



Aviation Investigation Final Report

Location:	Cahokia, Illinois	Accident Number:	GAA18CA110
Date & Time:	January 22, 2018, 11:15 Local	Registration:	N989HH
Aircraft:	HELICOPTERES GUIMBAL CABRI G2	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	2 Minor
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The helicopter flight instructor reported that the student pilot was performing a normal approach to a hover with a quartering gusting headwind. He added that he "reminded" the student of the need to anticipate right pedal input as they applied power to terminate to a hover. Subsequently, the student pilot did not add sufficient "right pedal," and the helicopter immediately and very rapidly yawed to the left. The flight instructor said, "my controls," and attempted to recover, but the helicopter continued to spin counterclockwise, touched down, and then rolled onto its right side.

The helicopter sustained substantial damage to the fuselage and main rotor system.

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

The automated weather observation system on the airport reported that, about the time of the accident, the wind was from 170° at 11 knots, gusting to 22 knots. The student pilot attempted to hover on runway 12L.

Probable Cause and Findings

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

The student pilot's failure to maintain yaw control while landing in gusting crosswind conditions and the flight instructor's delayed remedial action.

Findings

Aircraft	Yaw control - Not attained/maintained
Personnel issues	Aircraft control - Student/instructed pilot
Personnel issues	Delayed action - Instructor/check pilot
Environmental issues	Crosswind - Effect on operation
Environmental issues	Gusts - Effect on operation

Factual Information

History of Flight

Maneuvering-hover	Loss of control in flight (Defining event)
Maneuvering-hover	Attempted remediation/recovery
Maneuvering-hover	Collision with terr/obj (non-CFIT)
Other	Roll over

Flight instructor Information

Certificate:	Commercial; Flight instructor	Age:	32, Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	4-point
Instrument Rating(s):	Helicopter	Second Pilot Present:	Yes
Instructor Rating(s):	Helicopter	Toxicology Performed:	No
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	December 8, 2017
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	October 2, 2017
Flight Time:	(Estimated) 203 hours (Total, all aircraft), 75 hours (Total, this make and model), 119 hours (Pilot In Command, all aircraft), 20 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Student pilot Information

Certificate:	Commercial; Flight instructor	Age:	43, Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land; Multi-engine sea	Seat Occupied:	Right
Other Aircraft Rating(s):	Glider; Gyroplane	Restraint Used:	4-point
Instrument Rating(s):		Second Pilot Present:	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	No
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	December 11, 2017
Occupational Pilot:	No	Last Flight Review or Equivalent:	July 16, 2016
Flight Time:	(Estimated) 1015 hours (Total, all aircraft), 5 hours (Total, this make and model), 50 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	HELICOPTERES GUIMBAL	Registration:	N989HH
Model/Series:	CABRI G2 NO SERIES	Aircraft Category:	Helicopter
Year of Manufacture:	2015	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	1124
Landing Gear Type:	Skid	Seats:	2
Date/Type of Last Inspection:	December 5, 2017 100 hour	Certified Max Gross Wt.:	1543 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	850.4 Hrs as of last inspection	Engine Manufacturer:	Lycoming
ELT:	C126 installed	Engine Model/Series:	O-360-J2A
Registered Owner:	D H HELICOPTER INC	Rated Power:	180 Horsepower
Operator:	D H HELICOPTER INC	Operating Certificate(s) Held:	Pilot school (141)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KCPS,413 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	16:53 Local	Direction from Accident Site:	259°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	11 knots / 22 knots	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	170°	Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	29.54 inches Hg	Temperature/Dew Point:	15°C / 9°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Cahokia, IL (CPS)	Type of Flight Plan Filed:	VFR
Destination:	Cahokia, IL (CPS)	Type of Clearance:	VFR
Departure Time:	11:00 Local	Type of Airspace:	Class D

Airport Information

Airport:	ST LOUIS DOWNTOWN CPS	Runway Surface Type:	Concrete
Airport Elevation:	412 ft msl	Runway Surface Condition:	Dry
Runway Used:	12L	IFR Approach:	None
Runway Length/Width:	5301 ft / 75 ft	VFR Approach/Landing:	Stop and go

Wreckage and Impact Information

Crew Injuries:	2 Minor	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor	Latitude, Longitude:	38.571388,-90.154441(est)

Administrative Information

Investigator In Charge (IIC):	Swenson, Eric
Additional Participating Persons:	Harvinder Pujji; FAA; St. Louis, MO
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=96643

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