



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Matthews, North Carolina	Accident Number:	ERA18LA202
Date & Time:	July 26, 2018, 19:00 Local	Registration:	N1193Y
Aircraft:	Cessna 150	Aircraft Damage:	Substantial
Defining Event:	Miscellaneous/other	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The student pilot was conducting a local, solo flight. He reported that all ground operations were normal and that no water was found in the fuel during the preflight inspection. He took off with full tanks of fuel. About 40 minutes into the flight and about 1,800 ft mean sea level, he noticed that the airplane was "sluggish" and would not "maintain lift," but all engine indications were normal, and he noted no sputtering or hesitation. The pilot applied carburetor heat, and the engine speed dropped by about 300 rpm. Because the airplane continued to fly sluggishly, the pilot turned off the carburetor heat and then decided to conduct a forced landing in a grass field, during which the airplane nosed over and came to rest inverted.

Examination of the airframe and engine did not reveal evidence of any preimpact mechanical malfunctions or failures that would have precluded normal operation. The pilot reported that there were no mechanical issues with the airplane during the flight and that the engine could produce 2,750 rpm (the maximum-rated rpm) at full power. He added that the high ambient temperature of 100°F and the full fuel load may have contributed to the airplane's sluggishness.

A review of the student's logbook revealed that he had received only 3.1 hours of dual instruction and 15 hours of solo flight experience and that he did not have an instructor's endorsement to fly solo. The student's lack of training and experience likely contributed to his perception that there was a performance problem with the airplane.

Probable Cause and Findings

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

The student pilot's improper decision to conduct a solo flight without an endorsement to do so and to perform an off-airport landing based on a perceived performance issue with the airplane. Contributing to the accident was the pilot's lack of training and overall experience.

Findings

Personnel issues	Decision making/judgment - Pilot
Personnel issues	Initial instruct/training - Pilot
Personnel issues	Total experience - Pilot

Factual Information

History of Flight

Maneuvering	Miscellaneous/other (Defining event)
Emergency descent	Off-field or emergency landing
Landing-landing roll	Nose over/nose down

On July 26, 2018, about 1900 eastern daylight time, a Cessna 150B, N1193Y, was substantially damaged during a precautionary landing in Matthews, North Carolina. The student pilot was not injured. The airplane was operated by the pilot under the provisions of Title 14 *Code of Federal Regulations* part 91 as a solo-instructional flight. Visual meteorological conditions prevailed, and no flight plan was filed for the local flight that originated at Wilgrove Air Park (8A6), Charlotte, North Carolina at 1810.

The pilot reported that the preflight procedures, taxi, takeoff, and departure were uneventful. The fuel tanks were full and no water was noted. About 40 minutes into the flight, about 1,800 feet above mean sea level, he noticed that the airplane was "sluggish" and would not "maintain lift." The engine indications were normal with no sputtering or hesitation noted. He applied carburetor heat and the engine speed dropped about 300 rpm. The airplane was still sluggish, so he turned off the carburetor heat. Since the airplane continued to fly sluggishly, the pilot decided to land the airplane in a grass field adjacent to a church. During the landing rollout, the airplane nosed over and came to rest, inverted.

The pilot reported in a postaccident interview and a written statement that there were no mechanical issues with the airplane in flight, and the engine would produce 2,750 rpm at full power. He also reported that the high ambient temperature (100°F) and the full fuel tanks may have contributed to the airplane's sluggishness.

An inspector with the Federal Aviation Administration (FAA) responded to the accident site and examined the wreckage. He reported that the wings and fuselage sustained structural damage. His examination of the airframe and engine did not reveal evidence of a mechanical malfunction or failure that would have precluded normal operation.

The pilot held a student pilot certificate and reported 3.1 hours of dual instruction and 15 hours of solo flight time. He did not have an instructor's endorsement to operate the airplane in solo flight. The FAA inspector reviewed his pilot logbook and reported that there were "severe training deficiencies."

Student pilot Information

Certificate:	Student	Age:	36, Male
Airplane Rating(s):	None	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 With waivers/limitations	Last FAA Medical Exam:	June 22, 2018
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	18 hours (Total, all aircraft), 18 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N1193Y
Model/Series:	150 B	Aircraft Category:	Airplane
Year of Manufacture:	1962	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	15059593
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	June 7, 2018 Annual	Certified Max Gross Wt.:	1499 lbs
Time Since Last Inspection:	15 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	6697 Hrs as of last inspection	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	O-200 SERIES
Registered Owner:		Rated Power:	100 Horsepower
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:	JQF,704 ft msl	Distance from Accident Site:	13 Nautical Miles
Observation Time:	18:50 Local	Direction from Accident Site:	360°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	None / None
Wind Direction:		Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.96 inches Hg	Temperature/Dew Point:	32°C / 17°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Charlotte, NC (8A6)	Type of Flight Plan Filed:	None
Destination:	Charlotte, NC (8A6)	Type of Clearance:	None
Departure Time:	18:10 Local	Type of Airspace:	Class B

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	35.160278,-80.720558(est)

Administrative Information

Investigator In Charge (IIC):	Hicks, Ralph
Additional Participating Persons:	Richard Brady; FAA/FSDO; Charlotte, NC
Original Publish Date:	November 6, 2019
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=97906

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](#).