Aviation Investigation Final Report

Location:	Brooksville, Florida	**Accident Number:**	MIA03LA115
Date & Time:	May 11, 2003, 16:00 Local	**Registration:**	N7KH
Aircraft:	Piper PA-46-350P	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 None
Flight Conducted Under:	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.

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Pilot Information

Certificate:	Commercial	**Age:**	66,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	June 20, 2002
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	May 11, 2003
Flight Time:	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

Certificate:	Airline transport; Commercial; Flight instructor	**Age:**	54,Female
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Right
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	August 6, 2002
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	April 16, 2002
Flight Time:	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

Aircraft Make:	Piper	**Registration:**	N7KH
Model/Series:	PA-46-350P	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	4636176
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	March 27, 2003 Annual	**Certified Max Gross Wt.:**	4318 lbs
Time Since Last Inspection:	18.8 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	603 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	TIO-540-AE2A
Registered Owner:	On file	**Rated Power:**	350 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KBKV,77 ft msl	**Distance from Accident Site:**	
Observation Time:	15:53 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	12 knots / 20 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	250°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.03 inches Hg	**Temperature/Dew Point:**	31°C / 23°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	St. Petersburg, FL (KPIE)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	13:30 Local	**Type of Airspace:**	Class G

Wreckage and Impact Information

Crew Injuries:	2 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	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