



Aviation Investigation Final Report

Location:	Toterville, Iowa	Accident Number:	GAA17CA436
Date & Time:	July 24, 2017, 16:00 Local	Registration:	N47AH
Aircraft:	Bell 47G 3B	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

According to the helicopter pilot, during an agricultural flight, he made a downwind turn to spray the intended field. During the low airspeed right turn, he increased the engine power, and the rotor rpm decreased. He reported that he leveled the helicopter to clear power lines, but the rotor rpm remained low. The helicopter descended, and the pilot landed the helicopter in a corn field.

The helicopter sustained substantial damage to the tailboom and horizontal stabilizer.

The nearest METAR located 15 nautical miles south-southeast from the accident site reported that, about the time of the accident, the wind was calm.

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 failure to maintain rotor rpm while maneuvering at low altitude with low airspeed and a tailwind.

Findings

Personnel issues	Aircraft control - Pilot
Environmental issues	Tailwind - Effect on operation
Aircraft	Prop/rotor parameters - Not attained/maintained
Aircraft	Airspeed - Not attained/maintained
Aircraft	Altitude - Attain/maintain not possible

Factual Information

History of Flight

Maneuvering-low-alt flying	Loss of control in flight (Defining event)
Maneuvering-low-alt flying	Off-field or emergency landing

Pilot Information

Certificate:	Private	Age:	33, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	4-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	May 5, 2017
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	April 13, 2017
Flight Time:	(Estimated) 389 hours (Total, all aircraft), 1 hours (Total, this make and model), 150 hours (Last 90 days, all aircraft), 100 hours (Last 30 days, all aircraft), 10 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bell	Registration:	N47AH
Model/Series:	47G 3B 3B	Aircraft Category:	Helicopter
Year of Manufacture:	1961	Amateur Built:	
Airworthiness Certificate:	Normal; Restricted (Special)	Serial Number:	2645
Landing Gear Type:	N/A; Skid	Seats:	1
Date/Type of Last Inspection:	May 1, 2017 Annual	Certified Max Gross Wt.:	2850 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	14259 Hrs at time of accident	Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	TV0-435 SER
Registered Owner:	SCOTTS HELICOPTER SERVICE INC	Rated Power:	250 Horsepower
Operator:	SCOTTS HELICOPTER SERVICE INC	Operating Certificate(s) Held:	Agricultural aircraft (137)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KAUM,1233 ft msl	Distance from Accident Site:	15 Nautical Miles
Observation Time:	08:14 Local	Direction from Accident Site:	334°
Lowest Cloud Condition:	Clear	Visibility	7 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/ None
Wind Direction:		Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	30.03 inches Hg	Temperature/Dew Point:	14°C / 13°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Toterville, IA	Type of Flight Plan Filed:	None
Destination:	Toterville, IA	Type of Clearance:	None
Departure Time:	01:50 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	43.438888,-92.782218(est)

Administrative Information

Investigator In Charge (IIC):	Hicks, Michael
Additional Participating Persons:	Patrick Blaskvich ; FAA; Des Moines, IA
Original Publish Date:	April 23, 2018
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.nts.gov/Docket?ProjectID=95655

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