



National Transportation Safety Board Aviation Accident Final Report

Location:	Manhattan, New York	Accident Number:	ERA22LA091
Date & Time:	December 13, 2021, 16:10 Local	Registration:	N920PD
Aircraft:	BELL HELICOPTER TEXTRON CANADA 429	Aircraft Damage:	Substantial
Defining Event:	Dragged wing/rotor/float/other	Injuries:	2 None
Flight Conducted Under:	Public aircraft		

Analysis

The pilot reported that during landing and once established directly over the helipad, he proceeded to hover taxi over to the assigned landing location, but during touchdown the helicopter unexpectedly shifted forward, rotating onto the front skids, then began to oscillate. The crew heard a loud “bang” and subsequently the helicopter became airborne briefly before settling down hard on the pavement and the helicopter started to go into ground resonance, becoming uncontrollable. The pilot reported that the helipad was congested with several other aircraft on the ground and two preparing to land, so when the helicopter became uncontrollable, he “dumped” the collective and rolled back the throttle. During the oscillations, the main rotor blades stuck the wire strike protection system, which resulted in substantial damage to the rotor blades. The pilot reported that there were no preimpact mechanical malfunctions or failures 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 pilots overapplication of flight controls during landing, which resulted in the rotor blades contacting the wire strike protection system and subsequent hard landing.

Findings

Personnel issues	Incorrect action performance - Pilot
Environmental issues	Aircraft - Decision related to condition

Factual Information

History of Flight

Landing-flare/touchdown	Dragged wing/rotor/float/other (Defining event)
Landing-flare/touchdown	Hard landing
Landing-flare/touchdown	Ground resonance

Pilot Information

Certificate:	Commercial	Age:	42, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	4-point
Instrument Rating(s):	Airplane; Helicopter	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	March 9, 2021
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	November 24, 2021
Flight Time:	1432 hours (Total, all aircraft), 531 hours (Total, this make and model), 1158 hours (Pilot In Command, all aircraft), 118 hours (Last 90 days, all aircraft), 30 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Co-pilot Information

Certificate:	Commercial	Age:	41, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	4-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine	Toxicology Performed:	
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	March 15, 2021
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	October 6, 2021
Flight Time:	1520 hours (Total, all aircraft), 350 hours (Total, this make and model), 1350 hours (Pilot In Command, all aircraft), 40 hours (Last 90 days, all aircraft), 13 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BELL HELICOPTER TEXTRON CANADA	Registration:	N920PD
Model/Series:	429	Aircraft Category:	Helicopter
Year of Manufacture:	2014	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	57233
Landing Gear Type:	Skid	Seats:	9
Date/Type of Last Inspection:	December 8, 2021 Unknown	Certified Max Gross Wt.:	7000 lbs
Time Since Last Inspection:	1.2 Hrs	Engines:	2 Turbo shaft
Airframe Total Time:	3680 Hrs as of last inspection	Engine Manufacturer:	Pratt and Whitney Canada
ELT:	Installed, not activated	Engine Model/Series:	PW207D1
Registered Owner:		Rated Power:	621 Horsepower
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	NYC, 156 ft msl	Distance from Accident Site:	5 Nautical Miles
Observation Time:	16:51 Local	Direction from Accident Site:	21°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	230°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.23 inches Hg	Temperature/Dew Point:	11° C / -8° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Brooklyn, NY (FBF)	Type of Flight Plan Filed:	
Destination:	Manhattan, NY	Type of Clearance:	VFR
Departure Time:	15:40 Local	Type of Airspace:	Class G

Airport Information

Airport:	DOWNTOWN MANHATTAN/WALL ST JRB	Runway Surface Type:	
Airport Elevation:	7 ft msl	Runway Surface Condition:	Wet
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Full stop;Straight-in

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	40.701214, -74.009028(est)

Administrative Information

Investigator In Charge (IIC):	Mccarter, Lawrence		
Additional Participating Persons:	Victor Mevo; FAA FSDO; Farmingdale, NY		
Original Publish Date:	June 14, 2022	Investigation Class:	4
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=104433		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).