



Aviation Investigation Final Report

Location:	Ivanhoe, California	Accident Number:	WPR15LA116
Date & Time:	February 27, 2015, 10:30 Local	Registration:	N4774S
Aircraft:	Bell 47G 2A	Aircraft Damage:	Substantial
Defining Event:	Abrupt maneuver	Injuries:	1 Serious
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The commercial pilot was maneuvering the helicopter at low altitude to conduct agricultural spraying operations. While departing the coverage area, the pilot saw power lines and attempted to fly underneath them, but the helicopter's main rotor mast struck a wire, and the helicopter subsequently collided with terrain. The pilot reported no mechanical failures or malfunctions 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 failure to maintain clearance from a power line while maneuvering at low altitude.

Findings

Environmental issues	Wire - Decision related to condition
Aircraft	Altitude - Not attained/maintained
Personnel issues	Decision making/judgment - Pilot
Environmental issues	Wire - Effect on operation

Factual Information

History of Flight

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

On February 27, 2015, at 1030 Pacific standard time, a Bell 47G 2A, N4774S, collided with a suspended power line 15 miles northeast of Ivanhoe, California. The helicopter was registered to Barton Aero, Inc., and operated by Gilbert Aviation as a 14 Code of Federal Aviation, Part 137 aerial application flight. The commercial pilot was seriously injured, and the helicopter was substantially damaged. Visual meteorological conditions prevailed, and a flight plan had not been filed.

A Federal Aviation Administration (FAA) inspector who spoke to the pilot, stated that the pilot knew about the power line and attempted to avoid it at the last second by flying under it. The wire caught the main rotor mast and the helicopter came to rest on its right side in an orange tree orchard. The pilot was able to self extract, and sustained numerous broken bones. Examination of the helicopter wreckage by the inspector confirmed that a electrical power cable had wrapped around the helicopter's rotor mast.

The pilot reported no mechanical failures or malfunctions with the helicopter that would have precluded normal operation.

Pilot Information

Certificate:	Commercial	Age:	50, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	4-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Unknown	Last FAA Medical Exam:	May 31, 2014
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	4920 hours (Total, all aircraft), 0 hours (Last 90 days, all aircraft), 0 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bell	Registration:	N4774S
Model/Series:	47G 2A	Aircraft Category:	Helicopter
Year of Manufacture:	1965	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	WAV182
Landing Gear Type:	N/A; Skid	Seats:	1
Date/Type of Last Inspection:	January 11, 2015 100 hour	Certified Max Gross Wt.:	2850 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	4089 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed	Engine Model/Series:	VO-435 A1F
Registered Owner:	BARTON AERO INC	Rated Power:	220 Horsepower
Operator:	BARTON AERO INC	Operating Certificate(s) Held:	Agricultural aircraft (137)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KVIS, 294 ft msl	Distance from Accident Site:	15 Nautical Miles
Observation Time:	18:35 Local	Direction from Accident Site:	223°
Lowest Cloud Condition:	Clear	Visibility:	6 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/ None
Wind Direction:		Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	29.86 inches Hg	Temperature/Dew Point:	15°C / 8°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	VISALIA, CA (D86)	Type of Flight Plan Filed:	None
Destination:	VISALIA, CA (D86)	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	36.459445,-119.190834

Administrative Information

Investigator In Charge (IIC):	McKenny, Van
Additional Participating Persons:	Michael Coberly; FAA; Fresno, CA
Original Publish Date:	September 6, 2017
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=90794

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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](#).