



Aviation Investigation Final Report

Location:	NEAR MERTZON, Texas	Incident Number:	FTW82IA268
Date & Time:	July 3, 1982, 11:13 Local	Registration:	N73983
Aircraft:	BELL 47G2A1	Aircraft Damage:	Minor
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation		

Analysis

WHILE THE AIRCRAFT WAS BEING HOVERED LOW AND SLOW AROUND A WATER TROUGH, DIRECTIONAL CONTROL WAS LOST. THE PILOT AUTOROTATED TO THE GROUND AND ON TOUCHDOWN THE RIGHT SKID BUCKLED AND THE TAILROTOR GEARBOX SEPARATED WHEN IT STRUCK AN ANT HILL. THE PILOT ORIGINALLY REPORTED THAT ONE OF THE TAILROTOR BLADES HAD SEPARATED IN WHAT APPEARED TO BE FATIGUE. HOWEVER METALLURGICAL EXAMINATION OF THE FAILED PARTS INDICATED THAT ALL OF THE FRACTURES HAD OCCURED IN OVERLOAD. THE REPORTED WINDS WOULD HAVE BEEN CONDUCTIVE TO LOSS OF TAILROTOR EFFECTIVENESS AT LOWER AIRSPEEDS.

Probable Cause and Findings

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

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: MANEUVERING

Findings

1. (F) WEATHER CONDITION - UNFAVORABLE WIND
2. (C) DIRECTIONAL CONTROL - NOT MAINTAINED - PILOT IN COMMAND
3. (C) WIND INFORMATION - DISREGARDED - PILOT IN COMMAND

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

Findings

4. (C) PROPER DESCENT RATE - NOT OBTAINED - PILOT IN COMMAND

Factual Information

Pilot Information

Certificate:	Commercial	Age:	42, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Airplane; 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:	December 21, 1982
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	1464 hours (Total, all aircraft), 186 hours (Total, this make and model), 125 hours (Pilot In Command, all aircraft), 33 hours (Last 90 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BELL	Registration:	N73983
Model/Series:	47G2A1 47G2A1	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:		Serial Number:	2873
Landing Gear Type:	Skid	Seats:	3
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	2850 lbs
Time Since Last Inspection:	0 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	8972 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	VO-435-A1E
Registered Owner:	HAL E. NOELKE	Rated Power:	240 Horsepower
Operator:	HAL E. NOELKE	Operating Certificate(s) Held:	
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:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Unknown	Visibility	50 miles
Lowest Ceiling:	Unknown	Visibility (RVR):	
Wind Speed/Gusts:	25 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	165°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	85°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	NEAR MERTZON , TX	Type of Flight Plan Filed:	None
Destination:	NEAR MERTZON , TX	Type of Clearance:	None
Departure Time:	00:11 Local	Type of Airspace:	

Airport Information

Airport:		Runway Surface Type:	Dirt
Airport Elevation:	0 ft msl	Runway Surface Condition:	Dry
Runway Used:	0	IFR Approach:	None
Runway Length/Width:	0 ft / 0 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Minor
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	31.259477,-100.819358(est)

Administrative Information

Investigator In Charge (IIC):

Additional Participating Persons:

Original Publish Date: July 3, 1983

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=71898>

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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](#).