



# Aviation Investigation Final Report

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<b>Location:</b>	Jacksonville, Florida	<b>Accident Number:</b>	MIA05LA019
<b>Date &amp; Time:</b>	October 28, 2004, 19:15 Local	<b>Registration:</b>	N556WH
<b>Aircraft:</b>	Scottish Aviation Bulldog 120/121	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

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## Analysis

The pilot stated that before departure both fuel tanks were filled and after takeoff, the flight proceeded towards the destination airport though deviation to maintain visual flight rules was necessary. After flying over the Okefenokee Swamp which is located in the southeastern portion of Georgia, he reported losing several hundred feet of altitude while looking down to confirm a radio frequency, then looked up and observed trees. He applied aft elevator control input, added power to climb, then felt impact with several trees. He then climbed and flew in a southerly direction to avoid entering Jacksonville's airspace, and after verifying the airplane was controllable, he established contact with Jacksonville Approach Control and declared an emergency. The flight was vectored to the Jacksonville International Airport where after touchdown, the right main landing gear collapsed. Examination of the airplane revealed the leading edges of both wings exhibited semi-circular indentations. Additionally, the inboard drain for the left fuel tank was separated. The right wing fuel tank was drained and found to contain 2 quarts of fuel; the fuel selector was found positioned to the right tank position. The leading edge of the right main landing gear was noted to have impact damage; tree bark was noted in the damaged area of the gear.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain altitude/clearance with trees resulting in the in-flight collision with a tree, damage to the right main landing gear, and subsequent collapse of the right main landing gear during the emergency landing.

## Findings

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Occurrence #1: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: DESCENT

Findings

1. OBJECT - TREE(S)
2. (C) ALTITUDE/CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND

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Occurrence #2: MAIN GEAR COLLAPSED

Phase of Operation: LANDING - ROLL

Findings

3. LANDING GEAR,MAIN GEAR - COLLAPSED

## Factual Information

On October 28, 2004, about 1915 eastern daylight time, a Scottish Aviation Bulldog model 120/121, N556WH, registered to a private individual, collided with trees then experienced collapse of the right main landing gear during an emergency landing at the Jacksonville International Airport, Jacksonville, Florida. Weather conditions are unknown in the area of the tree contact location, and no flight plan was filed for the 14 CFR Part 91 personal flight from Newnan Coweta County Airport, Newnan, Georgia, to Jacksonville Naval Air Station, Jacksonville, Florida. The airplane was substantially damaged and the private-rated pilot, and one passenger were not injured. The flight originated about 1645, from Newnan County Airport.

The pilot stated that before departure both fuel tanks were filled and after takeoff, the flight proceeded towards the destination airport though deviation to maintain visual flight rules was necessary. After flying over the Okefenokee Swamp, which is located in the southeastern portion of Georgia, he reported losing several hundred feet of altitude while looking down to confirm a radio frequency, then looked up and observed trees. He applied aft elevator control input, added power to climb, then felt impact with several trees. He then climbed and flew in a southerly direction to avoid entering Jacksonville's airspace, and after verifying the airplane was controllable, he established contact with Jacksonville Approach Control and declared an emergency. The flight was vectored to the Jacksonville International Airport where after touchdown, the right main landing gear collapsed.

Examination of the airplane revealed the leading edges of both wings exhibited semi-circular indentations. Additionally, the inboard drain for the left fuel tank was separated. The right wing fuel tank was drained and found to contain 2 quarts of fuel; the fuel selector was found positioned to the right tank position. The leading edge of the right main landing gear was noted to have impact damage; tree bark was noted in the damaged area of the gear.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	51, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	February 5, 2003
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	July 10, 2004
<b>Flight Time:</b>	246 hours (Total, all aircraft), 130 hours (Total, this make and model), 170 hours (Pilot In Command, all aircraft), 17 hours (Last 90 days, all aircraft), 7 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Scottish Aviation	<b>Registration:</b>	N556WH
<b>Model/Series:</b>	Bulldog 120/121	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Experimental (Special)	<b>Serial Number:</b>	BH120/249
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	3
<b>Date/Type of Last Inspection:</b>	June 18, 2004 100 hour	<b>Certified Max Gross Wt.:</b>	2350 lbs
<b>Time Since Last Inspection:</b>	20.2 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	8907.6 Hrs	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	IO-360-A1B6
<b>Registered Owner:</b>	Steven A. Sanders	<b>Rated Power:</b>	200 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Few / 3600 ft AGL	<b>Visibility</b>	6 miles
<b>Lowest Ceiling:</b>	Broken / 11000 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	7 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	130°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.12 inches Hg	<b>Temperature/Dew Point:</b>	24°C / 20°C
<b>Precipitation and Obscuration:</b>	N/A - None - Haze		
<b>Departure Point:</b>	NEWNAN, GA (CCO)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Jacksonville, FL (KNIP)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	16:45 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	JACKSONVILLE INTL JAX	<b>Runway Surface Type:</b>	Concrete
<b>Airport Elevation:</b>	30 ft msl	<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	07	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	10000 ft / 150 ft	<b>VFR Approach/Landing:</b>	

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	30.235834,-81.680557

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Monville, Timothy
<b>Additional Participating Persons:</b>	Alan C Nemcik; FAA Flight Standards District Office; Orlando, FL
<b>Original Publish Date:</b>	March 30, 2005
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=60527">https://data.ntsb.gov/Docket?ProjectID=60527</a>

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](#).