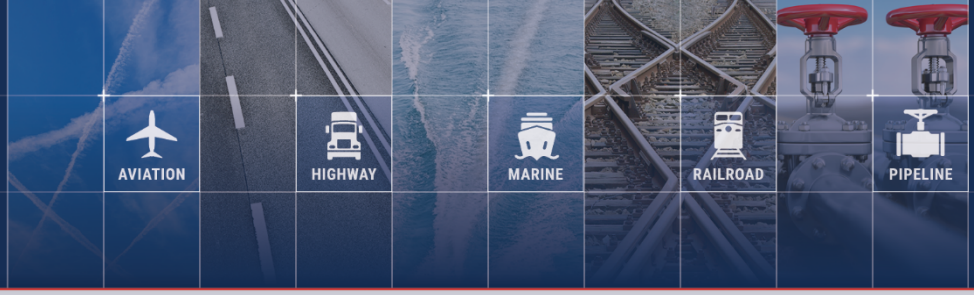

Aviation Investigation Final Report

Location:	DOUGLAS CITY, California	**Accident Number:**	LAX95FA020
Date & Time:	October 27, 1994, 19:20 Local	**Registration:**	N1497S
Aircraft:	CESSNA T337H	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE AIRCRAFT COLLIDED WITH A TREE IN MOUNTAINOUS TERRAIN DURING NIGHT INSTRUMENT METEOROLOGICAL CONDITIONS. THE PILOT DIVERTED FROM HIS PLANNED DESTINATION AFTER ENCOUNTERING ADVERSE WEATHER CONDITIONS. THE NON-INSTRUMENT RATED PILOT WAS FLYING LOW IN MOUNTAINOUS TERRAIN WHEN HE ENCOUNTERED RAIN, LOW CLOUDS, AND GUSTING WIND CONDITIONS. A HIGHWAY PATROL OFFICER, WHO IS ALSO A LICENSED PILOT, REPORTED THE WEATHER IN THE AREA AT THE TIME OF THE ACCIDENT AS IMC. THERE WAS NO EVIDENCE FOUND OF MECHANICAL FAILURE OR MALFUNCTION WITH THE AIRPLANE.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The improper in-flight decision of the pilot to fly in dark night time conditions in mountainous terrain during adverse weather conditions.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: MANEUVERING

Findings
1. (F) LIGHT CONDITION - DARK NIGHT
2. (F) WEATHER CONDITION - LOW CEILING

3. (F) WEATHER CONDITION - RAIN
4. (F) WEATHER CONDITION - GUSTS
5. (C) IN-FLIGHT PLANNING/DECISION - IMPROPER - PILOT IN COMMAND
6. TERRAIN CONDITION - MOUNTAINOUS/HILLY
7. (C) FLIGHT INTO KNOWN ADVERSE WEATHER - PERFORMED - PILOT IN COMMAND
8. LACK OF CERTIFICATION - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings
9. OBJECT - TREE(S)
10. (C) ALTITUDE - INADEQUATE - PILOT IN COMMAND

Factual Information

On October 27, 1994, about 1920 hours Pacific daylight time, a Cessna T337H, N1497S, collided with a tree in mountainous terrain at night, broke apart, and impacted the ground about 3.4 miles southwest of Douglas City, California. The airplane was operated by the pilot/owner as a personal flight. The airplane was destroyed by impact forces and postimpact fire. The certificated private pilot and passenger were fatally injured. The pilot departed Auburn, California, about 1800 hours and was destined for Redding, California, after diverting from Hayfork, California, due to night instrument meteorological conditions at the airport.

The UNICOM operator at the Hayfork Airport told Safety Board investigators the accident airplane overflew the airport on the night of the accident. The pilot indicated he could see some lights on the ground and asked the UNICOM operator about weather conditions on the ground. The UNICOM operator told the pilot it was "drizzling and the visibility was poor." The UNICOM operator did not make visual contact with the airplane but could hear it. The UNICOM operator described the engine sounds as "normal" and "distant like he was at a high altitude."

Another witness, who lives about 2.5 miles south of the accident site, saw the airplane flying low over his home. The airplane was heading north gaining altitude when he heard popping noises. The witness saw a strange light coming from the aircraft and then it verticallly descended to the ground. The witness indicated there was a light drizzle at the time.

A California Highway Patrol (CHP) Officer was patrolling State Route 299 at the time of the accident. At 1930 hours, he was driving eastbound on State Route 299 through Douglas City. The CHP Officer indicated he had driven through several "strong rain showers and gusty winds." The CHP Officer estimated the wind gusts at 25 to 30 miles per hour.

After hearing of the accident, the CHP officer drove to the intersection of Highway 3 and Browns Creek Road. At the intersection he could see light from flames across the canyon. At that time, the CHP officer noted the several broken layers of clouds that cleared off within 30 minutes. The CHP officer also indicated he was a private pilot and stated, "I would without a doubt say the area prior to the collision was IFR (instrument flight rules)."

Pilot Information

The pilot held a private pilot certificate which was issued on August 29, 1987, with airplane ratings for single and multiengine centerline thrust airplanes. The pilot did not possess an instrument rating. The most recent third-class medical certificate was issued to the pilot on January 15, 1993, and contained the limitation that correcting lenses be worn while exercising the privileges of his airman certificate.

No personal flight records were located for the pilot, and the aeronautical experience listed in this report was obtained from a review of the FAA airmen records on file in the Airman and Medical Records Center located in Oklahoma City, Oklahoma. The pilot listed his total pilot time as 6,200 hours in his last application for an airman medical certificate.

Meteorological Information

The closest official weather observation station is located in Redding, California, 30.3 nautical miles east of the accident site. At 1950 hours, a scheduled record surface observation was reporting in part: sky condition and ceiling 7,000 broken; visibility 10 miles; temperature 69 degrees Fahrenheit; dew point 51 degrees Fahrenheit; winds 210 degrees at 7 knots; altimeter 30.04" Hg; remarks cumulus clouds northwest through northeast.

At 1930 hours, the weather observation station at Arcata, California, located 57.6 nautical miles west of the accident site was reporting, in part: sky condition and ceiling, 1,200 scattered, measured 2,000 overcast visibility, 5 miles with light rain and fog; winds 170 degrees at 12 knots; altimeter 30.07" Hg.

Wreckage and Impact Information

A fallen dead tree about 80 feet in length was found at latitude 40-36.2 degrees north, and longitude 122-56.55 degrees west in a new growth meadow. The tree and other heavy vegetation had been exposed to a forest fire in the past. The meadow was on the east slope of a ridge line that was part of relief known as the Hayfork Divide.

The tree trunk was broken about 8 feet above the ground and was fallen in a direction towards the fuselage point of rest. The tree exhibited recent scrapes in horizontal branches located more than 50 feet above the break in the trunk. White paint chips and pages of aeronautical flight publications were found in the area below and on the fallen tree trunk.

The fuselage came to rest about 1,000 feet northwest of the fallen tree on the east slope of the same ridge line. The site was dense forest with trees over a 100 feet tall. The fuselage, both engines, both propellers, portions of the tail, and portions wing were located at the base of several trees that had been topped. The trees and the components were subjected to a postcrash fire. The electrical system, aircraft instruments, flight controls, and all combustible materials were destroyed.

Portions of the wings came to rest in a forested ravine between the fallen tree and fuselage point of rest. Portions of the windshield, fuel tanks, tailbooms, and elevator came to rest on higher ground west of a direct line from the fallen tree to the fuselage. There was no evidence of any of these components being exposed to a fire.

The left wing was reconstructed after the parts were recovered. A compression buckle was noted in the leading edge of the left wing fuel cell at station 79.6. The shape of the buckle

conformed to the diameter of the fallen tree.

The front propeller was found separated from the engine with one blade penetrating the soil. Examination of propeller revealed damage to both blades. The blades were bent forward, and exhibited nicks and gouges to the leading edge. There was also spanwise scratches on the face of both propellers. One blade was displaced opposite the direction of rotation and aft. The rear propeller remained attached to the engine. The blades also exhibited forward bending.

Medical and Pathological Information

A post mortem examination was conducted on the pilot by the Trinity County Coroner's Office with specimens retained for toxicological examination. The toxicological analysis was performed by the Armed Forces Institute of Pathology, Washington, D.C. The results of the toxicological analysis revealed positive results for ethanol and negative results for routine drug screens. A copy of the laboratory report is attached to this report.

Additional Information

Engine Examination

The engines were examined on February 14, 1995, at a salvage yard in Sacramento, California. Both engines were exposed to the postimpact fire. There was no evidence of mechanical failure or malfunction found in either of the engines. Examination of the rear engine turbocharger revealed evidence of rotation. The turbine impeller contacted the housing damaging one of the impeller blades and subsequently damaging several others.

Wreckage Release

The wreckage was released to the owner's representatives on February 13, 1995.

Pilot Information

Certificate:	Private	**Age:**	64,Male
Airplane Rating(s):	Single-engine land; Multi-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:**	Yes
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	January 15, 1993
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	6200 hours (Total, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	**Registration:**	N1497S
Model/Series:	T337H T337H	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	01929
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	May 15, 1994 Annual	**Certified Max Gross Wt.:**	4630 lbs
Time Since Last Inspection:		**Engines:**	2 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	CONTINENTAL
ELT:	Not installed	**Engine Model/Series:**	TSIO-360-HB
Registered Owner:	MURRISON, FORREST E.	**Rated Power:**	210 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Night/dark
Observation Facility, Elevation:	RDD ,502 ft msl	**Distance from Accident Site:**	30 Nautical Miles
Observation Time:	19:50 Local	**Direction from Accident Site:**	84°
Lowest Cloud Condition:	Unknown	**Visibility**	10 miles
Lowest Ceiling:	Broken / 7000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	7 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	210°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	21°C / 11°C
Precipitation and Obscuration:	N/A - None - Fog		
Departure Point:	AUBURN , CA (AUN)	**Type of Flight Plan Filed:**	None
Destination:	REDDING , CA (O85)	**Type of Clearance:**	None
Departure Time:	18:00 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:**	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	40.580299,-122.859565(est)

Administrative Information

Investigator In Charge (IIC):	Wilcox, Thomas
Additional Participating Persons:	RICHARD CONTE; SACRAMENTO , CA CLAUDE C UNDERWOOD; WICHITA , KS MICHAEL J GRIMES; MOBILE , AL
Original Publish Date:	December 19, 1995
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=28893