



Aviation Investigation Final Report

Location:	Lawrenceville, Georgia	Accident Number:	GAA16CA129
Date & Time:	January 26, 2016, 20:15 Local	Registration:	N338PC
Aircraft:	Pilatus PC12	Aircraft Damage:	Substantial
Defining Event:	Wildlife encounter (non-bird)	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation		

Analysis

The operator reported that during the takeoff roll, at the moment of rotation during night visual conditions, the pilot observed two white-tailed deer (*Odocoileus virginianus*) running across the runway. The pilot maneuvered the airplane to avoid the deer, however one of the deer impacted the nose wheel. The pilot decided to continue the takeoff, the airplane orbited the airport for about 1.5 hours, and then landed without further incident. A postflight inspection revealed substantial damage to the fuselage.

The operator verified that there were no preimpact mechanical failures or malfunctions with the airframe or engine that would have precluded normal operation.

As a safety recommendation, the operator stated that wildlife strikes can be dealt with proactively through accurate reports from the airport users and airport management establishing a program of regular wildlife population control. The operator further stated that reporting wildlife activity is the most important element of this proactive approach and that without these reports airport managers cannot properly gauge the amount of timing of their response.

The operator reported that from a conversation with the airport manager that the deer population has increased on the airport because of hunting pressure in the surrounding areas.

The airport manager reported that all of the movement areas at the airport are fenced. He also reported that the airport fencing is "standard FAA (Federal Aviation Administration) specification 6 foot tall chain link fence with triple strand barbed wire at the top on standard 45 degree angle outriggers."

The FAA has published CERTALERT 04-16 Deer Hazard to Aircraft and Deer Fencing (December 2004). This document describes the deer hazard to aircraft and recommends various airport fencing options to mitigate deer and aircraft strikes. This document states in part:

"Elevated deer populations in the United States represent an increasingly serious threat to both commercial and general aviation aircraft. It is currently estimated that there over 26 million deer in the

United States. Because of increasing urbanization and rapidly expanding deer populations, deer are adapting to human environments, especially around airports, where they often find food and shelter.

Proper fencing is the best way of keeping deer off aircraft movement areas. The FAA recommends a 10-12 foot chain link fence with 3-strand barbed wire outriggers. In some cases an airport may be able to use an 8-foot chain link fence with 3-strand barbed wire outriggers, depending upon the amount of deer activity in a local area. All fencing must be properly installed and maintained.

If deer are observed on or near the aircraft movement area, immediate action must be taken to remove them."

The Georgia Department of National Resources Wildlife Resources Division has published White-Tailed Deer Fact Sheet (April 2004). This document describes the behavior patterns of the white-tailed deer and states in part:

"Deer are most active around dawn and dusk. This is called a crepuscular activity pattern."

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: An unintentional collision with a white-tailed deer during the takeoff roll in night visual conditions.

Findings

Environmental issues	Animal(s)/bird(s) - Effect on equipment
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Factual Information

History of Flight

Takeoff	Wildlife encounter (non-bird) (Defining event)
Takeoff	Attempted remediation/recovery

Pilot Information

Certificate:	Airline transport; Flight instructor	Age:	29, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	4-point
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane single-engine; Instrument airplane	Toxicology Performed:	No
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	November 1, 2015
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	February 12, 2016
Flight Time:	(Estimated) 8200 hours (Total, all aircraft), 450 hours (Total, this make and model), 7900 hours (Pilot In Command, all aircraft), 90 hours (Last 90 days, all aircraft), 30 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Pilatus	Registration:	N338PC
Model/Series:	PC12 45	Aircraft Category:	Airplane
Year of Manufacture:	2000	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	338
Landing Gear Type:	Retractable - Tricycle	Seats:	8
Date/Type of Last Inspection:	January 12, 2016 100 hour	Certified Max Gross Wt.:	9965 lbs
Time Since Last Inspection:		Engines:	1 Turbo prop
Airframe Total Time:	5948.4 Hrs at time of accident	Engine Manufacturer:	Pratt and Whitney Canada
ELT:	C91A installed, not activated	Engine Model/Series:	PT6A-67B
Registered Owner:	Spectrum Air, LLC.	Rated Power:	1200 Horsepower
Operator:	Quest Diagnostics, Inc.	Operating Certificate(s) Held:	On-demand air taxi (135)
Operator Does Business As:		Operator Designator Code:	Q5QA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Night
Observation Facility, Elevation:	KLZU, 1061 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	00:45 Local	Direction from Accident Site:	326°
Lowest Cloud Condition:		Visibility	5 miles
Lowest Ceiling:	Overcast / 3500 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/ None
Wind Direction:		Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	30.13 inches Hg	Temperature/Dew Point:	9°C / 8°C
Precipitation and Obscuration:	Moderate - None - Mist		
Departure Point:	Lawrenceville, GA (LZU)	Type of Flight Plan Filed:	IFR
Destination:	PENSACOLA, FL (PNS)	Type of Clearance:	IFR
Departure Time:	20:15 Local	Type of Airspace:	Class D

Airport Information

Airport:	GWINNETT COUNTY - BRISCOE FIEL LZU	Runway Surface Type:	Asphalt
Airport Elevation:	1061 ft msl	Runway Surface Condition:	Dry
Runway Used:	25	IFR Approach:	None
Runway Length/Width:	6000 ft / 100 ft	VFR Approach/Landing:	None

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:	33.978332,-83.961669(est)

Administrative Information

Investigator In Charge (IIC):	Hodges, Michael
Additional Participating Persons:	Vincent English ; FAA Atlanta FSDO; Hapeville , GA
Original Publish Date:	April 5, 2016
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=92728

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](#).