



National Transportation Safety Board

Aviation Accident Data Summary

Location:	Tyler, MN	Accident Number:	CEN15LA382
Date & Time:	08/25/2015, 0847 CDT	Registration:	N2805Z
Aircraft:	PIPER PA 22-160	Injuries:	2 Serious, 1 Minor
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The student pilot reported that the airplane was topped off with fuel before the flight and that he completed a functional check of the carburetor heat during his pretakeoff engine run-up. Shortly after liftoff, he observed a significant decrease in engine speed, and the airplane began to descend. He reduced the pitch to increase airspeed, but the airplane descended into a cornfield about 50 ft past the end of the runway.

Postaccident engine examination did not reveal any evidence of preimpact anomalies that would have precluded normal operation. Fuel samples from each wing tank, the fuel lines, the fuel strainer, and the carburetor bowl were consistent with 100 low-lead aviation fuel and did not contain any water or debris. The weather conditions were conducive to the formation of serious carburetor icing at all power settings. Additionally, the pilot reported that the grass runway was wet with dew, which likely increased the air humidity over the runway and the possibility of carburetor ice formation during taxi and takeoff. Although the pilot reported that he conducted a functional check of the carburetor heat before departure, it is likely he did not adequately ensure that the carburetor was clear of ice before beginning the takeoff. Based on the available information, the partial loss of engine power during takeoff was likely due to carburetor ice accumulation.

The pilot did not have a valid pilot certificate, and his most recent student certificate had been expired for 5.5 years. Additionally, federal regulations prohibit student pilots from acting as pilot-in-command of an aircraft carrying passengers.

Flight Events

- Taxi-to runway - Other weather encounter
- Takeoff - Loss of engine power (partial)
- Takeoff - Attempted remediation/recovery
- Landing - Off-field or emergency landing
- Landing - Collision with terr/obj (non-CFIT)

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The student pilot's failure to adequately ensure the carburetor was clear of ice before takeoff, which resulted in a partial loss of engine power during takeoff due to carburetor icing.

Findings

Aircraft-Aircraft systems-Ice/rain protection system-Intake anti-ice, deice-Incorrect use/operation - C
Personnel issues-Action/decision-Info processing/decision-Identification/recognition-Student/instructed pilot - C
Personnel issues-Experience/knowledge-Experience/qualifications-Qualification/certification-Pilot
Environmental issues-Conditions/weather/phenomena-Temp/humidity/pressure-Conducive to carburetor icing-Effect on equipment - C

Pilot Information

Certificate:	Student	Age:	39
Airplane Rating(s):	None	Instrument Rating(s):	None
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	(Estimated) 81.7 hours (Total, all aircraft), 81.7 hours (Total, this make and model), 58.7 hours (Pilot In Command, all aircraft), 0 hours (Last 90 days, all aircraft), 0 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N2805Z
Model/Series:	PA 22-160	Engines:	1 Reciprocating
Operator:	On file	Engine Manufacturer:	Lycoming
Operating Certificate(s) Held:	None	Engine Model/Series:	O-320-B2A
Flight Conducted Under:	Part 91: General Aviation - Personal		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	MML, 1183 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	None	Wind Speed/Gusts, Direction:	8 knots / , 320°
Temperature:	13°C	Visibility	10 Miles
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Tyler, MN (63Y)	Destination:	Tyler, MN (63Y)

Airport Information

Airport:	Tyler Municipal Airport (63Y)	Runway Surface Type:	Grass/turf
Runway Used:	32	Runway Surface Condition:	Wet
Runway Length/Width:	2600 ft / 160 ft		

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	2 Serious	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:	44.291667, -96.150278 (est)		

Administrative Information

Investigator In Charge (IIC):	Andrew T Fox	Adopted Date:	03/18/2019
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=91862		

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.