Aviation Investigation Final Report

Location:	Venice, Florida	**Accident Number:**	MIA04FA086
Date & Time:	May 20, 2004, 18:15 Local	**Registration:**	N3331W
Aircraft:	Piper PA-32-260	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot's wife stated that at the time of the accident she was at the Venice Airport, standing near the hangar where they keep the airplane. She observed her husband doing touch and go landings to runway 22. Just prior to the accident her husband approached to land on runway 22. The airplane never touched down on the runway. As the airplane neared the runway she observed it do a slight lift back up to about the height of a 2 1/2 story building. The right wing then raised up and the left wing dropped down. She stopped watching the airplane and ran to a person at another hangar to call for help. She does not recall the engine sounds. There were some other airplanes taking off before her husband but they had left the area. At the time of the accident there were no other airplanes flying in the area. Examination of the wreckage did not reveal any discrepancies with the aircraft structure, flight controls, aircraft systems, engine assembly, engine components, or propeller. Postmortem examination of the pilot and toxicology testing showed no evidence which could be considered causal to the accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Failure of the pilot to recover from an improper landing flare resulting in his failure to maintain airspeed (Vs), an inadvertant stall, loss of control, and inflight collision with terrain during an uncontrolled descent.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings
1. FLARE - IMPROPER - PILOT IN COMMAND
2. (C) REMEDIAL ACTION - IMPROPER - PILOT IN COMMAND
3. AIRSPEED(VS) - NOT MAINTAINED - PILOT IN COMMAND
4. STALL - INADVERTENT - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings
5. TERRAIN CONDITION - GROUND

Factual Information

HISTORY OF FLIGHT

On May 20, 2004, about 1815 eastern daylight time, a Piper PA-32-260, N3331W, registered to Freedom Aviation LLC, and operated by a private individual, as a Title 14 CFR Part 91 personal flight, crashed while performing touch-and-go landings at Venice Municipal Airport, Venice, Florida. Visual meteorological conditions prevailed at the time, and no flight plan was filed. The aircraft incurred substantial damage and the private-rated pilot received fatal injuries. The flight had originated from Venice Municipal Airport minutes before the accident.

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PERSONNEL INFORMATION

The pilot held an FAA private pilot certificate with airplane single engine land privileges, issued on December 16, 2003. The pilot held an FAA third-class medical certificate issued on July 22, 2003, with limitations that corrective lenses be worn while exercising the privileges of the certificate. According to the pilot's logbook, at the time of the accident the pilot had accumulated about 87 total flight hours, with about 21 hours in the Piper PA-32-260.

AIRCRAFT INFORMATION

The airplane was a Piper Aircraft Corporation model PA-32-260, serial number 32-169, manufactured in 1965. At the time of the accident, the airplane had accumulated about 2,355.84 total flight hours. The airplane was equipped with a Lycoming model O-540-E4B5 reciprocating engine, which produces 250 horsepower. The airplane was equipped with a Hartzell model HC-C24K-1BF propeller, which contained two blades.

Maintenance records showed the airplane was last inspected on April 21, 2004, when it received an annual inspection. At the time of the accident, the airplane had accumulated about 18 flight hours since this inspection, the engine had accumulated about 18 flight hours since factory overhaul, and the propeller had accumulated about 402 flight hours since major

overhaul. The airplanes static system, altimeter, and transponder were last tested on May 9, 2003.

METEROLOGICAL INFORMATION

The Venice Municipal Airport, 1821 surface weather observation was wind from 310 at 11 knots, visibility 10 statute miles, sky condition clear, temperature 27 degrees Celsius, dew point temperature 22 degrees Celsius, altimeter setting 30.15 inHg. Visual meteorological conditions prevailed at the time of the accident.

WRECKAGE AND IMPACT INFORMATION

The airplane wreckage was located on the south side of the Venice Municipal Airport near the intersection of runways 31 and 4, at latitude 27 degrees 04.152 minutes North and longitude 82 degrees 26.435 minutes West. The airplane came to a rest with the tail of the airplane resting in the trees and the nose of the airplane against the ground with the left wing partially separated from the fuselage at the wing root. The debris path was approximately 75 feet long heading 220 degrees and the aircraft was resting at a heading of 360 degrees. Fragments of the red position light lens were found in the vicinity of the initial ground scar. All components of the airplane which are necessary for flight were located on or around the airplane wreckage.

Examination of the flight control system showed that there was continuity within the aileron, rudder, stabilator, and stabilator trim systems. The stabilator trim system was found in the neutral position. The wing flaps were found in the full down position and flap continuity was established from both flaps to the flap handle. The throttle control, propeller control, and mixture control in the cockpit were all found in the full forward position and continuity was established between the engine controls and the engine. The stall warning system was tested and found to be operating normally.

Examination of the fuel system showed the fuel caps were in place on the wings. The left main fuel tank was found to contain 10 gallons of fuel, the left auxiliary tank had impact damage and was breached. The right main fuel tank was found to contain 5 gallons of fuel and the right auxiliary tank contained 1/2 gallon of fuel. The fuel selector valve was positioned on the left main tank and was found to be operating normally. Fuel line continuity was established throughout the fuel system and no obstructions were found. The fuel boost pump switch was found in the on position. The electric fuel boost pump operated normally when tested after the accident.

Examination of the engine showed that the engine rotated and all cylinders produced compression. When rotated by hand, continuity was established for the crankshaft, camshaft, valve train, and accessory drives. The engine contained oil and the oil lines and oil cooler were unobstructed. Each magneto produced a spark at each post when they were rotated by hand. The magneto switch was found in the both position and operated normally when tested. The spark plugs were removed and found to have a light gray colored deposit, consistent with

normal operation. The carburetor bowl was found to be clean and full of fuel, the inlet fuel screen was clean, the needle valve and float operated normally, and all passages in the carburetor were unobstructed. The muffler was examined and no evidence of leakage was found.

The propeller was found attached to the engine after the accident. The propeller spinner was fragmented during the accident. Examination of the propeller was conducted at a propeller overhaul facility with NTSB and Hartzell Propeller personnel present. The examination revealed that cycling of the pitch change mechanism was not possible and the blades were not loose in the hub and could not be manually turned. One blade was twisted approximately 90 degrees toward low pitch. It was also bent aft approximately 60 degrees with a large radius bend The other blade was twisted approximately 90 degrees toward low pitch. It was bent aft approximately 45 degrees with a large radius bend which started at about 1/3 radius. It also had an aft bend in the trailing edge of the blade at about 2/3 radius. There was significant paint abrasion at the blade tips of both blades. The abrasion and tip damage to both blades was very similar. Disassembly of the propeller showed the pitch change rod was fractured in two places. It was fractured in overstress on both the forward and aft sides of the fork. All other components within the hub were intact.

MEDICAL AND PATHOLOGICAL INFORMATION

Postmortem examination of the pilot was performed by the Medical Examiner's Office, Sarasota, Florida. The cause of death was attributed to blunt impact to head and neck. No findings which could be considered causal to the accident were reported.

Postmortem toxicology studies on specimens obtained from the pilot were performed by the FAA Bioaeronautical Sciences Research Laboratory, Oklahoma City, Oklahoma. The tests were negative for carbon monoxide, cyanide, ethanol, and drugs.

ADDITIONAL INFORMATION

The airplane wreckage was released to the pilot's wife on May 21, 2004. During return shipment of the accident airplane's disassembled propeller, the propeller hub was lost by the shipping company. The propeller blades did arrive at the storage point of the airplane wreckage at the Venice Municipal Airport. All other components retained by NTSB for further testing were returned to the pilot's wife.

Pilot Information

Certificate:	Private	**Age:**	42,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	July 22, 2003
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	December 16, 2003
Flight Time:	87 hours (Total, all aircraft), 21 hours (Total, this make and model), 31 hours (Pilot In Command, all aircraft), 18 hours (Last 90 days, all aircraft), 18 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N3331W
Model/Series:	PA-32-260	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	32-169
Landing Gear Type:	Tricycle	**Seats:**	6
Date/Type of Last Inspection:	April 21, 2004 Annual	**Certified Max Gross Wt.:**	3400 lbs
Time Since Last Inspection:	18.44 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	2355.84 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	O-540-E4B5
Registered Owner:	Freedom Aviation LLC	**Rated Power:**	250 Horsepower
Operator:	Ricky C. Unger	**Operating Certificate(s) Held:**	None
Operator Does Business As:	Personal	**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	VNC,18 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	08:21 Local	**Direction from Accident Site:**	360°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	11 knots / None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	310°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.14 inches Hg	**Temperature/Dew Point:**	27°C / 22°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Venice, FL (KVNC)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	Class G

Airport Information

Airport:	Venice Municipal KVNC	**Runway Surface Type:**	Asphalt
Airport Elevation:	18 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	31	**IFR Approach:**	None
Runway Length/Width:	5000 ft / 150 ft	**VFR Approach/Landing:**	Touch and go

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	27.069166,-82.440551

Administrative Information

Investigator In Charge (IIC):	Kennedy, Jeffrey
Additional Participating Persons:	Thomas Gross; FAA FSDO; Tampa, FL Robert Martellotti; New Piper Aircraft Corp.; Vero Beach, FL Edward Rogalski; Textron Lycoming Engines; Williamsport, PA Paul Lehman; New Piper Aircraft Corp.; Vero Beach, FL Thomas McCreary; Hartzell Propeller Inc; Piqua, OH
Original Publish Date:	April 28, 2005
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=59271