



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	ALLEN, TX	<b>Accident Number:</b>	FTW89DPA03
<b>Date &amp; Time:</b>	12/02/1988, 1545 CST	<b>Registration:</b>	N74124
<b>Aircraft:</b>	BELL 47-D1	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 Serious

**Flight Conducted Under:** Part 91: General Aviation - Personal

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## 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

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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

<b>Certificate:</b>	Private	<b>Age:</b>	57, Male
<b>Airplane Rating(s):</b>	Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 Expired	<b>Last FAA Medical Exam:</b>	07/03/1986
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	1100 hours (Total, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	BELL	<b>Registration:</b>	N74124
<b>Model/Series:</b>	47-D1 47-D1	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	WH-5009
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	3
<b>Date/Type of Last Inspection:</b>	Unknown	<b>Certified Max Gross Wt.:</b>	2200 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	FRANKLIN
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	6V4-200-C32
<b>Registered Owner:</b>	SKELTON, PAUL E.	<b>Rated Power:</b>	200 hp
<b>Operator:</b>	SKELTON, PAUL E.	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	ADS, 643 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	1547 CST	Direction from Accident Site:	225°
Lowest Cloud Condition:	Scattered / 0 ft agl	Visibility	15 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	Calm /	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	21° C / 2° C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1540 CST	Type of Airspace:	Class G

## Wreckage and Impact Information

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

## Administrative Information

Investigator In Charge (IIC):	J O JOHNSON	Report Date:	06/25/1990
Additional Participating Persons:	JACK SUTTLE; FORT WORTH, TX		
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 <a href="mailto:pubinquiry@ntsb.gov">pubinquiry@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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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](#).