



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	NEW IBERIA, LA	<b>Accident Number:</b>	FTW98LA002
<b>Date &amp; Time:</b>	10/02/1997, 1440 CDT	<b>Registration:</b>	N2163Y
<b>Aircraft:</b>	Bell 206B	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 Minor

**Flight Conducted Under:** Part 91: General Aviation - Instructional

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## Analysis

The flight instructor (CFI) was demonstrating an autorotation with a 180 degree turn to a soft sod area. The CFI reported that the helicopter touched down with only slight forward speed in a slightly nose low attitude. Following touchdown, the skids dug into the soft ground, and the helicopter began pitching forward. The CFI applied 'slight downward collective.' Subsequently, the helicopter nosed over, the main rotor blades contacted the ground, and the helicopter came to rest on its left side. The commercial pilot, who was receiving instruction, reported that the helicopter touched down smoothly in a level attitude 'carrying 5 to 10 knots forward speed.' An FAA inspector recommended that local helicopter operators discontinue using the sod area for running landings and autorotations until the ground is considered hard enough for practice running landings. The CFI stated that at the time of the accident, the wind was variable, but generally aligned with the direction of landing.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: improper touchdown by the flight instructor. A related factor was: soft sod in the touchdown/landing area.

## Findings

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Occurrence #1: NOSE OVER  
Phase of Operation: LANDING

### Findings

1. EMERGENCY PROCEDURE - SIMULATED - PILOT IN COMMAND(CFI)
2. (F) TERRAIN CONDITION - GRASS
3. (F) TERRAIN CONDITION - SOFT
4. (C) TOUCHDOWN - IMPROPER - PILOT IN COMMAND

## Factual Information

On October 2, 1997, at 1440 central daylight time, a Bell 206B helicopter, N2163Y, registered to Flight Safety International, Inc., and operated by Petroleum Helicopter, Inc., as a Title 14 CFR Part 91 instructional flight, was substantially damaged during a practice autorotational landing at the Acadiana Regional Airport, New Iberia, Louisiana. The flight instructor sustained minor injuries, and the commercial pilot was not injured. Visual meteorological conditions prevailed, and a company flight plan was filed. The flight originated from the Lafayette Regional Airport, Lafayette, Louisiana, about 40 minutes prior to the accident.

According to the operator, the flight instructor was demonstrating an autorotation with a 180 degree turn to the sod area adjacent to Seaway 34. The operator added that "the winds were variable, but were generally aligned with the landing direction." The flight instructor reported to the operator that "the aircraft touched down with only slight forward speed in a slightly nose low attitude." Following touchdown, the helicopter began pitching over on its nose and the flight instructor applied "slight downward collective." Subsequently, the helicopter nosed over, the main rotor blades contacted the ground, and the helicopter came to rest on its left side.

The commercial pilot receiving instruction stated in the narrative portion of the NTSB Pilot/Operator Aircraft Accident Report (NTSB Form 6120.1/2), that the aircraft touched down smoothly in a level attitude. He added that "we were carrying 5 to 10 knots forward speed" during the landing.

Examination of the aircraft by the FAA inspector revealed that the tailboom was separated at the fuselage, the airframe sustained structural damage, and the main rotor and tail rotor blades were damaged. The FAA inspector confirmed that the ground was very soft and this condition contributed to the skids of the helicopter to dig into the soft ground, resulting in the helicopter to nose over.

The FAA inspector recommended that the local helicopter operators to discontinue using the sod area for running landings and autorotations until the sod area is hard enough to practice running landing.

## Pilot Information

<b>Certificate:</b>	Flight Instructor; Commercial; Private	<b>Age:</b>	27, Male
<b>Airplane Rating(s):</b>	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>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Helicopter	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	11/27/1996
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	580 hours (Total, all aircraft), 77 hours (Total, this make and model), 478 hours (Pilot In Command, all aircraft), 36 hours (Last 90 days, all aircraft), 17 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Bell	<b>Registration:</b>	N2163Y
<b>Model/Series:</b>	206B 206B	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	3496
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	5
<b>Date/Type of Last Inspection:</b>	09/06/1997, 100 Hour	<b>Certified Max Gross Wt.:</b>	3200 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Turbo Shaft
<b>Airframe Total Time:</b>	5019 Hours	<b>Engine Manufacturer:</b>	Allison
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	250-C20B
<b>Registered Owner:</b>	FLIGHT SAFETY INTERNATIONAL	<b>Rated Power:</b>	420 hp
<b>Operator:</b>	PETROLEUM HELICOPTER INC.	<b>Operating Certificate(s) Held:</b>	On-demand Air Taxi (135)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	HEEA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	ACA, 24 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	1455 CDT	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	10 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	40°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	28° C
Precipitation and Obscuration:			
Departure Point:	(ARA)	Type of Flight Plan Filed:	Company VFR
Destination:		Type of Clearance:	
Departure Time:	0000	Type of Airspace:	Class D

## Airport Information

Airport:	ACADIANA REGIONAL (ARA)	Runway Surface Type:	Grass/turf
Airport Elevation:	24 ft	Runway Surface Condition:	Soft
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Traffic Pattern

## 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:	

## Administrative Information

Investigator In Charge (IIC):	DOUGLAS D WIGINGTON	Report Date:	10/30/1998
Additional Participating Persons:	JAVIER RODRIGUEZ; BATON ROUGE, LA		
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> .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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](#).