



Aviation Investigation Final Report

Location:	LANGLEY, Washington	Accident Number:	SEA95LA004
Date & Time:	October 7, 1994, 18:00 Local	Registration:	N2064
Aircraft:	Monocoupe Aircraft 110 SPECIAL	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

WHILE DESCENDING TO LAND AND BANKING TO THE RIGHT, THE ELEVATOR PARTIALLY SEPARATED FROM THE AIRPLANE AND IMPINGED UPON THE RUDDER. THE RUDDER WAS JAMMED TO THE FULL RIGHT POSITION AND AIRCRAFT CONTROL WAS RENDERED IMPOSSIBLE. THE PILOT ATTEMPTED TO LAND THE AIRPLANE AFTER ALL ATTEMPTS TO REGAIN CONTROL WERE UNSUCCESSFUL. DURING THE LANDING, THE AIRPLANE IMPACTED TREES AND WAS SUBSTANTIALLY DAMAGED. AN EXAMINATION OF THE WRECKAGE REVEALED THAT THE ELEVATOR HINGE ATTACH FITTING WELD HAD CORRODED FROM INSIDE AND FAILED.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: CORROSION AND SUBSEQUENT FAILURE OF THE ELEVATOR HINGE ATTACH FITTING WELD. THIS ALLOWED THE ELEVATOR TO BEND AND IMPINGE UPON THE RUDDER, SUBSEQUENTLY JAMMING IT TO THE FULL RIGHT POSITION AND RENDERING THE AIRCRAFT IMPOSSIBLE TO CONTROL.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: DESCENT - NORMAL

Findings

1. (C) FLIGHT CONTROL,ELEVATOR ATTACHMENT - CORRODED
2. (C) FLIGHT CONTROL,ELEVATOR ATTACHMENT - FRACTURED
3. (C) FLT CONTROL SYST,RUDDER CONTROL - JAMMED

Occurrence #2: FORCED LANDING

Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: EMERGENCY DESCENT/LANDING

Findings

4. OBJECT - TREE(S)
5. (C) AIRCRAFT CONTROL - NOT POSSIBLE

Factual Information

On October 7, 1994, about 1800 hours Pacific daylight time, N2064, a Monocoupe 110 Special airplane, operated by Frederick E. Ludtke, Sr., Freeland, Washington, was substantially damaged during a forced landing into trees in Langley, Washington. The forced landing was precipitated by a flight control malfunction while descending. The commercial pilot, the sole occupant, was not injured. Visual meteorological conditions prevailed and no flight plan had been filed. The personal flight departed from Everett, Washington, and was conducted under 14 CFR 91.

According to the pilot, the airplane's rudder jammed into a full right deflection while the pilot was descending through 5,000 feet mean sea level and banking to the right. According to the pilot, "the result was a snap rolling entry into a right spin with the right rudder pedal in the full forward limit of travel." The pilot attempted to control the airplane by applying various levels of engine power and available flight controls. Full aircraft control could not be regained by the pilot. The airplane continued to descend in a bank and a "dramatic skid." The pilot stated that he decided to "slow the airplane down" and settle into trees. The airplane impacted trees and was substantially damaged.

Subsequent examination of the airplane revealed that the elevator hinge attach fitting had separated, allowing the elevator to partially detach from the airplane. An examination of the attach fitting revealed that the weld had failed. Corrosion was observed inside a void between the elevator hinge attach fitting base plate and the mating horizontal stabilizer spar.

Pilot Information

Certificate:	Commercial	Age:	29, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	June 29, 1994
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	380 hours (Total, all aircraft), 54 hours (Total, this make and model), 325 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Monocoupe Aircraft	Registration:	N2064
Model/Series:	110 SPECIAL 110 SPECIA	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Aerobatic; Normal; Utility	Serial Number:	A748
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	July 29, 1994 Annual	Certified Max Gross Wt.:	1610 lbs
Time Since Last Inspection:	47 Hrs	Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	WARNER
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	SCARAB 165
Registered Owner:	LUDTKE SR., FREDERICK E.	Rated Power:	165 Horsepower
Operator:		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:	PAE ,606 ft msl	Distance from Accident Site:	7 Nautical Miles
Observation Time:	17:45 Local	Direction from Accident Site:	100°
Lowest Cloud Condition:	Scattered / 25000 ft AGL	Visibility	30 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	320°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	16°C / 9°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	EVERETT , WA (PAE)	Type of Flight Plan Filed:	None
Destination:	(WA31)	Type of Clearance:	None
Departure Time:	00:00 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:	Forced 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:	48.040481,-122.44033(est)

Administrative Information

Investigator In Charge (IIC):	Guzzetti, Jeffrey
Additional Participating Persons:	WILLIAM REICHART; RENTON , WA
Original Publish Date:	June 19, 1995
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=42076

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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](#).