



Aviation Investigation Final Report

Location:	ALLEN, Texas	Accident Number:	FTW89DPA03
Date & Time:	December 2, 1988, 15:45 Local	Registration:	N74124
Aircraft:	BELL 47-D1	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE NON-RATED, PRIVATE AIRPLANE PILOT WAS FLYING HIS HELICOPTER IN THE TRAFFIC PATTERN AND PRACTICING POWER RECOVERY AUTOROTATIONS, WHEN ON THE THIRD OR FOURTH ATTEMPT, THE PILOT/OWNER FLARED EXCESSIVELY CAUSING THE TAIL ROTOR BLADES TO STRIKE THE GROUND. THE TAIL ROTOR SYSTEM SEPARATED AND THE HELICOPTER ROLLED OVER RESULTING IN SUBSTANTIAL DAMAGE TO THE MAIN ROTOR SYSTEM AND AIRFRAME.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: UNQUALIFIED PILOT'S POOR JUDGEMENT IN LEVELING THE HELICOPTER DURING THE FLARE AND CONTRIBUTING TO THIS WAS HIS LACK OF TOTAL EXPERIENCE IN THIS TYPE AIRCRAFT.

Findings

Occurrence #1: DRAGGED WING, ROTOR, POD, FLOAT OR TAIL/SKID
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

1. ROTOR SYSTEM, TAIL ROTOR BLADE - SEPARATION
2. (C) AUTOROTATION - MISJUDGED - PILOT IN COMMAND
3. (F) LACK OF TOTAL EXPERIENCE IN TYPE OF AIRCRAFT - UNQUALIFIED PERSON

Occurrence #2: ROLL OVER
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Factual Information

Pilot Information

Certificate:	Private	Age:	57, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Expired	Last FAA Medical Exam:	July 3, 1986
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	1100 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BELL	Registration:	N74124
Model/Series:	47-D1 47-D1	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	WH-5009
Landing Gear Type:	Skid	Seats:	3
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	2200 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	FRANKLIN
ELT:	Not installed	Engine Model/Series:	6V4-200-C32
Registered Owner:	SKELTON, PAUL E.	Rated Power:	200 Horsepower
Operator:		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:	ADS ,643 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	15:47 Local	Direction from Accident Site:	225°
Lowest Cloud Condition:	Scattered	Visibility	15 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	21°C / 2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	15:40 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Simulated forced landing

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	33.100025,-96.660148(est)

Administrative Information

Investigator In Charge (IIC):	Johnson, J
Additional Participating Persons:	JACK SUTTLE; FORT WORTH , TX
Original Publish Date:	June 25, 1990
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=22693

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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](#).