



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Tampa, FL	<b>Accident Number:</b>	ATL02TA030
<b>Date &amp; Time:</b>	01/04/2002, 1505 EST	<b>Registration:</b>	N46TP
<b>Aircraft:</b>	Hughes OH-6A	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 Minor
<b>Flight Conducted Under:</b>	Public Aircraft		

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## Analysis

The commercial pilot, under the supervision of the flight instructor, initiated a full-touchdown autorotation in an unmowed, grassy practice area. After touchdown, the helicopter began a slow ground run for three to five feet with no abnormalities. The flight instructor and commercial pilot then reported a very hard hop, and the helicopter collided with the ground and began gyrating violently. Both pilots shut it down. Examination of the helicopter revealed the main rotor severed the tail boom, separating it from the airframe. The pilots reported no mechanical failures.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper flare during practice autorotation.

## Findings

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Occurrence #1: HARD LANDING  
Phase of Operation: MANEUVERING

### Findings

1. (C) FLARE - IMPROPER - PILOT IN COMMAND

## Factual Information

On January 4, 2002, at 1505 eastern standard time, a Hughes OH-6A helicopter, N46TP, registered to, owned, and operated by the City of Tampa Police Department, collided with terrain during training maneuvers in a field near Tampa International Airport in Tampa, Florida. The public use instructional flight was conducted under the provisions of Title 14 CFR Part 91 with no flight plan filed. Visual meteorological conditions prevailed at the time of the accident. The certificated flight instructor and the commercial pilot received minor injuries, and the helicopter sustained substantial damage. The flight departed the Tampa Police Aviation hangar in Tampa, Florida, at 1400.

The flight instructor was acting as check airman for the commercial pilot's annual airman competency/proficiency check. The commercial pilot completed several maneuvers before a full-touchdown autorotation was initiated in a dry, unmowed, grassy practice area west of the approach end of runway 27 at Tampa International Airport. The maneuver, from entry at 500 feet above ground level to touchdown, was actively monitored by the flight instructor and was performed correctly with the rotor RPM, airspeed, attitude, and sink rate within parameters. The pilot initiated a flare at 100 feet above ground level, and, through final descent to the ground, lifted the collective to cushion the landing. The helicopter touched down in a slight nose-down attitude and began a slow ground run for three to five feet. The flight instructor and commercial pilot then reported a very hard "hop" that threw both upward against their shoulder harnesses, and the commercial pilot's helmet struck the upper doorjamb. The commercial pilot stated, "the helicopter then rose up left side low, then slammed into the ground, with the right side taking the brunt of the force." The helicopter then began gyrating violently, and both the flight instructor and commercial pilot shut it down.

Examination of the helicopter revealed the main rotor blade severed the tail boom, separating the tail rotor and vertical/horizontal assembly from the airframe. One main rotor blade was separated, and the other main rotor blade displayed deformation. The pilots reported no mechanical failures.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	29, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	10/22/2001
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	11/09/2000
<b>Flight Time:</b>	871 hours (Total, all aircraft), 371 hours (Total, this make and model), 745 hours (Pilot In Command, all aircraft), 117 hours (Last 90 days, all aircraft), 46 hours (Last 30 days, all aircraft)		

## Check Pilot Information

<b>Certificate:</b>	Airline Transport; Flight Instructor; Commercial	<b>Age:</b>	40, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land; Single-engine Sea	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane Multi-engine; Airplane Single-engine; Helicopter; Instrument Airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	07/25/2001
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	11/09/2001
<b>Flight Time:</b>	6550 hours (Total, all aircraft), 2000 hours (Total, this make and model), 5975 hours (Pilot In Command, all aircraft), 93 hours (Last 90 days, all aircraft), 35 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Hughes	<b>Registration:</b>	N46TP
<b>Model/Series:</b>	OH-6A	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	891268
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	12/11/2001, 100 Hour	<b>Certified Max Gross Wt.:</b>	2550 lbs
<b>Time Since Last Inspection:</b>	50 Hours	<b>Engines:</b>	1 Turbo Shaft
<b>Airframe Total Time:</b>	6910 Hours at time of accident	<b>Engine Manufacturer:</b>	Allison
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	T63A700
<b>Registered Owner:</b>	City of Tampa Police Department	<b>Rated Power:</b>	317 hp
<b>Operator:</b>	City of Tampa Police Department	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	KTPA, 26 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	1553 EST	Direction from Accident Site:	90°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	220°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.32 inches Hg	Temperature/Dew Point:	9°C / -1°C
Precipitation and Obscuration:			
Departure Point:	Tampa, FL (KTPA)	Type of Flight Plan Filed:	None
Destination:	Tampa, FL (KTPA)	Type of Clearance:	VFR
Departure Time:	1400 EST	Type of Airspace:	Class B

## Airport Information

Airport:	Tampa International Airport (KTPA)	Runway Surface Type:	Grass/turf
Airport Elevation:	26 ft	Runway Surface Condition:	Dry; Soft
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Unknown

## Wreckage and Impact Information

Crew Injuries:	2 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor	Latitude, Longitude:	27.975278, -82.533056

## Administrative Information

Investigator In Charge (IIC):	Butch Wilson	Report Date:	02/25/2003
Additional Participating Persons:	Richard Herndon; FAA - Tampa FSDO 35; Tampa, FL		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).