



Aviation Investigation Final Report

Location:	MOULTONBORO, New Hampshire	Accident Number:	NYC85LA005
Date & Time:	October 7, 1984, 17:55 Local	Registration:	N401GC
Aircraft:	BELL 47G3-B1	Aircraft Damage:	Substantial
Defining Event:		Injuries:	3 None
Flight Conducted Under:	Part 135: Air taxi & commuter - Non-scheduled		

Analysis

ACFT WAS CLIMBING THROUGH A MOUNTAIN SADDLE WHEN THE ENGINE BEGAN TO BACKFIRE AND LOSE POWER. PLT ENTERED AUTOROTATION & SETTLED INTO TREES ON AUTOROTATIVE FLARE. ENGINE INSPECTION REVEALED #3 CYLINDER INTAKE VALVE SPRINGS BROKEN.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: CLIMB

Findings

1. (C) ENGINE ASSEMBLY, VALVE, INTAKE - DISABLED

Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Findings

2. AUTOROTATION - PERFORMED - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: LANDING

Findings

3. (F) TERRAIN CONDITION - MOUNTAINOUS/HILLY
4. (F) TERRAIN CONDITION - HIGH VEGETATION
5. (F) OBJECT - TREE(S)

Factual Information

Pilot Information

Certificate:	Commercial	Age:	44, 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:	None Valid Medical--no waivers/lim.	Last FAA Medical Exam:	May 11, 1984
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	2229 hours (Total, all aircraft), 295 hours (Total, this make and model), 1996 hours (Pilot In Command, all aircraft), 245 hours (Last 90 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BELL	Registration:	N401GC
Model/Series:	47G3-B1 47G3-B1	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal; Utility	Serial Number:	3568
Landing Gear Type:	Retractable - Tricycle	Seats:	3
Date/Type of Last Inspection:	February 27, 1984 100 hour	Certified Max Gross Wt.:	2950 lbs
Time Since Last Inspection:	89 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	5822 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed	Engine Model/Series:	VO-435-A1F
Registered Owner:	VERMONT TRAVELERS, INC.	Rated Power:	270 Horsepower
Operator:		Operating Certificate(s) Held:	On-demand air taxi (135)
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:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	12 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	MOULTONBORO , VT (HN08)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	15:52 Local	Type of Airspace:	Class G

Airport Information

Airport:	MOULTONBORO	Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC): Taylor, Vernon

Additional Participating Persons:

Original Publish Date:

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=35629>

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](#).