



Aviation Investigation Final Report

Location:	St. Johns, Arizona	Accident Number:	WPR14LA042
Date & Time:	November 3, 2013, 13:15 Local	Registration:	N3148C
Aircraft:	Cessna 180	Aircraft Damage:	Substantial
Defining Event:	Fuel exhaustion	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airline transport pilot was conducting a cross-country flight. While on final approach to the destination airport, the airplane experienced a loss of engine power. The pilot subsequently made a forced off-airport landing, which resulted in substantial damage to the fuselage.

During the recovery of the wreckage, no fuel was found in the right wing fuel tank and less than 4 gallons of fuel was found in the left wing fuel tank. The fuel system was intact, and no sign of fuel leakage from either tank was observed. The engine was test run with no anomalies noted. Although the pilot had conducted the flight many times before without incident, given the evidence, it is likely that the pilot did not ensure that adequate fuel was onboard the airplane for this flight, which resulted in fuel exhaustion and 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 while on final approach due to fuel exhaustion, which resulted from the pilot's improper preflight fuel planning.

Findings

Aircraft	Fuel - Fluid level
Personnel issues	Fuel planning - Pilot

Factual Information

History of Flight

Approach-VFR pattern final	Fuel exhaustion (Defining event)
Approach-VFR pattern final	Loss of engine power (total)
Emergency descent	Collision with terr/obj (non-CFIT)

On November 3, 2013, about 1315 mountain standard time (MST), a Cessna 180, N3148C, while on approach to land experienced a loss of engine power near St. Johns, Arizona. The owner/pilot was operating the airplane under the provisions of 14 *Code of Federal Regulations* (CFR) Part 91. The airline transport pilot was not injured; the airplane sustained substantial damage to the fuselage. The cross-country personal flight departed Delhart, Texas, about 1100, with a planned destination of St. Johns, Arizona. Visual meteorological conditions prevailed, and no flight plan had been filed.

The pilot reported that during approach to land following a 3.4 hour cross country flight the engine lost power about 1 mile east of the runway. The wind was from the west at 20 knots, gusting to 30 knots. The pilot determined he would not make it to the runway and made an emergency landing in a dirt field. During approach to land the pilot did not use carburetor heat. The pilot further stated that he had refueled the airplane to capacity at the self-service fuel pit prior to departing.

The airplane wreckage was recovered for further examination. During the wreckage recovery the right wing fuel tank was void of fuel, the left wing fuel tank had less than four gallons of fuel. It was noted that the fuel system was intact, and no sign of any leaking fuel from either fuel tank.

The pilot stated to the FAA inspector that he had made the same flight many times before and he could not understand how he could have run out of fuel this time.

On November 20, 2013, the aircraft was examined at Air Transport, Phoenix, Arizona. During the examination the airplane was configured to allow for a test run of the engine. The engine was supplied fuel by means of an external fuel tank. The engine started immediately without issue. After the engine warmed up, it was noted that the oil pressure and fuel pressures were normal.

The engine was shut down and restarted without difficulty. The magneto check was completed with both left and right magnetos and observed roughly 150 rpm for both.

No abnormalities were found which would preclude normal operation of the engine.

Pilot Information

Certificate:	Airline transport; Flight instructor	Age:	65
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane single-engine	Toxicology Performed:	No
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	May 23, 2013
Occupational Pilot:	No	Last Flight Review or Equivalent:	July 21, 2013
Flight Time:	18000 hours (Total, all aircraft), 470 hours (Total, this make and model), 10000 hours (Pilot In Command, all aircraft), 20 hours (Last 90 days, all aircraft), 9.8 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N3148C
Model/Series:	180	Aircraft Category:	Airplane
Year of Manufacture:	1954	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	30947
Landing Gear Type:	Tailwheel	Seats:	
Date/Type of Last Inspection:	June 1, 2013 Annual	Certified Max Gross Wt.:	2550 lbs
Time Since Last Inspection:	27 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	2833.4 Hrs as of last inspection	Engine Manufacturer:	CONT MOTOR
ELT:	Installed, not activated	Engine Model/Series:	O-470 SERIES
Registered Owner:	On file	Rated Power:	230 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:	KSJN, 5733 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	19:54 Local	Direction from Accident Site:	338°
Lowest Cloud Condition:		Visibility	10 miles
Lowest Ceiling:	Broken / 6500 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	19 knots / 27 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	240°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.89 inches Hg	Temperature/Dew Point:	18°C / 1°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	DALHART, TX (DHT)	Type of Flight Plan Filed:	VFR
Destination:	St. Johns, AZ (KSJN)	Type of Clearance:	VFR flight following
Departure Time:	11:00 Local	Type of Airspace:	Class E

Airport Information

Airport:	St Johns Industrial Air Park KSJN	Runway Surface Type:	Asphalt
Airport Elevation:	5737 ft msl	Runway Surface Condition:	Dry
Runway Used:	21	IFR Approach:	None
Runway Length/Width:	3400 ft / 60 ft	VFR Approach/Landing:	Straight-in

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	34.5,-109.370002

Administrative Information

Investigator In Charge (IIC):	Jones, Patrick
Additional Participating Persons:	Scott G Boek; Federal Aviation Administration; Scottsdale, AZ
Original Publish Date:	November 29, 2016
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=88383

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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](#).