



Aviation Investigation Final Report

Location:	Dietrich, Idaho	Accident Number:	WPR14LA272
Date & Time:	June 29, 2014, 17:30 Local	Registration:	N350CR
Aircraft:	Aerospatiale AS350B2	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	3 Serious
Flight Conducted Under:	Part 135: Air taxi & commuter - Non-scheduled		

Analysis

The commercial pilot reported that the purpose of the flight was to position the helicopter and its installed camera equipment to the staging area of an intended aerial videography project. He added that the prestart, run-up, and hover checks were uneventful. While proceeding to the staging area, he climbed the helicopter to between about 800 and 1,000 ft above ground level. Shortly thereafter, the pilot lost consciousness, and his next recollection was waking up in an intensive care unit. After the pilot lost consciousness, the front seat passenger attempted to control the helicopter using the cyclic; however, the helicopter eventually collided with terrain.

According to medical records regarding the pilot's postaccident hospital treatment, the pilot suffered a sudden, temporary loss of consciousness (known as a syncopal episode) while he was operating the helicopter. Postaccident medical evaluation led to a diagnosis of sick sinus syndrome, a heart condition, which likely caused the pilot's loss of consciousness and his subsequent inability to maintain helicopter control.

Probable Cause and Findings

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

The pilot's sudden incapacitation from a previously undiagnosed medical condition while in cruise flight, which resulted in his inability to maintain helicopter control.

Findings

Personnel issues	Cardiovascular - Pilot
Aircraft	(general) - Attain/maintain not possible

Factual Information

History of Flight

Enroute-cruise	Loss of control in flight (Defining event)
Uncontrolled descent	Miscellaneous/other

On June 29, 2014, about 1730 mountain daylight time, an Aerospatiale AS350B2, N350CR, collided with terrain near Dietrich, Idaho. Reeder Flying Service was operating the helicopter under the provisions of 14 Code of Federal Regulations (CFR) Part 135. The commercial pilot and two passengers sustained serious injuries. The helicopter sustained substantial damage during the accident sequence. The cross-country aerial photography flight departed Twin Falls, Idaho, about 1630, with a planned destination of Rexburg, Idaho. Visual meteorological conditions (VMC) prevailed, and no flight plan had been filed.

Witnesses reported that the helicopter was traveling in a northeasterly direction when they observed it make a sudden 180-degree reversal to the southwest, followed by a rapid tail-first descent into the ground.

The pilot reported that the purpose of the flight was to position the helicopter and its installed camera equipment to a staging area of an intended aerial videography project. One passenger was in the front left seat to operate the camera, and the other was behind the pilot in the right rear outboard seat.

According to the pilot, prestart, run-up, and hover checks were uneventful. He flew to a scenic waterfall, and flew two orbits to test the camera equipment and its imaging. He then notified his maintenance department that he was preceding to the staging area. He climbed the helicopter to 800-1,000 ft agl; shortly thereafter the pilot lost consciousness. His next recollection was waking up in an intensive care unit at a hospital.

After the pilot lost consciousness, the front seat passenger attempted to control the helicopter using the cyclic; however, the helicopter eventually collided with terrain.

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	57, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	3-point
Instrument Rating(s):	Helicopter	Second Pilot Present:	No
Instructor Rating(s):	Helicopter	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	March 24, 2014
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	April 10, 2014
Flight Time:	7405 hours (Total, all aircraft), 2682 hours (Total, this make and model), 7280 hours (Pilot In Command, all aircraft), 88 hours (Last 90 days, all aircraft), 39 hours (Last 30 days, all aircraft)		

The 57-year-old pilot held a commercial pilot certificate with ratings for airplane single-engine land, helicopter, and instrument. The pilot held a flight instructor (CFI) certificate with ratings for helicopter and instrument helicopter.

The pilot held a second-class medical certificate issued on March 24, 2014, with no limitations or waivers.

The pilot reported that he had a total flight time of 7,405 hours with 2,683 hours in this make and model. He logged 88 hours in the previous 90 days, and 39 in the previous 30 days. He completed a flight review on April 10, 2014.

Aircraft and Owner/Operator Information

Aircraft Make:	Aerospatiale	Registration:	N350CR
Model/Series:	AS350B2 BA	Aircraft Category:	Helicopter
Year of Manufacture:	1990	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	2328
Landing Gear Type:	Skid	Seats:	6
Date/Type of Last Inspection:	April 11, 2014 100 hour	Certified Max Gross Wt.:	4961 lbs
Time Since Last Inspection:		Engines:	1 Turbo shaft
Airframe Total Time:	8887 Hrs at time of accident	Engine Manufacturer:	Honeywell
ELT:	Installed, not activated	Engine Model/Series:	LTS 101-700D-
Registered Owner:	REEDER FLYING SERVICE INC	Rated Power:	732 Horsepower
Operator:	REEDER FLYING SERVICE INC	Operating Certificate(s) Held:	On-demand air taxi (135)

The helicopter was an Airbus Helicopters, Inc., AS350B2, serial number 2328. The operator reported that the helicopter had a total airframe time of 8,887 hours at the time of the accident. It had a 100-hour

inspection on April 11, 2014.

The engine was a Honeywell LTS 101-700D-2, serial number LE-46019C. The pilot reported that the total time on the engine was 6,518 hours, and time since major overhaul was 904 hours.

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KJER	Distance from Accident Site:	
Observation Time:	16:53 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	19 knots / 26 knots	Turbulence Type Forecast/Actual:	/ Unknown
Wind Direction:	260°	Turbulence Severity Forecast/Actual:	/ Unknown
Altimeter Setting:	30.04 inches Hg	Temperature/Dew Point:	27°C / 2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Twin Falls, ID (TWF)	Type of Flight Plan Filed:	None
Destination:	Rexburg, ID (RXE)	Type of Clearance:	None
Departure Time:	16:30 Local	Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:	2 Serious	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 Serious	Latitude, Longitude:	42.900001,-114.25(est)

Medical and Pathological Information

The National Transportation Safety Board's medical officer reviewed the pilot's airman medical file, personal, and hospital medical records and prepared a factual report that is contained in the public docket for this accident.

In summary, the pilot had a history of high blood pressure and high cholesterol. The pilot had gastroenteritis the night prior to the accident, and symptoms had reportedly been resolved following treatment with bismuth subsalicylate. The following morning, he reported that he felt that he was well enough to fly.

According to postaccident medical records from the pilot's hospital treatment, the pilot suffered a sudden, temporary loss of consciousness (known as a syncopal episode) while controlling the helicopter. Postaccident medical evaluation led to a diagnosis of sick sinus syndrome, a group of heart rhythm disorders that include slow heart rhythm (bradycardia) or periods when the heart pauses for an excessive interval sometimes accompanied by fatigue, confusion or syncope. The condition was treated with an implanted pacemaker the day following the accident.

Tests and Research

Wreckage Examination

Investigators from the NTSB, Airbus Helicopters, and Honeywell examined the wreckage at Air Transport, Phoenix, Arizona, on July 15, 2014. A complete report of the examination is in the public docket for this accident. The examination revealed no anomalies with the airframe or engine.

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

Video Study

The passengers were filming the flight. A review of the video indicated that the pilot slumped forward in his seat; his body movements were limp and flaccid. The passenger in the front left seat appeared to reach his right hand in front of the pilot near the area of the cyclic. The passenger in the rear seat appeared to reach forward, and try to pull the pilot's upper torso toward the back of the seat. The helicopter then fell forward into the ground.

Administrative Information

Investigator In Charge (IIC):	Plagens, Howard
Additional Participating Persons:	Rudy Rossi; FAA FSDO; Boise, ID Jay Eller; Honeywell; Phoenix, AZ
Original Publish Date:	July 25, 2016
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=89560

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](#).