



Aviation Investigation Final Report

Location:	Waimea, Hawaii	Accident Number:	WPR23LA061
Date & Time:	December 7, 2022, 16:42 Local	Registration:	N130WS
Aircraft:	Eurocopter EC 130 B4	Aircraft Damage:	Substantial
Defining Event:	Settling with power/vortex ring state	Injuries:	1 Minor, 6 None
Flight Conducted Under:	Part 135: Air taxi & commuter - Non-scheduled - Sightseeing		

Analysis

The pilot in the helicopter reported that, he turned final approach at about 100 ft above ground level and the helicopter started settling with power [entered vortex ring state]. The pilot attempted to stop the descent by applying collective and forward cyclic, but the helicopter subsequently landed hard and sustained substantial damage to the aft fuselage. 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 loss of helicopter control on approach to land due to entering a vortex ring state condition, which resulted in a hard landing.

Findings

Personnel issues	Aircraft control - Pilot
Aircraft	Descent/approach/glide path - Not attained/maintained

Factual Information

History of Flight

Landing-flare/touchdown	Hard landing
Approach	Settling with power/vortex ring state (Defining event)

Pilot Information

Certificate:	Commercial	Age:	78, Male
Airplane Rating(s):	None	Seat Occupied:	Front
Other Aircraft Rating(s):	Helicopter	Restraint Used:	4-point
Instrument Rating(s):	Helicopter	Second Pilot Present:	No
Instructor Rating(s):	Helicopter	Toxicology Performed:	
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	June 27, 2022
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	38596 hours (Total, all aircraft), 3276 hours (Total, this make and model), 38546 hours (Pilot In Command, all aircraft), 124 hours (Last 90 days, all aircraft), 27 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Passenger Information

Certificate:		Age:	
Airplane Rating(s):		Seat Occupied:	Center
Other Aircraft Rating(s):		Restraint Used:	4-point
Instrument Rating(s):		Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

Passenger Information

Certificate:		Age:	
Airplane Rating(s):		Seat Occupied:	Right
Other Aircraft Rating(s):		Restraint Used:	4-point
Instrument Rating(s):		Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

Passenger Information

Certificate:		Age:	
Airplane Rating(s):		Seat Occupied:	Center
Other Aircraft Rating(s):		Restraint Used:	4-point
Instrument Rating(s):		Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Eurocopter	Registration:	N130WS
Model/Series:	EC 130 B4	Aircraft Category:	Helicopter
Year of Manufacture:	2003	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	3735
Landing Gear Type:	Emergency float	Seats:	7
Date/Type of Last Inspection:	October 22, 2022 100 hour	Certified Max Gross Wt.:	5350 lbs
Time Since Last Inspection:	74.5 Hrs	Engines:	1 Turbo shaft
Airframe Total Time:	20394.7 Hrs as of last inspection	Engine Manufacturer:	Safrea/Turbomeca
ELT:	C91 installed, not activated	Engine Model/Series:	Arriel 2B1
Registered Owner:		Rated Power:	847 Horsepower
Operator:		Operating Certificate(s) Held:	On-demand air taxi (135)
Operator Does Business As:	Air Taxi	Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	National WX Service HI,100 ft msl	Distance from Accident Site:	2 Nautical Miles
Observation Time:	16:22 Local	Direction from Accident Site:	300°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None / 4300 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	14 knots / 34 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	80°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.99 inches Hg	Temperature/Dew Point:	29°C / 15°C
Precipitation and Obscuration:	Moderate - None - Haze		
Departure Point:	Kamuela, HI	Type of Flight Plan Filed:	VFR
Destination:	Kamuela, HI (HAP)	Type of Clearance:	None
Departure Time:	15:49 Local	Type of Airspace:	Class G

Airport Information

Airport:	Hapuna Heliport (Private) N/A	Runway Surface Type:	
Airport Elevation:	660 ft msl	Runway Surface Condition:	Unknown
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor, 5 None	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 Minor, 6 None	Latitude, Longitude:	20.006,-155.796

Administrative Information

Investigator In Charge (IIC):	Rho, Paul	
Additional Participating Persons:	Shaun Tu; FAA; Honolulu, HI	
Original Publish Date:	March 15, 2023	Investigation Class: 4
Note:	The NTSB did not travel to the scene of this accident.	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=106435	

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