



National Transportation Safety Board Aviation Accident Final Report

Location:	Put In Bay, OH	Accident Number:	NYC03LA040
Date & Time:	01/20/2003, 0945 EST	Registration:	N9945M
Aircraft:	Cessna 207A	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 Minor, 1 None
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Analysis

Shortly after takeoff, about 300 feet agl, the engine lost all power. The pilot activated the electric fuel pump, and moved the fuel selector several times. However, the engine did not regain power, and the pilot performed a forced landing into trees. After the accident, the pilot stated to a police officer that he might have departed with the fuel selector positioned to an empty tank. The pilot subsequently stated that both fuel gauges indicated "1/4" full, and he could not remember which tank was selected during the takeoff. Additionally, a passenger stated that he did not smell or observe fuel when he exited the airplane. The passenger added that in the past, the pilot had exhausted one fuel tank, then switched to the other tank and the engine re-started. Examination of the wreckage by an FAA inspector revealed that fuel selector was positioned to the right tank. The right fuel tank contained some fuel, and left fuel tank had ruptured. Following the accident, a successful engine test-run was performed.

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 fuel starvation and a total loss of engine power during the initial climb.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. FLUID,FUEL - STARVATION
2. (C) FUEL MANAGEMENT - INADEQUATE - PILOT IN COMMAND

Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: DESCENT - EMERGENCY

Findings

3. OBJECT - TREE(S)

Factual Information

On January 20, 2003, about 0945 eastern standard time, a Cessna 207A, N9945M, was substantially damaged during a forced landing, following a total loss of engine power while departing from Put In Bay Airport (3W2), Put In Bay, Ohio. The certificated commercial pilot and a passenger sustained minor injuries, while another passenger was not injured. Visual meteorological conditions prevailed for the planned flight to Carl R. Keller Field (PCW), Port Clinton, Ohio. No flight plan was filed for the air taxi flight conducted under 14 CFR Part 135.

The pilot stated that the engine start, taxi, run-up, and takeoff were uneventful. However, shortly after departing runway 03, about 300 feet agl, the engine lost all power. After the power loss, the pilot activated the electric fuel pump, and moved the fuel selector several times. He then heard the stall warning horn, and performed a forced landing into trees. The pilot believed that the power loss was related to fuel, but he was not sure of the exact cause. He added that there was no unusual engine noise or sputtering.

The pilot further stated that both fuel gauges indicated "1/4" full, and he probably departed with the fuel selector positioned to the right tank, but could not be certain. The pilot also noted that after the power loss, with the electric fuel pump operating, the fuel flow gauge did not indicate any flow. However, he added that in the past, there was a time lag between activation of the pump, and a noticeable increase in indicated fuel flow.

According to an Ohio State Police report, shortly after the accident, the pilot stated to a Put In Bay police officer that he may have selected the empty fuel tank. Additionally, one of the passengers stated that when he exited the airplane, he did not see or smell any fuel. The passenger added:

"I have been in the plane with [the pilot] before when he has run out of fuel in one tank and switched over to the other tank and refired the engine..."

Examination of the wreckage by a Federal Aviation Administration (FAA) inspector revealed substantial damage to both wings, the fuselage, and the empennage. The inspector observed that the fuel selector was positioned to the right fuel tank, and the right tank contained some fuel. The left fuel tank had ruptured during the impact. The inspector observed about one ounce of fuel in the flow divider, and it was absent of contamination. He did not observe any ice build-up on the air intake. Due to the disposition of the wreckage, the inspector was unable to rotate the propeller 360 degrees. He was able to move it somewhat, and did not hear any binding sounds. The inspector planned to further examine the engine after the wreckage was recovered.

On February 4, 2003, under the supervision of an FAA inspector, an engine test-run was attempted. Due to impact damage, a new propeller, fuel pump, and auxiliary starter were utilized for the test-run. An initial engine start was unsuccessful. Subsequently, the spark plugs were dried, a damaged left magneto p-lead was replaced, and the engine was primed. When the crankshaft was rotated, the engine started immediately and ran smoothly.

Pilot Information

Certificate:	Commercial	Age:	56, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	12/03/2002
Occupational Pilot:		Last Flight Review or Equivalent:	06/20/2002
Flight Time:	4500 hours (Total, all aircraft), 405 hours (Total, this make and model), 4000 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N9945M
Model/Series:	207A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	20700153
Landing Gear Type:	Tricycle	Seats:	7
Date/Type of Last Inspection:	01/15/2003, Annual	Certified Max Gross Wt.:	3800 lbs
Time Since Last Inspection:	10 Hours	Engines:	1 Reciprocating
Airframe Total Time:	6283 Hours at time of accident	Engine Manufacturer:	Continental
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	IO-520
Registered Owner:	Alaska Aircraft Leasing LLC	Rated Power:	300 hp
Operator:	Dairy Air	Operating Certificate(s) Held:	On-demand Air Taxi (135)
Operator Does Business As:		Operator Designator Code:	C8NA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	ONZ, 591 ft msl	Distance from Accident Site:	35 Nautical Miles
Observation Time:	0955 EST	Direction from Accident Site:	330°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	270°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.95 inches Hg	Temperature/Dew Point:	-9° C / -15° C
Precipitation and Obscuration:			
Departure Point:	Put In Bay, OH (3W2)	Type of Flight Plan Filed:	None
Destination:	Port Clinton, OH (PCW)	Type of Clearance:	None
Departure Time:	0945 EST	Type of Airspace:	Class G

Airport Information

Airport:	Put In Bay Airport (3W2)	Runway Surface Type:	Asphalt
Airport Elevation:	595 ft	Runway Surface Condition:	Dry
Runway Used:	030	IFR Approach:	None
Runway Length/Width:	2870 ft / 75 ft	VFR Approach/Landing:	Forced Landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor, 1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor, 1 None	Latitude, Longitude:	41.636667, -82.828333

Administrative Information

Investigator In Charge (IIC):	Robert J Gretz	Adopted Date:	07/23/2003
Additional Participating Persons:	Robert Kerner; FAA FSDO-25; Cleveland, OH		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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