



Aviation Investigation Final Report

Location:	N. MYRTLE BEACH, South Carolina	Accident Number:	ATL96LA023
Date & Time:	December 18, 1995, 15:00 Local	Registration:	N234SM
Aircraft:	HILLER 12C	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The private helicopter pilot and certified flight instructor were conducting pre-checkride flight training. While executing an autorotation to a power recovery, the tail rotor assembly collided with the ground and subsequently separated from the gearbox assembly. No mechanical problems with the helicopter were reported by the pilots.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper operation of the flight controls during a practice autorotation, and the certified flight instructor's inadequate supervision of the operation

Findings

Occurrence #1: DRAGGED WING, ROTOR, POD, FLOAT OR TAIL/SKID
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

1. TERRAIN CONDITION - GROUND
2. (C) ROTORCRAFT FLIGHT CONTROLS - IMPROPER USE OF - PILOT IN COMMAND
3. (C) AUTOROTATION - IMPROPER - PILOT IN COMMAND
4. (C) SUPERVISION - INADEQUATE - PILOT IN COMMAND(CFI)

Factual Information

On December 18, 1995, at 1500 eastern standard time, a Hiller 12C, N234SM, touched down hard during a practice autorotation at the Grand Strand Airport in North Myrtle Beach, South Carolina. The instructional flight operated under the provisions of 14 CFR Part 91 with no flight plan filed. Visual weather conditions prevailed at the time of the accident. The helicopter sustained substantial damage; the certified flight instructor and the private pilot were not injured. The flight departed North Myrtle Beach, at 1430.

The pilots were conducting pre-checkride flight training. According to the private pilot, they were executing a practice autorotation to a powered recovery. As the pilots maneuvered the helicopter during the flare, the tail rotor assembly struck the ground. No mechanical problems with the airplane were reported by the pilot.

Pilot Information

Certificate:	Commercial	Age:	39,Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	Helicopter	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	April 26, 1995
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	2126 hours (Total, all aircraft), 200 hours (Total, this make and model), 1932 hours (Pilot In Command, all aircraft), 51 hours (Last 90 days, all aircraft), 7 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	HILLER	Registration:	N234SM
Model/Series:	12C 12C	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	55-4101
Landing Gear Type:	Skid	Seats:	3
Date/Type of Last Inspection:	April 25, 1995 Annual	Certified Max Gross Wt.:	2500 lbs
Time Since Last Inspection:	61 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3289 Hrs	Engine Manufacturer:	FRANKLIN
ELT:	Not installed	Engine Model/Series:	6V4-200-C33
Registered Owner:	STEVEN R. GANN	Rated Power:	200 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	CRE ,34 ft msl	Distance from Accident Site:	
Observation Time:	14:11 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Scattered / 1000 ft AGL	Visibility	7 miles
Lowest Ceiling:	Overcast / 15000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	10 knots / 15 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	50°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	13°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(CRE)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	14:30 Local	Type of Airspace:	Class G

Airport Information

Airport:	GRAND STRAND AIRPORT CRE	Runway Surface Type:	Asphalt
Airport Elevation:	34 ft msl	Runway Surface Condition:	Dry
Runway Used:	5	IFR Approach:	None
Runway Length/Width:	6000 ft / 100 ft	VFR Approach/Landing:	Simulated forced landing

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:	33.689449,-78.889564(est)

Administrative Information

Investigator In Charge (IIC): Powell, Phillip

Additional Participating Persons: DAVID SEXTON;

Original Publish Date: April 18, 1996

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=3678>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).