



# Aviation Investigation Final Report

---

<b>Location:</b>	Brooksville, Florida	<b>Accident Number:</b>	MIA03LA115
<b>Date &amp; Time:</b>	May 11, 2003, 16:00 Local	<b>Registration:</b>	N7KH
<b>Aircraft:</b>	Piper PA-46-350P	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

---

## Analysis

The pilot stated that after takeoff he performed airwork for approximately 1 hour then proceeded direct to the Hernando County Airport where he performed 2 or 3 practice instrument approaches. During climb out at 2,000 feet between 110 and 120 knots following another practice instrument approach, he noted a large bird fly past the windshield. He then felt an impact but there was no discrepancy with the flight controls. As the flight lesson was nearly complete, the flight proceeded to the departure airport where the airplane was landed uneventfully. The airplane was secured, then visually inspected which revealed a dent in the leading edge of the left horizontal stabilizer. He remained overnight at the airport, then departed the following day for an airport located along the east coast of Florida. The safety pilot reported that she was flying with the pilot to complete his annual recurrent training and after the initial departure proceeded to the Hernando County Airport to practice instrument approaches. The pilot-in-command had been holding at the published holding intersection (AZBOG), departed the holding pattern, began climbing, and while flying at 2,500 feet mean sea level and 120 knots indicated airspeed, collided with a bird. No effect on flight controls was noted and the flight proceeded to the initial departure airport where after landing, the external damage was noted. Examination of the airplane revealed the leading edge of the left horizontal stabilizer was crushed up near left butt line 38.177. Inspection revealed that canted frame assembly (p/n 84246-800), located at fuselage station 311.382, was torn adjacent to the forward attach bolt of the left horizontal stabilizer. Additionally, an angle (p/n 84218-2), which is riveted to and part of the canted frame assembly exhibited a section missing below and outboard of the forward attach bolt of the left horizontal stabilizer. Evidence of displacement between the forward attach bolt of the left horizontal stabilizer and the canted frame assembly was noted. Personnel from the Smithsonian National Museum of Natural History identified the bird to be the Black Vulture (*Coryagyps atratus*), which has a weight range between 42-75 ounces.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:  
The in-flight collision with a Black Vulture resulting in substantial damage.

### Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT  
Phase of Operation: CLIMB

#### Findings

1. OBJECT - BIRD(S)

## Factual Information

On May 11, 2003, about 1600 eastern daylight time, a Piper PA-46-350P, N7KH, registered to Liberty Oil And Refining Association, Inc., experienced a bird strike following a practice instrument approach to the Hernando County Airport, Brooksville, Florida. Visual meteorological conditions prevailed at the time and no flight plan was filed for the 14 CFR Part 91 instructional flight. The airplane was substantially damaged and the commercial-rated pilot and safety pilot were not injured. The flight originated about 1330 hours from St. Petersburg-Clearwater International Airport, Clearwater, Florida.

The pilot stated that after takeoff he performed airwork for approximately 1 hour then proceeded directly to the Hernando County Airport where he performed two or three practice instrument approaches. During climb out at 2,000 feet between 110 and 120 knots following another practice instrument approach, he saw a large bird fly past the windshield. He then felt an impact but there was no discrepancy with the flight controls. As the flight lesson was nearly complete, the flight proceeded to the departure airport where the airplane was landed uneventfully. The airplane was secured, then visually inspected which revealed a dent in the leading edge of the left horizontal stabilizer. He remained overnight at the airport, then departed the following day for an airport located along the east coast of Florida.

The safety pilot reported that she was flying with the pilot to complete his annual recurrent training and after the initial departure proceeded to the Hernando County Airport to practice instrument approaches. The pilot-in-command had been holding at the published holding intersection (AZBOG), departed the holding pattern, began climbing, and while flying at 2,500 feet mean sea level and 120 knots indicated airspeed, collided with a bird. No effect on flight controls was noted and the flight proceeded to the initial departure airport where after landing, the external damage was noted.

Examination of the airplane revealed the leading edge of the left horizontal stabilizer was crushed up near left butt line 38.177. Inspection revealed that canted frame assembly (p/n 84246-800), located at fuselage station 311.382, was torn adjacent to the forward attach bolt of the left horizontal stabilizer. Additionally, an angle (p/n 84218-2), which is riveted to and part of the canted frame assembly exhibited a section missing below and outboard of the forward attach bolt of the left horizontal stabilizer. Evidence of displacement between the forward attach bolt of the left horizontal stabilizer and the canted frame assembly was noted.

The pilot reported the occurrence to the NTSB on May 27, 2003.

Personnel from the Smithsonian National Museum of Natural History identified the bird to be the Black Vulture (*Coryagyps atratus*), which has a weight range between 42-75 ounces.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	66, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane; Helicopter	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	June 20, 2002
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	May 11, 2003
<b>Flight Time:</b>	6400 hours (Pilot In Command, all aircraft), 60 hours (Last 90 days, all aircraft), 16 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

## Flight instructor Information

<b>Certificate:</b>	Airline transport; Commercial; Flight instructor	<b>Age:</b>	54, Female
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine; Instrument airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--w/ waivers/lim	<b>Last FAA Medical Exam:</b>	August 6, 2002
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	April 16, 2002
<b>Flight Time:</b>	4511 hours (Total, all aircraft), 2335 hours (Total, this make and model), 4277 hours (Pilot In Command, all aircraft), 90 hours (Last 90 days, all aircraft), 22 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N7KH
<b>Model/Series:</b>	PA-46-350P	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	4636176
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	March 27, 2003 Annual	<b>Certified Max Gross Wt.:</b>	4318 lbs
<b>Time Since Last Inspection:</b>	18.8 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	603 Hrs at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	TIO-540-AE2A
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	350 Horsepower
<b>Operator:</b>	On file	<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>	KBKV, 77 ft msl	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	15:53 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	12 knots / 20 knots	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	250°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.03 inches Hg	<b>Temperature/Dew Point:</b>	31°C / 23°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	St. Petersburg, FL (KPIE)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	13:30 Local	<b>Type of Airspace:</b>	Class G

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<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>	28.473611,-82.455558

## Administrative Information

**Investigator In Charge (IIC):** Monville, Timothy

**Additional Participating Persons:** James R Blake; FAA Flight Standards District Office; Tampa, FL

**Original Publish Date:** April 28, 2004

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.ntsb.gov/Docket?ProjectID=57148>

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](#).