



National Transportation Safety Board Aviation Incident Final Report

Location:	INTERCOASTAL CI, LA	Incident Number:	FTW831A053
Date & Time:	12/02/1982, 1300 CST	Registration:	N2258F
Aircraft:	BELL 412	Aircraft Damage:	None
Defining Event:		Injuries:	2 None

Flight Conducted Under: Part 91: General Aviation -

Analysis

WHILE IN CRUISE FLIGHT, THE PILOTS HEARD A LOUD POP AND FELT A SEVERE CYCLIC CONTROL VIBRATION. AN IMMEDIATE PRECAUTIONARY LANDING WAS MADE. AN EXAMINATION REVEALED THAT THERE WAS A FATIGUE CRACK IN THE TRAILING EDGE OF THE BLUE, MAIN ROTOR YOKE FLEXURE, PN 412-010-101-113. THE HELICOPTER AND THE FIXTURE HAD ACCUMULATED 1071 HRS OF FLIGHT TIME. THE LIFE LIMIT OF THE FAILED COMPONENT WAS 5000 HRS.

Probable Cause and Findings

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

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: CRUISE - NORMAL

Findings

1. (C) ROTOR SYSTEM,MAIN ROTOR HUB YOKE(SPINDLE) - FATIGUE

Factual Information

Pilot Information

Certificate:	Airline Transport	Age:	33, Male
Airplane Rating(s):		Seat Occupied:	Unknown
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Helicopter	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	09/21/1982
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	6820 hours (Total, all aircraft), 967 hours (Total, this make and model), 3901 hours (Pilot In Command, all aircraft), 12 hours (Last 90 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BELL	Registration:	N2258F
Model/Series:	412 412	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:		Serial Number:	33073
Landing Gear Type:	Skid	Seats:	12
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	11600 lbs
Time Since Last Inspection:	77 Hours	Engines:	2 Turbo Shaft
Airframe Total Time:	1071 Hours	Engine Manufacturer:	P&W
ELT:	Not installed	Engine Model/Series:	PT6T-3B
Registered Owner:	PETROLEUM HELICOPTERS, INC.	Rated Power:	1350 hp
Operator:	PETROLEUM HELICOPTERS, INC.	Operating Certificate(s) Held:	On-demand Air Taxi (135)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	, 0 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0000	Direction from Accident Site:	0°
Lowest Cloud Condition:	Scattered / 700 ft agl	Visibility	7 Miles
Lowest Ceiling:	Unknown / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	15 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	90°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	/ 0° C
Precipitation and Obscuration:			
Departure Point:	ABBEVILLE, LA (0R3)	Type of Flight Plan Filed:	None
Destination:	RENO, NV (RNO)	Type of Clearance:	None
Departure Time:	0000	Type of Airspace:	

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	Report Date:	12/02/1983
Additional Participating Persons:		
Publish Date:		
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinquiry@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .	

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).