



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Marathon, Florida	Accident Number:	ERA17LA347
Date & Time:	September 16, 2017, 08:55 Local	Registration:	N3187V
Aircraft:	Beech 35	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (total)	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The private pilot fueled the airplane to capacity before departing on a local photography flight. About 1 hour after departing, the pilot was climbing the airplane to cruise altitude for the return to the departure airport. About 800 to 1,000 ft above mean sea level, the airplane experienced a sudden, total loss of engine power over open water and beyond gliding distance to shore. The pilot prepared to ditch and attempted five engine restarts without success. The propeller continued to windmill as the airplane landed upright, but subsequently sank in about 12 ft of saltwater. The airplane was recovered 12 days later and a fuel sheen was observed in the area.

The wreckage was examined following recovery and the engine crankshaft could not be rotated due to saltwater corrosion. Examination of the engine-driven fuel pump revealed that the drive shaft remained intact and could be actuated by hand with no anomalies noted. The engine and its ignition and induction systems could not be thoroughly examined or tested due to extensive saltwater corrosion; therefore, the reason for the loss of engine power could not be determined.

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 for reasons that could not be determined because saltwater corrosion precluded a complete examination.

Findings

Not determined	(general) - Unknown/Not determined
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Factual Information

History of Flight

Enroute-climb to cruise	Loss of engine power (total) (Defining event)
Emergency descent	Ditching

On September 16, 2017, about 0855 eastern daylight time, a Beech 35, N3187V, was substantially damaged while ditching in the Gulf of Mexico, following a total loss of engine power about 10 miles west of Marathon, Florida. The private pilot and passenger were not injured. The personal flight was operated by the private pilot and conducted under the provisions of Title 14 *Code of Federal Regulations* Part 91. Visual meteorological conditions prevailed and no flight plan was filed for the flight that originated from Fort Lauderdale Executive Airport (FXE), Fort Lauderdale, Florida, about 0745.

The pilot reported that he and a business partner planned to survey damage to his business partner's home on No Name Key, Florida. They flew to the home, circled it at a low altitude, took photographs, and began a climb back to cruise altitude for the return to FXE. About 800 to 1,000 ft above mean sea level, the airplane experienced a total loss of engine power. The pilot prepared to ditch as the airplane would not glide far enough to reach land. He also attempted two engine restarts with no success, and reported the emergency to air traffic control. The pilot attempted two more engine restarts using the wobble fuel pump and electric fuel pump. He then attempted another restart using the electric fuel pump with no success. The pilot added that the propeller continued to windmill during the restart attempts. The pilot landed on the water with the landing gear and flaps retracted. The airplane came to rest upright and both occupants were rescued by law enforcement personnel.

According to the president of a recovery company, the airplane was recovered 12 days later, on September 28, 2017. The airplane appeared to be intact and was resting on a sandy bottom. When the airplane was floated to the surface of the water, a fuel sheen was observed on the water surface. Following recovery, no fuel or water was noted in the left wing fuel tank and approximately 1 gallon of a fuel and water mixture was recovered from the right wing fuel tank. The president of the recovery company added that he was unable to rotate the propeller, possibly due to corrosion.

The pilot further stated that he used REC-90, a 90 octane, ethanol free gasoline in the airplane and stored the gasoline in his hangar. After every flight, he completely fueled the airplane from the gasoline storage to prevent condensation from accumulating in the fuel tanks. Prior to the accident flight, he last flew the airplane on September 11, 2017, for .6 hours and added 6 gallons of gasoline after he landed. He also inspected the fuel tanks during the preflight inspection for the accident flight, and both fuel tanks were full. He recalled being burned from fuel in the water and noted that a recovery diver made the same comment. The pilot subsequently provided a receipt indicating that he most recently purchased 30 gallons of REC-90 on September 5, 2017.

Initial examination of the wreckage by a Federal Aviation Administration inspector revealed that the fuselage was buckled during the ditching. The inspector further examined the wreckage at a recovery

facility and specifically examined the engine driven fuel pump as the pilot thought that the pump might have failed. The engine driven fuel pump drive shaft remained intact. The inspector was able to actuate the pump by hand and did not note any anomalies with the pump. Due to extensive corrosion damage, the inspector was unable to rotate the engine crankshaft.

The four-seat, low-wing, retractable tricycle-gear airplane, serial number D-623, was manufactured in 1947. It was powered by a Continental E185, 185-horsepower engine, equipped with a constant-speed, two-blade Hartzell propeller. The airplane's most recent annual inspection was completed on April 27, 2017. At that time, the airframe had accumulated 3,768.4 hours of operation and the engine had accumulated 72 hours since major overhaul. The airplane had flown about 35 hours, from the time of the most recent annual inspection, until the accident.

Pilot Information

Certificate:	Private	Age:	56,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	July 11, 2016
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	601 hours (Total, all aircraft), 421 hours (Total, this make and model), 509 hours (Pilot In Command, all aircraft), 35 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	Registration:	N3187V
Model/Series:	35 UNDESIGNAT	Aircraft Category:	Airplane
Year of Manufacture:	1947	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	D-623
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	April 27, 2017 Annual	Certified Max Gross Wt.:	2562 lbs
Time Since Last Inspection:	35 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3768 Hrs as of last inspection	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	E-185-8
Registered Owner:		Rated Power:	185
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:	MTH, 5 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	08:53 Local	Direction from Accident Site:	90°
Lowest Cloud Condition:	Few / 1600 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	9 knots /	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	40°	Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	29.96 inches Hg	Temperature/Dew Point:	30°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Fort Lauderdale, FL (FXE)	Type of Flight Plan Filed:	None
Destination:	Fort Lauderdale, FL (FXE)	Type of Clearance:	VFR flight following
Departure Time:	07:45 Local	Type of Airspace:	

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:	24.725555,-81.228889(est)

Administrative Information

Investigator In Charge (IIC):	Gretz, Robert
Additional Participating Persons:	Jose Santiago; FAA/FSDO; Miramar, FL
Original Publish Date:	March 18, 2019
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=96324

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](#).