



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Social Circle, Georgia	Accident Number:	ERA24LA057
Date & Time:	December 5, 2023, 15:00 Local	Registration:	N53AA
Aircraft:	TEXTRON AVIATION INC 172S	Aircraft Damage:	Substantial
Defining Event:	Collision with terr/obj (non-CFIT)	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

According to the flight instructor, he was simulating an engine failure with the student pilot. He selected a field to approach and proceeded to reduce the engine rpm to simulate the engine failure. They continued the maneuver until they were approximately 100 feet above the ground, at which point he instructed the student pilot to add full power and climb out. The student pilot complied, but right at that moment, the flight instructor felt a heavy gust of wind. He described it as a downdraft, and despite the engine producing full power, it would not climb. The flight instructor took control of the airplane and attempted to recover it from the descent. The airplane continued to descend until it collided with a fence and touched down in the field. During the landing roll, the airplane impacted a tree, resulting in substantial damage to the horizontal stabilizer. The pilots reported that there were no pre-accident mechanical malfunctions or failures with the airplane that would have precluded normal operation. An engine test run was facilitated, and no anomalies were noted during the test.

Probable Cause and Findings

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

An encounter with a downdraft while maneuvering at low altitude, which resulted in a collision with a fence.

Findings

Environmental issues	Downdraft - Effect on operation
Environmental issues	Fence/fence post - Ability to respond/compensate

Factual Information

History of Flight

Maneuvering-low-alt flying	Collision with terr/obj (non-CFIT) (Defining event)
Maneuvering-low-alt flying	Other weather encounter

Flight instructor Information

Certificate:	Airline transport; Commercial; Flight instructor	Age:	45, Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	August 22, 2023
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	9100 hours (Total, all aircraft), 239 hours (Total, this make and model), 5155 hours (Pilot In Command, all aircraft), 65 hours (Last 90 days, all aircraft), 30 hours (Last 30 days, all aircraft)		

Student pilot Information

Certificate:	Student	Age:	35, Female
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	121 hours (Total, all aircraft), 121 hours (Total, this make and model), 2 hours (Pilot In Command, all aircraft), 28 hours (Last 90 days, all aircraft), 12 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	TEXTRON AVIATION INC	Registration:	N53AA
Model/Series:	172S	Aircraft Category:	Airplane
Year of Manufacture:	2016	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	172S11737
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	November 18, 2023 100 hour	Certified Max Gross Wt.:	2550 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	5249 Hrs as of last inspection	Engine Manufacturer:	Lycoming
ELT:	C126 installed, activated, did not aid in locating accident	Engine Model/Series:	IO-360-L2A
Registered Owner:	On file	Rated Power:	180 Horsepower
Operator:	On file	Operating Certificate(s) Held:	Pilot school (141)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	AHN	Distance from Accident Site:	23 Nautical Miles
Observation Time:	14:27 Local	Direction from Accident Site:	233°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	9 knots / 16 knots	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	280°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.09 inches Hg	Temperature/Dew Point:	10°C / 3°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Athens, GA (AHN)	Type of Flight Plan Filed:	None
Destination:	Covington, GA (CVC)	Type of Clearance:	None
Departure Time:	14:34 Local	Type of Airspace:	Class G

Airport Information

Airport:	Sleepy Hollow 18GA	Runway Surface Type:	Asphalt
Airport Elevation:	750 ft msl	Runway Surface Condition:	Dry;Vegetation
Runway Used:	34	IFR Approach:	None
Runway Length/Width:	2600 ft / 22 ft	VFR Approach/Landing:	Simulated forced landing

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	33.693174,-83.657672(est)

Administrative Information

Investigator In Charge (IIC):	Alleyne, Eric
Additional Participating Persons:	Clint Ellerbee; FAA/FSDO; Atlanta, GA
Original Publish Date:	March 21, 2024
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=193481

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).