Aviation Investigation Final Report

Location:	Lancaster, Pennsylvania	**Accident Number:**	ERA22LA069
Date & Time:	November 20, 2021, 11:30 Local	**Registration:**	N210JB
Aircraft:	K COPTERS 47G-2	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control in flight	**Injuries:**	1 Serious, 1 Minor
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

According to the flight instructor, the purpose of the flight was to conduct hovering and pattern work maneuvers. After the completion of the flight, the student pilot was hovering and awaiting clearance to return to the ramp. The flight instructor said she was looking around to ensure the runway was clear and making a radio call, when suddenly, the helicopter pitched up. She attempted to gain control of the helicopter but was unsuccessful. The helicopter collided with the ground and rolled over. The flight instructor said she was not on the flight controls prior to the accident event.

According to the student pilot, he stated that he was practicing hovering maneuvers for about an hour. He said that he was tired and transferred the controls to the flight instructor, as they waited to cross the field. The student pilot said that while they were waiting, the nose pitched up and the tailboom hit the ground. The helicopter then collided with the ground and rolled over. He said that he was not on the flight controls at the time of the accident.

The helicopter was inspected by a Federal Aviation Administration (FAA) inspector and revealed structural damage to the airframe. No flight control anomalies were discovered that would have precluded normal operation. During the FAA interviews of the pilots, both seemed to have believed that the other was on the flight controls at the time of the accident.

Probable Cause and Findings

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

The flight instructor’s failure to ensure a positive transfer of aircraft control, which resulted in a loss of control and collision with terrain.

Findings

Personnel issues	Incorrect action sequence - Flight crew
Aircraft	Pitch control - Not attained/maintained

Factual Information

History of Flight

Maneuvering-hover	Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Airline transport; Commercial; Flight instructor	**Age:**	32,Female
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Right
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	Lap only
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	
Instructor Rating(s):	Airplane single-engine; Helicopter; Instrument airplane; Instrument helicopter	**Toxicology Performed:**	
Medical Certification:	Class 1 Without waivers/limitations	**Last FAA Medical Exam:**	August 1, 2021
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	(Estimated) 2855 hours (Total, all aircraft), 43 hours (Total, this make and model), 2116 hours (Pilot In Command, all aircraft), 65 hours (Last 90 days, all aircraft), 24 hours (Last 30 days, all aircraft)		

Student pilot Information

Certificate:	Commercial; Flight engineer; Flight instructor	**Age:**	68,Male
Airplane Rating(s):	Single-engine land; Single-engine sea	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	Lap only
Instrument Rating(s):	Airplane	**Second Pilot Present:**	
Instructor Rating(s):	Airplane single-engine; Instrument airplane	**Toxicology Performed:**	
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	February 4, 2021
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	1940 hours (Total, all aircraft), 17 hours (Total, this make and model), 1820 hours (Pilot In Command, all aircraft), 6 hours (Last 90 days, all aircraft), 1 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	K COPTERS	**Registration:**	N210JB
Model/Series:	47G-2	**Aircraft Category:**	Helicopter
Year of Manufacture:	1969	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	K992
Landing Gear Type:	Skid	**Seats:**	2
Date/Type of Last Inspection:	October 20, 2021 Annual	**Certified Max Gross Wt.:**	2450 lbs
Time Since Last Inspection:	10 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	2156 Hrs as of last inspection	**Engine Manufacturer:**	Lycoming
ELT:	C91 installed, not activated	**Engine Model/Series:**	IO-435-A1F
Registered Owner:	On file	**Rated Power:**	165 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KLNS,403 ft msl	**Distance from Accident Site:**	0 Nautical Miles
Observation Time:	11:39 Local	**Direction from Accident Site:**	173°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:	110°	**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:	30.54 inches Hg	**Temperature/Dew Point:**	6°C / -3°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Lancaster, PA (LNS)	**Type of Flight Plan Filed:**	None
Destination:	Lancaster, PA	**Type of Clearance:**	VFR
Departure Time:	10:00 Local	**Type of Airspace:**	Class D

Airport Information

Airport:	LANCASTER LNS	**Runway Surface Type:**	
Airport Elevation:	402 ft msl	**Runway Surface Condition:**	Vegetation
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Serious, 1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	1 Serious, 1 Minor	**Latitude, Longitude:**	40.122361,-76.294361(est)

Administrative Information

Investigator In Charge (IIC):	Alleyne, Eric
Additional Participating Persons:	Robert C. Hall; FAA/FSDO; Honolulu, HI
Original Publish Date:	May 26, 2022
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=104281