



National Transportation Safety Board Aviation Accident Final Report

Location:	SYLVAN SPRINGS, AL	Accident Number:	MIA99LA144
Date & Time:	05/01/1999, 0920 CDT	Registration:	N5105G
Aircraft:	Cessna 172H	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None

Flight Conducted Under: Part 91: General Aviation - Instructional

Analysis

The pilot stated that he preflighted the airplane before departure with no discrepancies noted. He departed with full fuel tanks and flew to a nearby area where he orbited several times. He flew to another area then returned to the area where he orbited the first time. He later stated that he applied carburetor heat, reduced the throttle, then after seeing the area again, applied the throttle and removed carburetor heat. The engine did not respond. He only verified that the mixture control was full rich, that the magneto switch was in the 'both' position, and pumped the throttle which increased engine rpm slightly. He maneuvered the airplane for a forced landing and just before touchdown, he placed the mixture control in the idle-cutoff position and the magneto switch to the off position. After touchdown, the airplane rolled through a fence then nosed over. The airplane was recovered and using some of the fuel that was in the airplane at the time of the accident, the engine was started and found to operate normally. Review of the icing probability chart revealed that the conditions were favorable for moderate icing at cruise power or serious icing at descent power.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:
The total loss of engine power for undetermined reasons.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: MANEUVERING

Findings

1. (C) REASON FOR OCCURRENCE UNDETERMINED

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

Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings

2. OBJECT - FENCE

Factual Information

On May 1, 1999, about 0920 central daylight time, a Cessna 172H, N5105G, registered to a private individual, nosed over after a forced landing in a field near Sylvan Springs, Alabama. Visual meteorological conditions prevailed at the time and no flight plan was filed for the 14 CFR Part 91 instructional flight. The airplane was substantially damaged and the student pilot, the sole occupant, was not injured. The flight originated at 0905, from the Bessemer Airport, Bessemer, Alabama.

The pilot stated that before takeoff, he preflighted the airplane with no discrepancies noted. The flight departed with full fuel tanks and after takeoff, he flew to the area of his mother-in-law's house, circled the area, flew to another area, and returned to the area of his in-law's house. He applied carburetor heat, reduced the throttle, for one last look, then pushed the throttle and carburetor heat controls; there was no response from the engine. He pulled the throttle control then pushed it again but there was no response from the engine. He later stated that he thought the engine was at idle rpm. He then verified that the magneto switch was in the "both" position, but did not move it, and verified that the mixture control was in the "full rich" position, which had not been changed since takeoff. He then pumped the throttle control and the primer control, and the engine responded momentarily with each application, but not enough to maintain altitude. He began flying toward a field he noted and just before touchdown, he pulled the mixture control to the idle cut-off position, and placed the magneto switch to the "off" position. After touchdown, the airplane traveled through a barb wire fence then nosed over. He noted after exiting the airplane that fuel was leaking from the fuel tank vent line.

The airplane was examined at the accident site by an FAA inspector who noted fuel leakage from both fuel tanks which contained automotive fuel. The airplane was recovered and a serviceable propeller was installed for the attempted engine run. Additionally, following the accident, the fuel tanks were drained but the drained fuel was added for the engine run. The engine was started, operated at idle for 5 minutes, then operated to 1,700 rpm where magneto check was performed. The left and right magneto drop was 60 and 50 rpm, respectively. Also, carburetor heat was applied and the engine rpm decreased 125 rpm. The throttle was increased full forward for about 15 seconds and the engine rpm increased to 2,300 rpm. The engine was then secured.

Review of the carburetor icing probability chart revealed the conditions were favorable for moderate icing at cruise power or serious icing at descent power.

Pilot Information

Certificate:	Student	Age:	47, Male
Airplane Rating(s):	None	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--no waivers/lim.	Last FAA Medical Exam:	01/08/1998
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	25 hours (Total, all aircraft), 24 hours (Total, this make and model), 6 hours (Pilot In Command, all aircraft), 9 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N5105G
Model/Series:	172H 172H	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal; Utility	Serial Number:	17256222
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	01/02/1999, Annual	Certified Max Gross Wt.:	2300 lbs
Time Since Last Inspection:	16 Hours	Engines:	1 Reciprocating
Airframe Total Time:	4672 Hours	Engine Manufacturer:	Continental
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	O-300-D
Registered Owner:	ROBERT C. YOUNG	Rated Power:	145 hp
Operator:	ROBERT C. YOUNG	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	BHM, 644 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0853 EDT	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:	Variable	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	17° C / 6° C
Precipitation and Obscuration:			
Departure Point:	BESSEMER, AL (EKY)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	0905 CDT	Type of Airspace:	Class G

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	TIMOTHY W MONVILLE	Report Date:	09/07/2000
Additional Participating Persons:	CLOVIS L JACKSON; BIRMINGHAM, AL		
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 pubinquiry@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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