



Aviation Investigation Final Report

Location:	MIAMI, Florida	Accident Number:	MIA87LA190
Date & Time:	June 20, 1987, 18:50 Local	Registration:	N6772D
Aircraft:	BELL 47G-2	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

THE INSTRUCTOR PLT STATED THAT THE HELICOPTER BEGAN TO VIBRATE WHILE THE STUDENT PLT WAS MANEUVERING IT DURING AN INSTRUCTIONAL FLT. THE INSTRUCTOR PLT THEN EXECUTED A FORCED LANDING AND UPON TOUCHDOWN THE MAIN ROTOR BLADES CONTACTED THE GROUND. INSPECTION OF THE HELICOPTER REVEALED THAT THE BOLT WHICH ATTACHES ONE SIDE OF THE SWASHPLATE TO THE SCISSOR ASSY BROKE RESULTING IN THE LOSS OF PITCH CONTROL OF THE MAIN ROTOR BLADES.

Probable Cause and Findings

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

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: MANEUVERING

Findings

1. (C) ROTORCRAFT FLIGHT CONTROL, SWASHPLATE ASSEMBLY - FAILURE, PARTIAL
2. (C) ROTORCRAFT FLIGHT CONTROL, SWASHPLATE ASSEMBLY - DISCONNECTED

Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: HARD LANDING

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

3. (C) FLARE - NOT POSSIBLE - PILOT IN COMMAND(CFI)

Factual Information

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	27, 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:	August 25, 1986
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	2300 hours (Total, all aircraft), 2031 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BELL	Registration:	N6772D
Model/Series:	47G-2 47G-2	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	2256
Landing Gear Type:	Skid	Seats:	2
Date/Type of Last Inspection:	April 8, 1987 100 hour	Certified Max Gross Wt.:	2450 lbs
Time Since Last Inspection:	20 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	8459 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	VO-435-A1D
Registered Owner:	TOYOSHI KIMURA	Rated Power:	260 Horsepower
Operator:	KIMURA INTERNATIONAL	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:	OPF ,9 ft msl	Distance from Accident Site:	
Observation Time:	18:50 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Scattered / 2500 ft AGL	Visibility	12 miles
Lowest Ceiling:	Broken / 20000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	120°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	18:00 Local	Type of Airspace:	Class D

Airport Information

Airport:	OPA LOCKA OPF	Runway Surface Type:	Asphalt
Airport Elevation:	9 ft msl	Runway Surface Condition:	Dry
Runway Used:	9	IFR Approach:	None
Runway Length/Width:	8002 ft / 150 ft	VFR Approach/Landing:	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:	25.909662,-80.270431(est)

Administrative Information

Investigator In Charge (IIC): Monville, Timothy

Additional Participating Persons:

Original Publish Date: October 7, 1988

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=31933>

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](#).