



National Transportation Safety Board Aviation Accident Data Summary

Location:	VENICE, LA	Accident Number:	FTW99LA155
Date & Time:	06/01/1999, 1448 CDT	Registration:	N7131U
Aircraft:	Bell 206B	Injuries:	3 None
Flight Conducted Under:	Part 91: General Aviation - Aerial Observation		

Analysis

About 150 feet agl and 60 knots, as the helicopter was accelerating, the pilot heard a loud 'bang,' and the low rotor rpm and engine out audio warning activated. The pilot initiated an autorotation to a grassy area, 'flared the aircraft, and placed it in six to eight inches of water.' A main rotor blade contacted the tailboom, partially separating it aft of the horizontal stabilizer. A passenger reported that the pilot 'pulled pitch right before the landing and we landed with one medium bump and then followed very quickly with another medium bump with a loud sound with it.' The passenger further reported that the landing attitude was 'relatively normal;' however, 'it was possibly a little more pitched up than normal.' An examination of the engine revealed that the Spur Adapter Gearshaft was fractured at the forward splines. According to the engine manufacturer's metallurgist, 'severe spline wear led to [the] spiral fatigue failure of the Spur Adapter Gearshaft and Compressor Adapter Coupling.' The reason for the spline wear was not determined.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper touchdown procedure, resulting in a main rotor blade contacting the tailboom. Factors were the soft and wet terrain conditions, and the loss of engine power due to the spiral fatigue failure of the gas generator turbine shafting due to spline wear.

Findings

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

Findings

1. (F) TURBOSHAFT ENGINE,GAS GENERATOR TURBINE SHAFT - WORN
2. (F) TURBOSHAFT ENGINE,GAS GENERATOR TURBINE SHAFT - FATIGUE
3. (F) TURBOSHAFT ENGINE,GAS GENERATOR TURBINE SHAFT - FRACTURED
4. TURBOSHAFT ENGINE,GAS GENERATOR TURBINE SHAFT - SEPARATION
5. AUTOROTATION - INITIATED - PILOT IN COMMAND

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

Occurrence #3: HARD LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

6. (F) TERRAIN CONDITION - WET
7. (F) TERRAIN CONDITION - SOFT
8. (C) TOUCHDOWN - IMPROPER - PILOT IN COMMAND
9. MISC ROTORCRAFT,MAIN ROTOR/TAIL BOOM CONTACT

Pilot Information

Certificate:	Commercial; Private	Age:	38
Airplane Rating(s):	Single-engine Land	Instrument Rating(s):	Airplane; Helicopter
Other Aircraft Rating(s):	Helicopter	Instructor Rating(s):	None
Flight Time:	3385 hours (Total, all aircraft), 1825 hours (Total, this make and model), 2036 hours (Pilot In Command, all aircraft), 162 hours (Last 90 days, all aircraft), 55 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bell	Registration:	N7131U
Model/Series:	206B 206B	Engines:	1 Turbo Shaft
Operator:	CHEVRON USA, INC.	Engine Manufacturer:	Allison
Operating Certificate(s) Held:	On-demand Air Taxi (135)	Engine Model/Series:	250C-20J
Flight Conducted Under:	Part 91: General Aviation - Aerial Observation		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	, 0 ft msl	Weather Information Source:	Pilot
Lowest Ceiling:	Broken / 3000 ft agl	Wind Speed/Gusts, Direction:	8 knots / , 130°
Temperature:	31 °C	Visibility	7 Miles
Precipitation and Obscuration:			
Departure Point:	WEST DELTA 30, GM (NONE)	Destination:	

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC): DOUGLAS D WIGINGTON Adopted Date: 11/30/2000

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 pubinq@ntsb.gov, or at 800-877-6799. Dockets released after this date are available at <http://dms.nts.gov/pubdms/>.

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