



Aviation Investigation Final Report

Location:	LOUISVILLE, Kentucky	Accident Number:	BF091LA014
Date & Time:	November 15, 1990, 10:20 Local	Registration:	N9280F
Aircraft:	HUGHES 269C	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Other work use		

Analysis

THE PILOT WAS PATROLLING A PIPELINE WHEN THE ENGINE LOST POWER. HE DID AN AUTOROTATION LANDING IN AN OPEN FIELD. THE INVESTIGATION REVEALED THE NUMBER ONE CYLINDER CONNECTING ROD CAP HAD FRACTURED. METALLURGICAL EXAMINATION OF THE FRACTURE SURFACE REVEALED A FATIGUE CRACK HAD ORIGINATED FROM A GALLING MARK ON THE BEARING SURFACE OF THE ROD. THE ENGINE WAS OPERATED 39 HOURS SINCE IT WAS LAST OVERHAULED.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: FATIGUE FAILURE OF THE NUMBER 1 CYLINDER CONNECTING ROD.

Findings

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

Findings

1. (C) ENGINE ASSEMBLY,CONNECTING ROD CAP - FAILURE,TOTAL
2. (C) ENGINE ASSEMBLY,CONNECTING ROD CAP - FATIGUE

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

Occurrence #3: HARD LANDING
Phase of Operation: LANDING

Factual Information

Pilot Information

Certificate:	Commercial	Age:	40,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Gyroplane; Helicopter	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane single-engine	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	November 16, 1990
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	7660 hours (Total, all aircraft), 2600 hours (Total, this make and model), 275 hours (Last 90 days, all aircraft), 46 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	HUGHES	Registration:	N9280F
Model/Series:	269C 269C	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	540305
Landing Gear Type:	Skid	Seats:	3
Date/Type of Last Inspection:	October 1, 1990 Unknown	Certified Max Gross Wt.:	2050 lbs
Time Since Last Inspection:	39 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	8409 Hrs	Engine Manufacturer:	LYCOMING
ELT:		Engine Model/Series:	HIO-360-D1A
Registered Owner:	HELICOPTERS, INC	Rated Power:	200 Horsepower
Operator:	HELICOPTERS INC.	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:	LOU	Distance from Accident Site:	
Observation Time:	11:50 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	9 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	230°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	21°C / 9°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	10:00 Local	Type of Airspace:	

Airport Information

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

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:	38.220741,-85.680046(est)

Administrative Information

Investigator In Charge (IIC): Jones, Dennis

Additional Participating Persons:

Original Publish Date: December 30, 1992

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=11645>

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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](#).