



Aviation Investigation Final Report

Location:	Arbuckle, California	Accident Number:	WPR18LA004
Date & Time:	October 13, 2017, 10:15 Local	Registration:	N247PV
Aircraft:	WESTERN INTERNATIONAL AVIA INC UH 1H	Aircraft Damage:	Substantial
Defining Event:	Flight control sys malf/fail	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Positioning		

Analysis

The pilot and mechanic reported that, before the accident, the mechanic had adjusted the helicopter’s main rotor track and balance. After the mechanic made the final adjustments, the pilot hovered the helicopter to a wash rack for cleaning. Subsequently, while the pilot was repositioning the helicopter to a nearby landing cart and just as the front portions of the skids were over the cart, the collective began to oscillate, followed by the skids striking the cart. The pilot attempted to land the helicopter as it continued to oscillate, but the right skid slid off the cart. The helicopter then rolled onto its right side and impacted the ground.

The mechanic reported that all components prior to the accident were in good working order and that the track and balance adjustments had resulted in satisfactory monitoring equipment readings prior to the accident.

Examination of the helicopter did not reveal evidence of any preaccident malfunctions or failures that would have precluded normal operation. The reason for the oscillations could not be determined based on the available information.

Probable Cause and Findings

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

A collective control malfunction for reasons that could not be determined.

Findings

Aircraft	Main rotor control - Malfunction
Not determined	(general) - Unknown/Not determined

Factual Information

History of Flight

Landing	Flight control sys malf/fail (Defining event)
Landing	Hard landing
Landing	Dynamic rollover

On October 13, 2017, about 1015 Pacific standard time, a Williams Helicopter Corporation UH-1H helicopter, N247PV, was substantially damaged when it was involved in an accident near Arbuckle, California. The pilot was not injured. The helicopter was operated as a Title 14 *Code of Federal Regulations* Part 91 repositioning flight.

The pilot and mechanic reported that, before the accident, the mechanic had adjusted the main rotor track and balance. After the mechanic made the final adjustments, the pilot hovered the helicopter to a wash rack for cleaning. Subsequently, while the pilot was repositioning the helicopter to a nearby landing cart, the collective began an uncommanded surge up and down just as the front portion of the landing skids were over the cart. The skids struck the cart causing damage to the front tips. The pilot attempted to land the helicopter on the cart as the collective continued to oscillate. The right skid slid off the cart and the helicopter rolled onto its right side and impacted the ground.

The mechanic reported that all components prior to the accident were in good working order and that the track and balance adjustments had resulted in satisfactory monitoring equipment readings prior to the accident.

Examination of the helicopter revealed that the airframe was substantially damaged, and that the main transmission, tail rotor, and right horizontal stabilizer had fracture separated. The pitch change links were all bent, and the main rotor blades were destroyed. Examination of the helicopter did not reveal evidence of any preaccident mechanical malfunctions or failures that would have precluded normal operation.

The pilot did not submit a National Transportation Safety Board Pilot/Operator Aircraft Accident Report Form 6120.1.

Pilot Information

Certificate:	Commercial	Age:	69, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	None
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	October 1, 2017
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	1 hours (Total, all aircraft), 1 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	WESTERN INTERNATIONAL AVIA INC	Registration:	N247PV
Model/Series:	UH 1H	Aircraft Category:	Helicopter
Year of Manufacture:	1965	Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	65-9649
Landing Gear Type:	N/A; Skid	Seats:	
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	9500 lbs
Time Since Last Inspection:		Engines:	Turbo shaft
Airframe Total Time:		Engine Manufacturer:	Lycoming
ELT:	Not installed	Engine Model/Series:	T53-L-13
Registered Owner:	On file	Rated Power:	1400 Horsepower
Operator:	On file	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:	KMVY,67 ft msl	Distance from Accident Site:	15 Nautical Miles
Observation Time:	09:53 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	300°	Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	30.17 inches Hg	Temperature/Dew Point:	16°C / 1°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Arbuckle, CA (N/A)	Type of Flight Plan Filed:	None
Destination:	Arbuckle, CA (N/A)	Type of Clearance:	None
Departure Time:	10:12 Local	Type of Airspace:	Unknown

Airport Information

Airport:	Private Strip N/A	Runway Surface Type:	
Airport Elevation:	123 ft msl	Runway Surface Condition:	Dry
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Precautionary landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	39.051944,-122.090553(est)

Administrative Information

Investigator In Charge (IIC):	Link, Samantha
Additional Participating Persons:	Stanley M Phillips; Federal Aviation Administration; Sacramento, CA
Original Publish Date:	May 6, 2021
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=96154

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).