



Aviation Investigation Final Report

Location:	MURFREESBORO, Tennessee	Accident Number:	ATL99LA036
Date & Time:	December 30, 1998, 15:00 Local	Registration:	N123NM
Aircraft:	Bell 47G-3B-2	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Other work use		

Analysis

The pilot had completed a local photographic flight, and was returning to the airport to refuel. While on short final to land, about five feet above the ground, the pilot's flight chart slipped off his right leg, and he was momentarily distracted while looking down to retrieve the chart. The pilot reported that the helicopter struck the ground in a level attitude on the skids. The passenger described the touchdown as 'abnormally hard'. The pilot said when he went to reposition the helicopter for refueling, he had no tail rotor pedal control. He then proceeded to shut the helicopter down. An examination of the helicopter disclosed that the tail boom assembly had been severed, and there was damage to the trailing edge of one of the main rotor blades. No mechanical problems with the helicopter were reported by the pilot.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadequate flare and his diverted attention, which resulted in a hard landing.

Findings

Occurrence #1: HARD LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

- Findings
1. MISC ROTORCRAFT, TAIL BOOM - CUT/SEVERED

2. (C) FLARE - INADEQUATE - PILOT IN COMMAND
3. (C) DIVERTED ATTENTION - PILOT IN COMMAND

Factual Information

On December 30, 1998, about 1500 central standard time, a Bell 47G-3B-2 helicopter, N123NM, collided with the ground during a landing on runway 36 at the Murfreesboro Municipal Airport (MBT), Murfreesboro, Tennessee. The helicopter was operated by Photo Data Services LLC, under the provisions of Title 14 CFR Part 91, and visual flight rules. Visual meteorological conditions prevailed. A flight plan was not filed for the local aerial survey flight. There were no injuries to the commercial helicopter pilot nor the photographer. The helicopter was substantially damaged. The flight had originated from the Murfreesboro Airport about 1400, on the same day.

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Pilot Information

Certificate:	Commercial	Age:	39, Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Helicopter	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	October 24, 1997
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	1813 hours (Total, all aircraft), 149 hours (Total, this make and model), 1615 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bell	Registration:	N123NM
Model/Series:	47G-3B-2 47G-3B-2	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	6702
Landing Gear Type:	Skid	Seats:	3
Date/Type of Last Inspection:	November 6, 1998 AAIP	Certified Max Gross Wt.:	2950 lbs
Time Since Last Inspection:	176 Hrs	Engines:	1 Turbo shaft
Airframe Total Time:	8514 Hrs	Engine Manufacturer:	Allison
ELT:	Installed, not activated	Engine Model/Series:	CAE C20B
Registered Owner:	PHOTO DATA SERVICES LLC	Rated Power:	420 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:	MBT ,616 ft msl	Distance from Accident Site:	
Observation Time:	19:00 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	29°C / 13°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(MBT)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	VFR
Departure Time:	14:00 Local	Type of Airspace:	Class E

Airport Information

Airport:	MURFREESBORO MUNICIPAL MBT	Runway Surface Type:	Concrete
Airport Elevation:		Runway Surface Condition:	Dry
Runway Used:	36	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Full stop

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:	35.780776,-86.33039(est)

Administrative Information

Investigator In Charge (IIC):	Hicks, Preston
Additional Participating Persons:	PAUL D JONES; NASVILLE , TN THOMAS SULLY;
Original Publish Date:	February 22, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=45507

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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](#).