



National Transportation Safety Board Aviation Accident Final Report

Location:	RIDGEFIELD, CT	Accident Number:	NYC01LA030
Date & Time:	11/02/2000, 1845 EST	Registration:	N4654G
Aircraft:	Cessna 172N	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Minor
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot reported that shortly before takeoff, she switched the airplane's fuel selector from the "right" position to the "both" position. During the initial climb after takeoff, the airplane's engine experienced momentary roughness followed by a loss of power. The pilot began performing the loss of engine power emergency checklist and verified that both the mixture and throttle controls were in the full forward position; however, she then needed to use both hands to maintain the airplane's glide attitude and was not able to verify the fuel selector position. The airplane struck trees, fell to ground and a post crash fire ensued. The majority of the airplane was consumed in the fire. A complete teardown of the engine did not reveal any pre-impact mechanical failures. Examination of the fuel selector revealed its position was approximately 35-degrees counterclockwise from the "both" tanks position, towards the "left" tank position; which would have resulted in a restricted fuel flow.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to verify the airplane's fuel tank selector position, which resulted in a loss of engine power.

Findings

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

Findings

1. (C) FLUID,FUEL - STARVATION
2. (C) FUEL TANK SELECTOR POSITION - NOT VERIFIED - PILOT IN COMMAND

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

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

Findings

3. OBJECT - TREE(S)

Factual Information

On November 2, 2000, about 1845 eastern standard time, a Cessna 172N, N4654G, was destroyed during a forced landing and post crash fire in Ridgefield, Connecticut, after takeoff from the Danbury Municipal Airport (DXR), Danbury, Connecticut. The certificated private pilot sustained minor injuries. Night visual meteorological conditions prevailed and no flight plan had been filed for the local flight. The personal flight was conducted under 14 CFR Part 91.

In a telephone interview, the pilot stated that she performed a pre-flight inspection of the airplane, and noted that the airplane's fuel tanks were completely filled. Additionally, she stated that she drained fuel from the airplane's three drain sources and the fuel was absent of contamination. She started the engine with the fuel selector positioned to the left wing fuel tank, and switched to the right wing fuel tank just prior to taxi. She performed an engine run-up, which included a check of the carburetor heat system and then taxied to runway 26 for takeoff with the intention of practicing "touch and go" landings. After the engine run-up she switch the fuel selector to the "both" position. The time between the engine run-up and takeoff was "less than 5 minutes."

The pilot described the takeoff as "perfectly normal." When the airplane was about 450 feet above the ground she glanced at the engine instruments, which were all in the normal range; however, immediately thereafter the airplane's engine experienced momentary roughness followed by a loss of power. The pilot began performing the loss of engine power emergency checklist and verified that both the mixture and throttle controls were in the full forward position; however, she then needed to use both hands to maintain the airplane's glide attitude and was not able to verify the fuel selector position. The pilot made a left turn and the airplane descend into treetops and initially came to rest about 12 to 15 feet above the ground. The airplane then fell to ground and a post crash fire ensued. The pilot exited the airplane through the front windshield, which was broken during the accident sequence, and the majority of the airplane was consumed in the fire.

The pilot reported 560 hours of total flight experience, with 250 hours in make and model. Additionally, she stated that she flew the airplane eight days prior to the accident and did not experience any problems.

The airplane's engine also sustained fire damaged. Both magnetos and the ignition harness were destroyed. Additionally, the carburetor was destroyed by impact and fire damage. The engine was retained and forwarded to Textron Lycoming, Williamsport, Pennsylvania, where it was examined under the supervision of a Federal Aviation Administration inspector. A complete teardown of the engine did not reveal any pre-impact mechanical failures.

The airplane's fuel selector, which was partially melted, was retained and forwarded to the Safety Board's Materials Laboratory, Washington, DC, for further examination. Examination of the fuel selector revealed its "as received" position was approximately 35-degrees counterclockwise from the "both" tanks position, towards the "left" tank position.

A representative from Cessna Aircraft Company stated that the position of the fuel selector as observed after the accident would have resulted in a fuel restriction; however, he noted the effect on engine performance if the valve remained in that position over an extended period of time had never been tested.

Review of the Airplane Information Manual, Section 4 - Normal Procedures, Before Takeoff Checklist instructed that the fuel selector valve be placed in the "both" position.

Pilot Information

Certificate:	Private	Age:	54, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	10/08/1999
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	560 hours (Total, all aircraft), 250 hours (Total, this make and model), 480 hours (Pilot In Command, all aircraft), 100 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N4654G
Model/Series:	172N 172N	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	17273280
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	06/02/2000, Annual	Certified Max Gross Wt.:	2550 lbs
Time Since Last Inspection:	125 Hours	Engines:	1 Reciprocating
Airframe Total Time:	3000 Hours	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	O-360-A4M
Registered Owner:	SUSAN L. BOGDAN	Rated Power:	180 hp
Operator:	SUSAN L. BOGDAN	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Night/Dark
Observation Facility, Elevation:	DXR, 458 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	1853 EST	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	10 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	360°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	52° C / 34° C
Precipitation and Obscuration:			
Departure Point:	(DXR)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1845 EST	Type of Airspace:	Class D

Airport Information

Airport:	DANBURY MUNICIPAL (DXR)	Runway Surface Type:	Asphalt
Airport Elevation:	458 ft	Runway Surface Condition:	Dry
Runway Used:	26	IFR Approach:	None
Runway Length/Width:	4422 ft / 150 ft	VFR Approach/Landing:	Forced Landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	LUKE SCHIADA	Report Date:	09/27/2001
Additional Participating Persons:	WILLIAM K DEKINE; WINDSOR LOCKS, CT		
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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