



Aviation Investigation Final Report

Location:	Culpeper, Virginia	Accident Number:	ERA23LA368
Date & Time:	July 14, 2023, 21:50 Local	Registration:	N1809H
Aircraft:	Piper PA-28-181	Aircraft Damage:	Substantial
Defining Event:	Wildlife encounter (non-bird)	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The flight instructor and student pilot completed several night landings without anomaly. Then, during the next takeoff, the student pilot applied engine power and the airplane accelerated down the runway. Just after reaching 50 knots, they noticed two deer standing in the center of the runway and called to abort the takeoff. They reduced the engine power and applied the brakes, but they were unable to stop before striking one of the deer with the left wing, which resulted in substantial damaged to the wing. The flight instructor reported no preimpact mechanical malfunctions or failures with the airplane that would have precluded normal operation.

Probable Cause and Findings

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

The airplane's impact with a deer while performing a takeoff at night.

Findings

Environmental issues	Animal(s)/bird(s) - Ability to respond/compensate
Environmental issues	Dark - Effect on operation

Factual Information

History of Flight

Takeoff	Wildlife encounter (non-bird) (Defining event)
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Flight instructor Information

Certificate:	Commercial; Flight instructor	Age:	23, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane single-engine	Toxicology Performed:	
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	September 6, 2023
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	May 31, 2023
Flight Time:	1151 hours (Total, all aircraft), 995 hours (Pilot In Command, all aircraft), 215 hours (Last 90 days, all aircraft), 81 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Student pilot Information

Certificate:	Student	Age:	32, Male
Airplane Rating(s):	None	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 3 Without waivers/limitations	Last FAA Medical Exam:	September 2, 2022
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	30 hours (Total, all aircraft), 26 hours (Total, this make and model), 1 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N1809H
Model/Series:	PA-28-181	Aircraft Category:	Airplane
Year of Manufacture:	1977	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	28-7790314
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	7911 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	O-360-A4M
Registered Owner:	Aviation Consulting Expertise LLC	Rated Power:	180 Horsepower
Operator:	Piston2Jet LLC	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Night
Observation Facility, Elevation:	KCJR,316 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	21:35 Local	Direction from Accident Site:	9°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	Unknown / None
Wind Direction:		Turbulence Severity Forecast/Actual:	Unknown / N/A
Altimeter Setting:	29.9 inches Hg	Temperature/Dew Point:	22°C / 17°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Manassas, VA (HEF)	Type of Flight Plan Filed:	None
Destination:	Manassas, VA (HEF)	Type of Clearance:	None
Departure Time:	21:15 Local	Type of Airspace:	Class G

Airport Information

Airport:	CULPEPER RGNL CJR	Runway Surface Type:	Asphalt
Airport Elevation:	316 ft msl	Runway Surface Condition:	Dry
Runway Used:	22	IFR Approach:	None
Runway Length/Width:	5000 ft / 100 ft	VFR Approach/Landing:	Stop and go;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	38.526205,-77.859168(est)

Administrative Information

Investigator In Charge (IIC): Kemner, Heidi

Additional Participating Persons: Cody Watson; FAA/FSDO; Dulles, VA

Original Publish Date: December 21, 2023

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=193055>

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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](#).