

Aviation Investigation Final Report

Location:	RAMONA, California	Accident Number:	LAX94LA101
Date & Time:	January 22, 1994, 09:30 Local	Registration:	N27HR
Aircraft:	Aviat CHRISTEN EAGLE II	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE PILOT DEPARTED ON A LOCAL AREA FLIGHT TO PHOTOGRAPH SOME PROPERTY THAT WAS OWNED BY THE PILOT. WITNESSES OBSERVED THE AIRPLANE FLYING LOW AND SLOW, GRADUALLY DESCENDING TOWARD RISING TERRAIN. AFTER GROUND CONTACT IN A NEAR WINGS AND NOSE LEVEL ATTITUDE, THE AIRPLANE THEN STRUCK A LARGE ROCK AND CAUGHT FIRE. THE PILOT WAS LOCATED OUTSIDE OF THE AIRPLANE, FORWARD OF THE FUSELAGE. THE PILOT SUSTAINED THERMAL INJURIES AND INHALATION OF THE PRODUCTS OF COMBUSTION. POSITIVE TOXICOLOGICAL RESULTS FOR ETHANOL WERE BELOW THE THRESHOLD OF IMPAIRMENT AND WAS NOT A FACTOR. NO MALFUNCTION OF THE AIRPLANE OR ENGINE WAS FOUND.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A failure of the pilot-in-command to maintain an adequate visual lookout and proper altitude to avoid colliding with rising terrain.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER Phase of Operation: MANEUVERING

Findings
1. TERRAIN CONDITION - RISING

2. (C) ALTITUDE - NOT MAINTAINED - PILOT IN COMMAND3. (C) VISUAL LOOKOUT - NOT MAINTAINED - PILOT IN COMMAND

Factual Information

On January 22, 1994, about 0930 hours Pacific standard time, an experimental Herb Ross Christen Eagle II, N27HR, collided with terrain while maneuvering about 5 miles east of Ramona, California. The airplane was being operated as a visual flight rules (VFR) local area personal flight when the accident occurred. The airplane, operated by the pilot, was destroyed by impact and postimpact fire. The certificated airline transport pilot, the sole occupant, received fatal injuries. Visual meteorological conditions prevailed. The flight originated from the Ramona Airport about 0925 hours.

A Federal Aviation Administration (FAA) operations inspector, San Diego Flight Standards District Office, reported that after departure the pilot intended to take aerial photographs of nearby property that the pilot owned. A witness reported observing the airplane circling at low altitude. No apparent engine problem was noted. Two witnesses reported that the airplane was in a gradual descent at slow speed. Another witness reported that the airplane was descending at high speed in a 30-degree nose-down attitude. The actual impact was not observed. The pilot was located outside of the airplane, forward of the wreckage point of rest. The airplane was consumed by a postimpact fire that also burned about 2 acres of brush.

The pilot held an airline transport pilot certificate with an airplane multiengine land rating and instrument airplane ratings and commercial pilot privileges with an airplane single-engine land rating. In addition, the pilot held a flight instructor certificate with airplane single-engine, multiengine, and instrument airplane ratings. The most recent second-class medical certificate was issued to the pilot on July 2, 1993, and contained the limitation that the pilot must have available glasses for near vision.

The pilot's flight log was consumed in the postcrash fire and no personal flight records were recovered for the pilot. The aeronautical experience listed on page 6 of this report was obtained from the pilot/operator report submitted by the aircraft owner. According to the pilot/operator report, the pilot's total aeronautical experience consists of about 25,000 hours, of which 50 were accrued in the accident aircraft make and model.

The airplane engine and airframe logbooks were consumed in the postcrash fire. The owner reported that the aircraft and engine had accumulated a total time in service of about 455 flight hours. No maintenance records were recovered. The owner reported that prior to departure the pilot fueled the airplane with 18 gallons of 100ll octane aviation fuel.

The closest official weather observation station is Gillespie Field, El Cajon, California, which is located 15 nautical miles southwest of the accident site. At 0949 hours, a surface observation was reporting in part:

Sky condition and ceiling, estimated 20,000 broken, 25,000 broken; visibility, 25 miles; temperature, 65 degrees F; altimeter, 30.10 inHg.

The airplane was examined by FAA airworthiness inspectors from the San Diego Flight Standards District Office. The examination revealed that the airplane struck rising brush covered terrain in a near wings and nose level attitude at high speed. About 40 feet after initial ground contact, the landing gear separated from the fuselage and the airplane struck a large rock. The engine separated and the fuselage continued another 35 feet. The fuselage was destroyed by the postcrash fire. The forward cockpit seatbelt/shoulder harness was fastened. The aft cockpit seatbelt/shoulder harness was not fastened. Flight control continuity was established.

The engine was examined by FAA inspectors after the aircraft was recovered. The examination revealed that it received impact and fire damage. The head portion of the No. 2 cylinder sustained impact damage and separated from the cylinder barrel. The crankshaft could be partially rotated and continuity of the gear train was established. Valve train continuity could not be established.

The engine driven fuel pump was broken from its mounting pad. The fuel servo remained attached to the engine and was fire damaged. The inlet screen was heat damaged; however, it was free of contaminants. The oil pressure screen and sump screens were free of contaminants.

Both magnetos were fire damaged. All of the spark plugs, except the bottom No. 4 plug, were removed. No unusual combustion signatures were noted. The FAA inspectors indicated that no evidence of any pre-impact mechanical failure of any rotating or reciprocating component of the engine was observed during the examination.

A postmortem examination of the pilot was conducted by the San Diego County Office of the Medical Examiner, 5555 Overland Ave., Bldg. 14, San Diego, California, on January 23, 1994. According to the report, the cause of death was attributed to inhalation of products of combustion. No preexisting conditions were noted during the postmortem examination which would have adversely affected the pilot's abilities to pilot the airplane.

A toxicological examination was conducted by the FAA Civil Aeromedical Institute (CAMI) on June 30, 1994. The examination revealed that no ethanol was detected in the blood and was negative for all screened drugs. Additionally, 15.000 (mg/dl) of ethanol was detected in vitreous fluid, 13.000 (mg/dl) of ethanol was detected in urine, 15.000(mg/dl) of methanol was detected in vitreous fluid, and 7.000 (mg/dl) was detected in the blood.

CAMI personnel indicated that the levels of ethanol were below the threshold of impairment. The levels of methanol were attributed to putrefaction.

Pilot Information

Certificate:	Airline transport; Commercial; Flight instructor	Age:	65,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Rear
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	Yes
Medical Certification:	Class 2 Valid Medicalw/ waivers/lim	Last FAA Medical Exam:	July 2, 1993
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	25000 hours (Total, all aircraft), 50 h	ours (Total, this make and model)	

Aircraft and Owner/Operator Information

Aircraft Make:	Aviat	Registration:	N27HR
Model/Series:	CHRISTEN EAGLE II CHRISTEN E	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Experimental (Special)	Serial Number:	ROSS 002
Landing Gear Type:	Tailwheel	Seats:	
Date/Type of Last Inspection:	Continuous airworthiness	Certified Max Gross Wt.:	1600 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	455 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	AEIO-360-AID
Registered Owner:	JACQUELINE HERENDEEN	Rated Power:	200 Horsepower
Operator:	BOB HERENDEEN	Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	SEE ,385 ft msl	Distance from Accident Site:	15 Nautical Miles
Observation Time:	09:49 Local	Direction from Accident Site:	200°
Lowest Cloud Condition:	Unknown	Visibility	25 miles
Lowest Ceiling:	Broken / 20000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	/ None	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	18°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	09:25 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:		Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	33.070571,-116.830482(est)

Administrative Information

Additional Participating STEVE DREW; SAN DIEGO , CA Original Publish Date: November 14, 1994 Last Revision Date: Verticipation Verticipation	Investigator In Charge (IIC):	Erickson, Scott	
Original Publish Date: November 14, 1994	Additional Participating Persons:	STEVE DREW; SAN DIEGO , CA	
Last Revision Date:	Original Publish Date:	November 14, 1994	
	Last Revision Date:		
Investigation Class: <u>Class</u>	Investigation Class:	<u>Class</u>	
Note:	Note:		
Investigation Docket: https://data.ntsb.gov/Docket?ProjectID=28642	Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=28642	

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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.