



Aviation Investigation Final Report

Location:	Carrollton, Ohio	Accident Number:	CHI08LA151
Date & Time:	June 1, 2008, 13:30 Local	Registration:	N74898
Aircraft:	Bell 47D1	Aircraft Damage:	Substantial
Defining Event:	Sys/Comp malf/fail (non-power)	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that he had departed the airport and had flown about 8 miles when the helicopter's cyclic began to shake violently during cruise flight. When he attempted to land, he could not get the helicopter to hover so he attempted a run-on landing. The pilot reported that the helicopter's skid caught some high grass or rough terrain and then the helicopter rolled on its side. The pilot reported that the helicopter was operating normally prior to the accident. The inspection of the helicopter revealed no preexisting anomalies.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The airframe vibration for an undetermined reason.

Findings

Environmental issues	Rough terrain - Contributed to outcome
Not determined	(general) - Unknown/Not determined

Factual Information

History of Flight

Enroute-cruise	Sys/Comp malf/fail (non-power) (Defining event)
Landing	Roll over

On June 1, 2008, at 1330 eastern daylight time, a Bell 47D1 helicopter, N74898, sustained substantial damage during a forced landing to a field after it experienced a severe shaking in the cyclic control during cruise flight near Carrollton, Ohio. The commercial helicopter pilot was not injured. The 14 Code of Federal Regulations Part 91 personal flight departed the Carrollton County-Tolson Airport (TSO), Carrollton, Ohio, at 1315 en route to Wheeling, West Virginia. Visual meteorological conditions prevailed and no flight plan was filed.

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The inspection of the helicopter by a helicopter mechanic revealed no preexisting anomalies. A broken hydraulic hose was sent to the National Transportation Safety Board's Investigator-In-Charge (IIC) for inspection. The inspection of the hose revealed no pre-impact anomaly.

Pilot Information

Certificate:	Commercial; Private	Age:	55, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	March 1, 2008
Occupational Pilot:	No	Last Flight Review or Equivalent:	January 1, 2008
Flight Time:	3115 hours (Total, all aircraft), 125 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bell	Registration:	N74898
Model/Series:	47D1	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	A1A1-68
Landing Gear Type:	Skid	Seats:	3
Date/Type of Last Inspection:	October 1, 2007 Annual	Certified Max Gross Wt.:	
Time Since Last Inspection:	47 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	2635 Hrs as of last inspection	Engine Manufacturer:	Franklin
ELT:	Not installed	Engine Model/Series:	O-325-5D
Registered Owner:	Thomas P. West	Rated Power:	
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	PHD,894 ft msl	Distance from Accident Site:	15 Nautical Miles
Observation Time:	12:53 Local	Direction from Accident Site:	240°
Lowest Cloud Condition:	Few / 5500 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	13 knots / 18 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	330°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.9 inches Hg	Temperature/Dew Point:	24°C / 12°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Carrollton, OH (TSO)	Type of Flight Plan Filed:	None
Destination:	Wheeling, WV (HLG)	Type of Clearance:	None
Departure Time:	13:15 Local	Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	40.561668,-81.077224

Administrative Information

Investigator In Charge (IIC):	Silliman, James
Additional Participating Persons:	James L Larry; FAA-Cleveland FSDO; Cleveland, OH
Original Publish Date:	August 13, 2009
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=68309

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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](#).