Last 90 days, all aircraft), 23 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	Registration:	N36PS
Model/Series:	A36	Aircraft Category:	Airplane
Year of Manufacture:	1977	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	E-1012
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	June 15, 2018 Annual	Certified Max Gross Wt.:	3651 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	3300 Hrs at time of accident	Engine Manufacturer:	Continental
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	
Registered Owner:	On file	Rated Power:	300 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:	FTW,710 ft msl	Distance from Accident Site:	5 Nautical Miles
Observation Time:	16:45 Local	Direction from Accident Site:	315°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	None / None
Wind Direction:		Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.02 inches Hg	Temperature/Dew Point:	18°C / -4°C
Precipitation and Obscuration:			
Departure Point:	Angel Fire, NM (AXX)	Type of Flight Plan Filed:	None
Destination:	Arlington, TX (GKY)	Type of Clearance:	VFR flight following
Departure Time:	13:00 Local	Type of Airspace:	Class D

Airport Information

Airport:	Fort Worth Meacham Internation FTW	Runway Surface Type:	Concrete
Airport Elevation:	710 ft msl	Runway Surface Condition:	Dry
Runway Used:	34	IFR Approach:	ILS;Practice
Runway Length/Width:	7502 ft / 150 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Serious	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious, 1 Minor	Latitude, Longitude:	32.755832,-97.297775

Administrative Information

Investigator In Charge (IIC):	Scott, Arnold
Additional Participating Persons:	Terry Collins; FAA Flight Standards District Office; Irving, TX
Original Publish Date:	August 10, 2020
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=98908

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).