



Aviation Investigation Final Report

Location:	Easton, Maryland	Accident Number:	ERA21LA267
Date & Time:	June 24, 2021, 11:15 Local	Registration:	N2143G
Aircraft:	Piper PA-28-161	Aircraft Damage:	Destroyed
Defining Event:	Loss of engine power (total)	Injuries:	1 Serious
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The student pilot was conducting his first solo flight. After his second takeoff, while turning onto the downwind leg of the airport traffic pattern, he heard the engine lose power. At an altitude of 700 ft above ground level, he did not think he could make it back to the airport, so he maneuvered the airplane for a forced landing to a field. During the approach, the airplane stalled and impacted a construction area before reaching the field. A postcrash fire ensued.

Flight control cable continuity for the aileron, stabilator, and rudder cables were continuous from the cockpit to the respective control surfaces, except for separations consistent with recovery cuts near the wing roots and the tailcone. The engine cylinders were examined with a borescope and minor scoring was noted. No anomalies were noted with the airframe or engine that would have precluded normal operation; however, due to the extent of the postcrash fire damage, the ignition and fuel systems could not be examined or tested, and the reason for the loss of engine power could not be determined.

Probable Cause and Findings

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

A total loss of engine power for reasons that could not be determined.

Findings

Not determined

(general) - Unknown/Not determined

Factual Information

History of Flight

Approach	Loss of engine power (total) (Defining event)
Emergency descent	Off-field or emergency landing
Emergency descent	Aerodynamic stall/spin
Uncontrolled descent	Collision with terr/obj (non-CFIT)
Approach	Unknown or undetermined

On June 24, 2021, about 1115 eastern daylight time, a Piper PA-28-161, N2143G, was destroyed when it was involved in an accident near Easton, Maryland. The pilot was seriously injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 instructional flight.

According to the student pilot, he conducted a preflight inspection before he and his instructor completed the engine run-up and takeoff with no anomalies noted. They stayed in the airport traffic pattern, conducting three takeoffs and landings before stopping to let the instructor out, so that the student pilot could perform three solo take-offs and landings.

After the second take-off, the student pilot was turning onto the downwind leg of the airport traffic pattern when he heard a reduction in engine power and could see the propeller slowing down. He was at an altitude of about 700 ft above ground level and had to pitch the airplane forward so it would not stall. The pilot did not think he could make it back to the airport, so he selected a field and maneuvered for a forced landing, during which the airplane impacted a pile of metal on the ground.

Witnesses reported that the airplane appeared to pitch nose-up before reaching the field, then stalled and impacted a construction area. Ground personnel rescued the student pilot before a postcrash fire ensued.

The wreckage was taken to an aircraft recovery facility for further examination. The fuselage above the lower fuselage skin and structure below the floorboards was consumed by fire. The instrument panel, most of the instruments, avionics, gauges, and switches were fire damaged and unreadable. The firewall was separated from the fuselage and the rudder pedal assembly remained attached to the firewall. Flight control cable continuity for the aileron, stabilator, and rudder cables were continuous from the cockpit to the respective control surfaces, except for separations consistent with cuts made during the recovery process near the wing roots and the tailcone.

The propeller remained attached to the crankshaft flange. Both magnetos remained installed on the back of the accessory housing; however, both units were consumed by fire. The

cylinders were examined using a borescope and minor scoring was noted. No anomalies were noted with the engine or airframe that would have precluded normal operation. Due to fire damage, the ignition and fuel systems could not be tested.

Pilot Information

Certificate:	Student	Age:	16, Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	None None	Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	10 hours (Total, all aircraft), 10 hours (Total, this make and model), 10 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N2143G
Model/Series:	PA-28-161	Aircraft Category:	Airplane
Year of Manufacture:	1978	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	28-7916176
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	May 21, 2021 100 hour	Certified Max Gross Wt.:	2325 lbs
Time Since Last Inspection:	8581 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	8649 Hrs as of last inspection	Engine Manufacturer:	LYCOMING
ELT:	Installed	Engine Model/Series:	O-320-D3G
Registered Owner:	Trident Aircraft Inc	Rated Power:	160 Horsepower
Operator:	Trident Aircraft Inc	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:	ESN, 72 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	11:13 Local	Direction from Accident Site:	195°
Lowest Cloud Condition:	Scattered / 6000 ft AGL	Visibility	10 miles
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	9 knots / 14 knots	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	100°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.4 inches Hg	Temperature/Dew Point:	24°C / 10°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Easton, MD	Type of Flight Plan Filed:	None
Destination:	Easton, MD	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class G

Airport Information

Airport:	EASTON/NEWNAM FLD ESN	Runway Surface Type:	Asphalt
Airport Elevation:	72 ft msl	Runway Surface Condition:	Dry
Runway Used:	4	IFR Approach:	None
Runway Length/Width:	5500 ft / 100 ft	VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	38.813886,-76.065659

Administrative Information

Investigator In Charge (IIC):	Boggs, Daniel
Additional Participating Persons:	Jonathon Hirsch; Piper Aircraft Inc; Vero Beach, FL Ryan Enders; Lycoming Engines; Williamsport, PA Steven O'Rourke; FAA FSDO; Baltimore, MD
Original Publish Date:	July 6, 2023
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=103329

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](#).