



Aviation Investigation Final Report

Location:	Troy, Montana	Accident Number:	SEA01TA172
Date & Time:	September 17, 2001, 16:00 Local	Registration:	N458CC
Aircraft:	Bell 205	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Public aircraft		

Analysis

The pilot was returning from an external load long-line firefighting flight when he noticed a vertical vibration above 90 knots. After landing at Troy he noticed damage to the main rotor blades. Subsequently, he noticed that pine needles had been ingested by the helicopter's induction system. The pilot reported that he had no memory of hitting any objects during the operation. The weather was clear with 20 miles visibility, and the sky was partially obscured by smoke. There was no report of mechanical failure or malfunction with the helicopter.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot-in-command's failure to maintain separation/clearance from trees while maneuvering.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: MANEUVERING - AERIAL APPLICATION

Findings

1. (F) OBJECT - TREE(S)
2. (C) CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND

Factual Information

On September 17, 2001, about 1600 mountain daylight time, a Bell 205 helicopter, N458CC, sustained substantial damage following a main rotor blade strike while conducting firefighting operations near Libby, Montana. The helicopter is registered to Billings Flying Service, Billings, Montana, and was being operated by the United States Forest Service (USFS) as a public use aircraft. The commercial pilot, the sole occupant of the helicopter, was not injured. Visual meteorological conditions prevailed, and USFS VFR flight following procedures were in effect.

In a written statement dated September 26, 2001, the pilot reported that he was maneuvering near a shoreline in an effort to get a full bucket of water. "I made 40-50 bucket drops on the fire and flew out my fuel cycle before breaking off from the fire and returned to Troy Airport. On the return flight to Troy airport, I noticed a vertical vibration at approximately 90 knots (forward airspeed)." He continued to Troy airport at a slower speed to avoid the vibration. After landing without incident, the pilot noted damage to the helicopter's main rotor blades. He also noted that pine needles had been ingested into the aircraft's induction system. The pilot did not recall coming into contact with anything during the flight.

Personnel from the USFS reported that the helicopter was conducting external load long-line (100 feet) operations when the helicopters main rotor blades contacted trees.

Postaccident examination of the helicopter, by a certified mechanic, revealed that both main rotor blades sustained substantial damage.

The pilot stated that the weather was clear with more than 20 miles visibility, with the sky partially obscured by occasional smoke.

The pilot reported no mechanical failure or malfunction of the aircraft.

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	55, Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	Helicopter	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	July 31, 2001
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	August 29, 2001
Flight Time:	17630 hours (Total, all aircraft), 3530 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bell	Registration:	N458CC
Model/Series:	205	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	67-17678
Landing Gear Type:	Skid	Seats:	2
Date/Type of Last Inspection:	August 1, 2001 100 hour	Certified Max Gross Wt.:	9500 lbs
Time Since Last Inspection:	37 Hrs	Engines:	1 Turbo shaft
Airframe Total Time:	8668 Hrs at time of accident	Engine Manufacturer:	Allied Signal
ELT:	Installed, not activated	Engine Model/Series:	T-53-L-13B
Registered Owner:	Billings Flying Service	Rated Power:	1300 Horsepower
Operator:	U.S. Forest Service	Operating Certificate(s) Held:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	20 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	10 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	315°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	24°C
Precipitation and Obscuration:	N/A - None - Smoke		
Departure Point:	Troy, MT (57S)	Type of Flight Plan Filed:	Company VFR
Destination:	MT	Type of Clearance:	None
Departure Time:	15:53 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	48.315277,-115.986663

Administrative Information

Investigator In Charge (IIC):	Hogenson, Dennis
Additional Participating Persons:	Eddie Morris; U.S. Forest Service; Missoula, MT
Original Publish Date:	June 3, 2002
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=53484

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](#).