



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Cochranton, Pennsylvania	Accident Number:	ERA18LA243
Date & Time:	September 1, 2018, 13:30 Local	Registration:	N3415M
Aircraft:	Piper PA12	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (total)	Injuries:	3 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that he had been flying for about 30 minutes when the engine lost total power. He flew the airplane toward a clearing for a forced landing, during which the airplane impacted a tree, resulting in substantial damage. Examination of the airplane and engine revealed no anomalies that would have precluded normal operation.

Although weather conditions at the accident site were conducive to the formation of carburetor ice at cruise power settings, the pilot provided conflicting statements regarding his use of carburetor heat, and whether carburetor icing played a role in the loss of engine power could not be determined based on the available information.

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 based on the available information.

Findings

Not determined	(general) - Unknown/Not determined
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Factual Information

History of Flight

Enroute-cruise	Loss of engine power (total) (Defining event)
Emergency descent	Off-field or emergency landing
Landing	Collision with terr/obj (non-CFIT)

On September 1, 2018, about 1330 eastern daylight time, a Piper PA-12, N3415M, was substantially damaged when it was involved in an accident near Cochran, Pennsylvania. The private pilot and two passengers were not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The pilot reported that he was flying for about 30 minutes when the engine lost total power. He attempted to return to the airport, but was unable to maintain altitude. He looked for a clearing to land in, and as he approached an open field, the airplane collided with a tree. The airplane then impacted terrain and came to rest inverted.

Examination of the airplane revealed buckling throughout the airframe. Crankshaft continuity was confirmed from the propeller hub to the accessory section of the engine. Thumb compression was obtained on all cylinders, and the magnetos generated spark. In a statement to the Federal Aviation Administration, the pilot stated that he did not use carburetor heat at the time of the event. In the pilot's report to the NTSB, the pilot reported that he did use carburetor heat at the time of the event.

Weather conditions at the departure airport, located about 10 miles south of the accident site, included wind from 180° at 3 knots, 10 statute miles visibility, scattered clouds at 3,800 ft above ground level, temperature 27°C, and dew point 21°C.

When plotted on a carburetor icing probability chart, the temperature and dew point indicated the potential for carburetor icing at cruise power and serious icing at the glide power settings.

Pilot Information

Certificate:	Airline transport; Commercial	Age:	35, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	March 14, 2018
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	(Estimated) 4650 hours (Total, all aircraft), 100 hours (Total, this make and model), 2000 hours (Pilot In Command, all aircraft), 120 hours (Last 90 days, all aircraft), 60 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Passenger Information

Certificate:		Age:	Male
Airplane Rating(s):		Seat Occupied:	Rear
Other Aircraft Rating(s):		Restraint Used:	Lap only
Instrument Rating(s):		Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

Passenger Information

Certificate:		Age:	Male
Airplane Rating(s):		Seat Occupied:	Rear
Other Aircraft Rating(s):		Restraint Used:	Lap only
Instrument Rating(s):		Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N3415M
Model/Series:	PA12	Aircraft Category:	Airplane
Year of Manufacture:	1947	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	12-2265
Landing Gear Type:	Tailwheel	Seats:	4
Date/Type of Last Inspection:	June 14, 2018 Annual	Certified Max Gross Wt.:	1750 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1045 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	C91 installed, not activated	Engine Model/Series:	41505 /O-235
Registered Owner:		Rated Power:	115 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:	GKJ,1399 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	13:53 Local	Direction from Accident Site:	150°
Lowest Cloud Condition:	Scattered / 3800 ft AGL	Visibility	10 miles
Lowest Ceiling:	Broken / 11000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.2 inches Hg	Temperature/Dew Point:	27°C / 21°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Meadville, PA (GKU)	Type of Flight Plan Filed:	None
Destination:	Meadville, PA (GKU)	Type of Clearance:	None
Departure Time:	13:00 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	41.525207,-80.14847(est)

Administrative Information

Investigator In Charge (IIC):	Alleyne, Eric		
Additional Participating Persons:	Vince Nolan; FAA/FSDO; Pittsburgh, PA		
Original Publish Date:	December 14, 2021	Investigation Class:	3
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=98239		

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](#).