



# Aviation Investigation Final Report

<b>Location:</b>	SAN ANTONIO, Texas	<b>Accident Number:</b>	FTW00LA145
<b>Date &amp; Time:</b>	May 9, 2000, 17:30 Local	<b>Registration:</b>	N14408
<b>Aircraft:</b>	Bell 47G	<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

During a touchdown autorotation, which the flight instructor was demonstrating, the helicopter touched down with forward movement. As the helicopter was sliding along the ground, it suddenly stopped and went up onto the toes of the skids before settling back onto the skids. During the event, the main rotor blades struck the tailboom forward of the tailrotor area and severed the tailboom

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The improper touchdown performed by the flight instructor.

## Findings

Occurrence #1: NOSE DOWN  
Phase of Operation: LANDING - ROLL

### Findings

1. AUTOROTATION - PERFORMED - PILOT IN COMMAND(CFI)
2. (C) TOUCHDOWN - IMPROPER - PILOT IN COMMAND(CFI)
3. MISC ROTORCRAFT,MAIN ROTOR/TAIL BOOM CONTACT

## Factual Information

On May 9, 2000, at 1730 central daylight time, a Bell 47G helicopter, N14408, was substantially damaged when it nosed down during a practice autorotation at the Stinson Municipal Airport near San Antonio, Texas. The helicopter was owned by Stinson Flight Center, LLC, and operated by Stinson Air Center, LLC, under 14 Code of Federal Regulations Part 91. The commercial pilot and the pilot rated student were not injured. Visual meteorological conditions prevailed for the local instructional flight, and a flight plan was not filed. The flight originated at the Stinson Municipal Airport, at 1700.

During a touchdown autorotation, which the flight instructor was demonstrating, the helicopter touched down with forward movement. As the helicopter was sliding along the ground, it suddenly stopped and went up on the toes of the skids before settling back onto the skids. During the event, the main rotor blades struck the tailboom forward of the tailrotor area and severed the tailboom. The operator reported that both main rotor blades, the front skid crossboom, the tailrotor gearbox, and both tailrotor blades sustained damage.

The FAA inspector who examined the accident site, reported that the grass area north of runway 9 had minute indentations.

### Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor; Private	<b>Age:</b>	38, Male
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea; Multi-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Helicopter	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	March 22, 1999
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	1745 hours (Total, all aircraft), 350 hours (Total, this make and model), 1435 hours (Pilot In Command, all aircraft), 105 hours (Last 90 days, all aircraft), 30 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Bell	<b>Registration:</b>	N14408
<b>Model/Series:</b>	47G 47G	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	988
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	May 7, 2000 Annual	<b>Certified Max Gross Wt.:</b>	2450 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	710 Hrs	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>		<b>Engine Model/Series:</b>	VO-435-A1
<b>Registered Owner:</b>	STINSON FLIGHT CENTER, LLC	<b>Rated Power:</b>	260 Horsepower
<b>Operator:</b>	STINSON AIR CENTER LLC	<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	SSF ,580 ft msl	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	17:53 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	7 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	0°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	29°C / 22°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	(SSF )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	VFR
<b>Departure Time:</b>	17:00 Local	<b>Type of Airspace:</b>	Class D

## Airport Information

<b>Airport:</b>	STINSON MUNICIPAL SSF	<b>Runway Surface Type:</b>	Grass/turf
<b>Airport Elevation:</b>	577 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	Full stop

## 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>	29.320545,-98.469802(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Roach, Joyce
<b>Additional Participating Persons:</b>	THOMAS HENNESSEE; SAN ANTONIO , TX
<b>Original Publish Date:</b>	November 29, 2000
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	The NTSB traveled to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=49203">https://data.ntsb.gov/Docket?ProjectID=49203</a>

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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](#).