



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Fairfield, California	Accident Number:	WPR20LA163
Date & Time:	June 2, 2020, 12:50 Local	Registration:	N65PJ
Aircraft:	Bell 206	Aircraft Damage:	Substantial
Defining Event:	Collision with terr/obj (non-CFIT)	Injuries:	3 Fatal
Flight Conducted Under:	Part 133: Rotorcraft ext. load		

Analysis

The pilot of the helicopter was retrieving two linemen after they completed powerline work and transporting them back to the landing zone via longline. A witness stated that, after picking up the linemen, the helicopter ascended into the powerlines, impacting, and severing one line located about 210 ft above ground level. The helicopter subsequently impacted terrain, rolled downhill, and came to rest in a ravine.

Examination of the helicopter revealed no evidence of mechanical malfunctions or anomalies that would have precluded normal operation. The main rotor blades displayed evidence of blade contact, and the engine compressor impeller contained debris consistent with the engine operating at the time of ground impact. The circumstances of the accident are consistent with the pilot's failure to maintain adequate clearance from powerlines, which resulted in the main rotor impacting a wire and subsequent impact with terrain.

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 adequate clearance from powerlines while conducting external load operations, which resulted in the main rotor contacting a wire and a subsequent collision with terrain.

Findings

Personnel issues	Monitoring environment - Pilot
Personnel issues	Aircraft control - Pilot
Environmental issues	Wire - Response/compensation

Factual Information

History of Flight

Maneuvering-low-alt flying	Miscellaneous/other
Maneuvering-low-alt flying	Collision with terr/obj (non-CFIT) (Defining event)

On June 2, 2020, about 1250 Pacific daylight time, a Bell 206L3 Helicopter, N65PJ, was substantially damaged when it was involved in an accident near Fairfield, California. The pilot and two passengers were fatally injured. The helicopter was operated as a Title 14 *Code of Federal Regulations (CFR)* Part 133 rotorcraft external load operation.

The helicopter was operated by PJ Helicopters under contract from Pacific Gas and Electric (PG&E) to perform power line repair work. A fuel truck driver associated with the operation stated that he arrived at the landing zone about 0900 on the morning of the accident, where the accident pilot and helicopter were waiting. Flight operations began between 1100 and 1130.

According to the operator around 1250, the two linemen had completed work for the day, and the pilot proceeded to their location to pick them up via longline from the tower on which they had been working. At that time, for unknown reasons, the linemen were lowered to the ground and disconnected from the long line. The helicopter circled for several minutes before it was called back, and the linemen reattached to the longline. A witness stated that he saw the accident helicopter ascend toward the lower line of a set of powerlines. The main rotor contacted the line, followed by the helicopter impacting terrain, where it rolled downhill, and came to rest in a ravine.

According to PG&E, the impacted power line was about 200 ft above ground level (agl), located about mid span between two towers at the bottom of a valley.

Pilot Information

Certificate:	Commercial	Age:	38,Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	5-point
Instrument Rating(s):	Helicopter	Second Pilot Present:	No
Instructor Rating(s):	Helicopter	Toxicology Performed:	Yes
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	December 22, 2019
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	(Estimated) 3099 hours (Total, all aircraft)		

Passenger Information

Certificate:		Age:	41,Male
Airplane Rating(s):		Seat Occupied:	None
Other Aircraft Rating(s):		Restraint Used:	Unknown
Instrument Rating(s):		Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

Passenger Information

Certificate:		Age:	29,Male
Airplane Rating(s):		Seat Occupied:	None
Other Aircraft Rating(s):		Restraint Used:	Unknown
Instrument Rating(s):		Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

The pilot held a commercial pilot certificate with ratings for rotorcraft-helicopter and instrument helicopter. His most recent Federal Aviation Administration second-class medical certificate was issued on December 23, 2019, at which time he reported 3,099 total hours of flight experience, with 422 hours in the previous six months.

Aircraft and Owner/Operator Information

Aircraft Make:	Bell	Registration:	N65PJ
Model/Series:	206 L3	Aircraft Category:	Helicopter
Year of Manufacture:	1985	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	51127
Landing Gear Type:	Skid	Seats:	7
Date/Type of Last Inspection:	100 hour	Certified Max Gross Wt.:	4150 lbs
Time Since Last Inspection:	18.5 Hrs	Engines:	1 Turbo shaft
Airframe Total Time:	16960.7 Hrs	Engine Manufacturer:	Rolls-Royce
ELT:	C126 installed, activated, did not aid in locating accident	Engine Model/Series:	M250-C30P
Registered Owner:	P J Helicopters Inc	Rated Power:	650 Horsepower
Operator:	P J Helicopters Inc	Operating Certificate(s) Held:	Rotorcraft external load (133)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KVCB, 109 ft msl	Distance from Accident Site:	5 Nautical Miles
Observation Time:	12:53 Local	Direction from Accident Site:	41°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	None / None
Wind Direction:		Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.95 inches Hg	Temperature/Dew Point:	15°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Fairfield, CA	Type of Flight Plan Filed:	None
Destination:	Fairfield, CA	Type of Clearance:	None
Departure Time:		Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Substantial
Passenger Injuries:	2 Fatal	Aircraft Fire:	On-ground
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	3 Fatal	Latitude, Longitude:	38.309722,-122.03388(est)

The helicopter was recovered from the site for examination. Flight control continuity was established from the single cockpit control to the control surfaces through breaks in the system consistent with impact damage.

Continuity was confirmed from the main rotor drive shaft to the main rotor. The freewheeling unit operated normally. The transmission-to-engine main drive shaft remained attached at the transmission via the Kaflex. The aft Kaflex was fractured.

One main rotor blade (white blade) was fractured about 73 inches from the blade grip. The trailing edge of the blade was split down its length starting about 13 inches from the grip. The tip of the rotor blade was separated from the blade and displayed evidence of a wire strike. The white pitch change link was fractured about 6 inches from the lower end of the tube.

The other main rotor blade (red blade) was fractured about 36 inches from the grip. The outer skin separated from the carbon layup of the top surface of the blade. The interior core separated from the lower surface of the blade. The trailing edge of the blade was split down its length in a few locations with the interior core missing. The red pitch change link was fractured at the lower end connection.

Examination of the transmission, pylon, and hydraulics system revealed no anomalies.

Examination of the engine revealed no evidence of preimpact mechanical malfunctions or anomalies. The compressor impeller was undamaged and displayed evidence of dirt ingestion consistent with operation at the time of impact.

Administrative Information

Investigator In Charge (IIC):	Cornejo, Tealeye
Additional Participating Persons:	Jeffrey Snider; Federal Aviation Administration; Sacramento, CA John McCoy; Pacific Gas and Electric; Sacramento, CA Seth Gunsauls; PJ Helicopters, Inc.; Red Bluff, CA Jeff Johnson; Wilson Construction; Canby, OR Jon-Adam Michael; Rolls Royce; Indianapolis, IN
Original Publish Date:	March 22, 2023
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=101367

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).