



Aviation Investigation Final Report

Location:	GALVESTON, Texas	Accident Number:	FTW84FA287
Date & Time:	June 25, 1984, 13:20 Local	Registration:	N2180J
Aircraft:	BELL 212	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor, 9 None
Flight Conducted Under:	Part 135: Air taxi & commuter - Non-scheduled		

Analysis

DURING TAKEOFF, THE HELICOPTER LIFTED OFF IN AN 80% POWER CHECK & THE PLT BEGAN A NORTHERLY DEPARTURE. BEFORE ACHIEVING TRANSLATIONAL LIFT, THE ROTOR RPM DROPPED TO APRX 85%. THE TORQUE METER INDICATED A SPLIT WITH THE #1 ENG INDICATING ABOUT 55% & THE #2 ENG INDICATING AS LOW AS 39%. THE LOW ROTOR RPM AUDIO & WARNING LIGHT ACTIVATED & THE HELICOPTER BEGAN TO SINK. THE PLT HAD INSUFFICIENT ALT TO RECOVER RPM. HE LANDED THE HELICOPTER IN A CLEAR AREA IN A NOSE HIGH ATTITUDE & WITH FORWARD SPEED. DURING THE LANDING, THE SKIDS WERE DAMAGED (SPREAD), THE HELICOPTER ROCKED FORWARD, THE RADOME WAS DAMAGED & THE TAIL BOOM WAS SEVERED. AN INVESTIGATION REVEALED THAT THE #2 ENG, MAIN FUEL CONTROL, PN3244736-8 HAD AN AIR LEAK AT THE P3-TP-PG REGULATOR AIR DIAPHRAM WJERE A RETAINING SCREW WAS LOOSE. THE SCREW HAD BEEN SAFETY WIRED & SEALED BY THE MANUFACTURER BUT WOULD TURN SLIGHTLY WITHIN THE LIMITS OF THE WIRE. WHEN TIGHTENED, WITHIN THE LIMITS, THE AIR LEAK STOPPED.

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(PARTIAL) - MECH FAILURE/MALF
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (C) FUEL SYSTEM,FUEL CONTROL - LOOSE
2. (C) MAINTENANCE,INSTALLATION - IMPROPER - MANUFACTURER
3. (F) INADEQUATE QUALITY CONTROL - MANUFACTURER
4. (C) FUEL SYSTEM,FUEL CONTROL - LEAK
5. (C) FUEL SYSTEM,FUEL CONTROL - OUTPUT LOW

Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Findings

6. AUTOROTATION - PERFORMED - PILOT IN COMMAND

Occurrence #3: HARD LANDING

Phase of Operation: DESCENT - EMERGENCY

Factual Information

Pilot Information

Certificate:	Commercial	Age:	31, Male
Airplane Rating(s):	None	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Helicopter	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	July 18, 1983
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	BELL	Registration:	N2180J
Model/Series:	212 212	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	31207
Landing Gear Type:	Skid	Seats:	14
Date/Type of Last Inspection:	June 9, 1984 100 hour	Certified Max Gross Wt.:	11200 lbs
Time Since Last Inspection:	37 Hrs	Engines:	2 Turbo shaft
Airframe Total Time:	1177 Hrs	Engine Manufacturer:	P&W
ELT:	Not installed	Engine Model/Series:	PT6T-3B-TPAC
Registered Owner:	PUMPKIN AIR INC.	Rated Power:	645 Horsepower
Operator:		Operating Certificate(s) Held:	On-demand air taxi (135)
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:	GLS, 7 ft msl	Distance from Accident Site:	4 Nautical Miles
Observation Time:	12:55 Local	Direction from Accident Site:	200°
Lowest Cloud Condition:	Scattered	Visibility	7 miles
Lowest Ceiling:	Broken / 25000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	30°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	34°C / 23°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	GALVESTON , TX	Type of Flight Plan Filed:	Company VFR
Destination:	HIGH ISL 474 , GM	Type of Clearance:	None
Departure Time:	00:00 Local	Type of Airspace:	Class G

Airport Information

Airport:	PENZOIL PAD 9T8	Runway Surface Type:	Grass/turf
Airport Elevation:	6 ft msl	Runway Surface Condition:	Dry
Runway Used:	0	IFR Approach:	
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor, 8 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor, 9 None	Latitude, Longitude:	29.299213,-94.790077(est)

Administrative Information

Investigator In Charge (IIC): Daugherty, J

Additional Participating Persons:

Original Publish Date:

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=21128>

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](#).