



Aviation Investigation Final Report

Location:	CHESTERFIELD, Missouri	Accident Number:	MKC82DA135
Date & Time:	July 31, 1982, 15:45 Local	Registration:	N4070B
Aircraft:	BELL 47J-2	Aircraft Damage:	Substantial
Defining Event:		Injuries:	4 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE PILOT STATED THAT HE TOOK OFF AND WAS GOING THROUGH TRANSLATIONAL LIFT AT ABOUT 15 TO 20 FT AGL WHEN HE HEARD A LOUD BANG. HE SAID THE LOUD BANG WAS ACCOMPANIED BY A POWER LOSS. AN IMMEDIATE DESCENT WAS MADE AND THE HELICOPTER WAS LANDED HARD WITH A FORWARD SPEED OF ABOUT 30 KTS. THE PILOT REPORTED THAT DURING THE LANDING, THE TAIL BOOM WAS CHOPPED OFF AND THE RIGHT SKID COLLAPSED WHEN THE HELICOPTER SKIDDED THROUGH A DITCH. THE ENGINE WAS STILL RUNNING AFTER LANDING. AN EXAMINATION OF THE ENGINE REVEALED NO PREIMPACT DEFICIENCIES.

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
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (C) REASON FOR OCCURRENCE UNDETERMINED

Occurrence #2: HARD LANDING

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

2. PRECAUTIONARY LANDING - PERFORMED - PILOT IN COMMAND

Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER

Phase of Operation: LANDING - ROLL

Findings

3. (F) TERRAIN CONDITION

Occurrence #4: OTHER GEAR COLLAPSED

Phase of Operation: LANDING

Factual Information

Pilot Information

Certificate:	Airline transport; Commercial; Flight instructor	Age:	27, Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane single-engine; Helicopter	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	August 12, 1981
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	4655 hours (Total, all aircraft), 975 hours (Total, this make and model), 3855 hours (Pilot In Command, all aircraft), 262 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BELL	Registration:	N4070B
Model/Series:	47J-2 47J-2	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:		Serial Number:	1812
Landing Gear Type:	Skid	Seats:	4
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	4000 lbs
Time Since Last Inspection:	8 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	11110 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	VO-540B1B
Registered Owner:	METROPOLITAN HELICOPTER INC	Rated Power:	260 Horsepower
Operator:	METROPOLITAN HELICOPTER INC	Operating Certificate(s) Held:	
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	10 miles
Lowest Ceiling:	Unknown	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	80°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	80°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	CHESTERFIELD , MO (SUS)	Type of Flight Plan Filed:	None
Destination:	ALHAMBRA , IL	Type of Clearance:	
Departure Time:	15:45 Local	Type of Airspace:	

Airport Information

Airport:	SPIRIT OF ST. LOUIS SUS	Runway Surface Type:	Dirt;Grass/turf
Airport Elevation:	0 ft msl	Runway Surface Condition:	Holes
Runway Used:	0	IFR Approach:	None
Runway Length/Width:	0 ft / 0 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	3 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 None	Latitude, Longitude:	38.650089,-90.530883(est)

Administrative Information

Investigator In Charge (IIC):

Additional Participating Persons:

Original Publish Date: July 31, 1983

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.ntsb.gov/Docket?ProjectID=70218>

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](#).