Aviation Investigation Final Report

Location:	Spofford, Texas	**Accident Number:**	GAA17CA165
Date & Time:	February 19, 2017, 09:45 Local	**Registration:**	N804DF
Aircraft:	ROBINSON HELICOPTER COMPANY R44	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control in flight	**Injuries:**	1 Minor
Flight Conducted Under:	Part 91: General aviation - Positioning		

Analysis

The pilot of the skid-equipped helicopter reported that, the night before the accident flight, he hover-taxied into a hangar because convective activity was approaching the airport and he did not have ground-handling equipment (wheels) to move the helicopter. The following morning, he attempted to hover-taxi out of the hangar for a positioning flight, but the main rotor blade struck the top of the hangar door when the helicopter was about three-quarters of the way out of the hangar. Subsequently, the helicopter spun and rolled over onto its left side.

The main rotor and tailboom sustained substantial damage.

The pilot reported that there were no preaccident mechanical malfunctions or failures with the helicopter that would have precluded normal operation.

Probable Cause and Findings

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

The pilot's decision to hover-taxi out of the hangar and his subsequent failure to maintain clearance from the hangar.

Findings

Personnel issues	Monitoring environment - Pilot
Personnel issues	Decision making/judgment - Pilot
Environmental issues	Residence/building - Effect on equipment
Environmental issues	Residence/building - Decision related to condition

Factual Information

History of Flight

Taxi-to runway	Collision with terr/obj (non-CFIT)
Taxi-to runway	Loss of control in flight (Defining event)
Taxi-to runway	Roll over

Pilot Information

Certificate:	Commercial	**Age:**	63,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Front
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	3-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	December 7, 2016
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	September 29, 2016
Flight Time:	(Estimated) 6905 hours (Total, all aircraft), 1905 hours (Total, this make and model), 6815 hours (Pilot In Command, all aircraft), 39 hours (Last 90 days, all aircraft), 28 hours (Last 30 days, all aircraft), 8 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	ROBINSON HELICOPTER COMPANY	**Registration:**	N804DF
Model/Series:	R44 II	**Aircraft Category:**	Helicopter
Year of Manufacture:	2006	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	11265
Landing Gear Type:	N/A; Skid	**Seats:**	4
Date/Type of Last Inspection:	May 18, 2016 Annual	**Certified Max Gross Wt.:**	2500 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	1953 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	C91 installed, activated, did not aid in locating accident	**Engine Model/Series:**	IO-540-AE1A5
Registered Owner:	On file	**Rated Power:**	245 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	Certificate of authorization or waiver (COA)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KDRT,1081 ft msl	**Distance from Accident Site:**	29 Nautical Miles
Observation Time:	15:53 Local	**Direction from Accident Site:**	330°
Lowest Cloud Condition:		**Visibility**	5 miles
Lowest Ceiling:	Broken / 1700 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	14 knots /	**Turbulence Type Forecast/Actual:**	/ None
Wind Direction:	140°	**Turbulence Severity Forecast/Actual:**	/ N/A
Altimeter Setting:	29.79 inches Hg	**Temperature/Dew Point:**	22°C / 18°C
Precipitation and Obscuration:	Moderate - None - Haze		
Departure Point:	Spofford, TX (55XS)	**Type of Flight Plan Filed:**	None
Destination:	HONDO, TX (HDO)	**Type of Clearance:**	None
Departure Time:	10:00 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	FRONTIER 55XS	**Runway Surface Type:**	
Airport Elevation:	1001 ft msl	**Runway Surface Condition:**	Dry
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Minor	**Latitude, Longitude:**	29.166389,-100.418334(est)

Preventing Similar Accidents

Manage Risk: Good Decision-making and Risk Management Practices are Critical (SA-023)

The Problem

Although few pilots knowingly accept severe risks, accidents can also result when several risks of marginal severity are not identified or are ineffectively managed by the pilot and compound into a dangerous situation. Accidents also result when the pilot does not accurately perceive situations that involve high levels of risk. Ineffective risk management or poor aeronautical decision-making can be associated with almost any type of fatal general aviation accident.

What can you do?

- Develop good decision-making practices that will allow you to identify personal attitudes that are hazardous to safe flying, apply behavior modification techniques, recognize and cope with stress, and effectively use all resources. Understand the safety hazards associated with human fatigue and strive to eliminate fatigue contributors in your life.
- Understand that effective risk management takes practice. It is a decision-making process by which you can systematically identify hazards, assess the degree of risk, and determine the best course of action.
- Be honest with yourself and your passengers about your skill level and proficiency. Refuse to allow external pressures, such as the desire to save time or money or the fear of disappointing passengers, to influence you to attempt or continue a flight in conditions in which you are not comfortable.
- Be honest with yourself and the FAA about your medical condition. If you have a medical condition or are taking any medication, do not fly until your fitness for flight has been thoroughly evaluated.
- Plan ahead with flight diversion or cancellation alternatives, and brief your passengers about the alternatives before the flight.

See https://www.ntsb.gov/Advocacy/safety-alerts/Documents/SA-023.pdf for additional resources.

The NTSB presents this information to prevent recurrence of similar accidents. Note that this should not be considered guidance from the regulator, nor does this supersede existing FAA Regulations (FARs).

Administrative Information

Investigator In Charge (IIC):	Gerhardt, Adam
Additional Participating Persons:	Ryan B Newman; FAA; San Antonio, TX
Original Publish Date:	June 7, 2017
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=94800