



National Transportation Safety Board Aviation Accident Data Summary

Location:	Dawsonville, GA	Accident Number:	ERA14FA058
Date & Time:	12/02/2013, 1919 EST	Registration:	N87NF
Aircraft:	PIPER PA-46-310P	Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot filed an instrument flight rules flight plan for the flight and was communicating with an air route traffic control center controller en route. The controller verified that the pilot had the local weather information for the intended destination and then he queried the pilot about the airplane's heading (which was north of the direct heading), and the pilot reported that he was having trouble with the autopilot. He then asked the pilot if he was able to hold the assigned altitude of 8,000 ft mean sea level (msl), and the pilot responded that he could; however, the airplane descended below 8,000 ft msl, and the controller then issued an altitude of 7,000 ft msl and a heading of 200 degrees. There was no response from the pilot, and radar contact was lost. Shortly after, the airplane wreckage was found.

According to air traffic control radar data, the airplane turned left and then right before entering a descending left turn. A trajectory and performance study determined that, during the flight's final 18 seconds, the airplane descended from about 8,000 to 2,200 ft msl, accelerated to about 300 knots indicated airspeed, and then broke up. According to the Pilot's Operating Handbook, the airplane's maximum operating limit speed was 172 knots.

Examinations of the airframe, engines, and autopilot revealed no preimpact mechanical malfunctions that would have precluded normal operations, and there was no evidence of medical impairment that would have affected the pilot's performance. The pilot held an instrument rating; however, investigators were unable to determine the extent of the pilot's recent night or instrument flight experience.

Although postaccident testing did not reveal any anomalies with the autopilot system, the pilot should have been able to disable the autopilot if it was experiencing a problem and then continue to fly the airplane. However, given the available data and his conversation with the controller, it is likely that the pilot became focused on the autopilot system and diagnosing the reported problem. Dark (moonless) night conditions prevailed for the flight, and, about the time of the accident, instrument meteorological conditions with restricted visibility due to rain prevailed. Given the pilot's distraction, the weather conditions encountered during the flight, and the sustained descending left turn, it is likely that the pilot experienced spatial disorientation and then lost control of the airplane.

Flight Events

Enroute - Unknown or undetermined
Enroute - Loss of control in flight
Uncontrolled descent - Collision with terr/obj (non-CFIT)

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's in-flight loss of airplane control due to spatial disorientation while operating in dark night instrument meteorological conditions, which resulted in the exceedance of the airplane's design stress limitations and a subsequent in-flight breakup. Contributing to the accident was the pilot's distraction by the reported malfunction of the autopilot system.

Findings

Aircraft-Aircraft systems-Auto flight system-Autopilot system-Not specified - F
Aircraft-Aircraft oper/perf/capability-Performance/control parameters-(general)-Not attained/maintained - C
Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
Personnel issues-Psychological-Perception/orientation/illusion-Spatial disorientation-Pilot - C
Personnel issues-Psychological-Attention/monitoring-(general)-Pilot - F
Environmental issues-Conditions/weather/phenomena-Light condition-Dark-Effect on operation - C
Environmental issues-Conditions/weather/phenomena-Ceiling/visibility/precip-Low ceiling-Effect on equipment - C

Pilot Information

Certificate:	Private	Age:	62
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	(Estimated) 3500 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	PIPER	Registration:	N87NF
Model/Series:	PA-46-310P	Engines:	1 Turbo Prop
Operator:	CULBAIR LLC	Engine Manufacturer:	Pratt and Whitney
Air Carrier Operating Certificate:	None	Engine Model/Series:	PT6A-34
Flight Conducted Under:	Part 91: General Aviation - Personal		

Meteorological Information and Flight Plan

Observation Facility, Elevation:	GVL, 1276 ft msl	Weather Information Source:	Weather Observation Facility
Conditions at Accident Site:	Instrument Conditions	Lowest Ceiling:	Overcast / 500 ft agl
Condition of Light:	Night/Dark	Wind Speed/Gusts, Direction:	Calm
Temperature:	10° C / 9° C	Visibility	4 Miles
Precipitation and Obscuration:	Mist		
Departure Point:	Morristown, NJ (MMU)	Destination:	Atlanta, GA (PDK)

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None

Administrative Information

Investigator In Charge (IIC):	Heidi Moats	Adopted Date:	05/13/2015
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=88501		

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