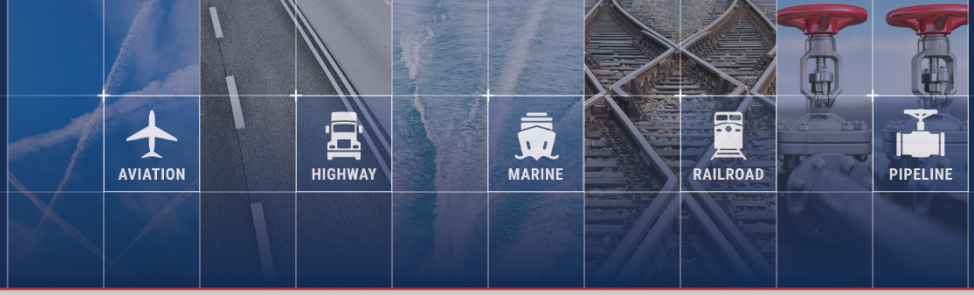

Aviation Investigation Final Report

Location:	DANVILLE, California	**Accident Number:**	LAX99FA078
Date & Time:	January 19, 1999, 19:35 Local	**Registration:**	N8579M
Aircraft:	Cessna 182P	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Positioning		

Analysis

The pilot received a preflight weather briefing and filed a VFR flight plan prior to departing Sacramento, California. During the briefing, the pilot was advised of forecast IFR conditions, with ceilings occasionally less than 1,000 feet and 3 miles visibility. Airmets advised mountain obscuration with scattered moderate to heavy rain. The FSS briefer concluded that after 1900-2000, the weather was going to reduce conditions to marginal VFR flight conditions. When the pilot opened his VFR flight plan by radio the briefer again asked him if he had the airmet for mountain obscuration, IFR conditions, and current information for the route. The pilot said yes he did and the briefer concluded by telling the pilot that VFR flight was not recommended. After the pilot arrived at Livermore airport he was asked by the local controller if he had a clearance on file or if he'd like to file one before he departed Livermore, and the pilot declined. The accident site was located between the elevation of 1,900 to 2,000 feet msl on a route consistent with a downwind departure from Livermore. A weather study by the Safety Board found that the airplane most likely experienced light to moderate rain after takeoff, with the airplane encountering heavy to very heavy rain near the accident site. Witnesses who were in the vicinity of the accident location confirmed that it was raining heavily near the accident timeframe.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's disregard for the preflight weather briefing, and his intentional continuation into adverse weather conditions.

Findings

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

Findings
1. TERRAIN CONDITION - MOUNTAINOUS/HILLY
2. WEATHER CONDITION - OBSCURATION
3. WEATHER CONDITION - RAIN
4. WEATHER CONDITION - LOW CEILING
5. (C) WEATHER FORECAST - DISREGARDED - PILOT IN COMMAND
6. (C) FLIGHT INTO ADVERSE WEATHER - ATTEMPTED - PILOT IN COMMAND
7. (C) VFR FLIGHT INTO IMC - CONTINUED - PILOT IN COMMAND

Factual Information

HISTORY OF FLIGHT

On January 19, 1999, about 1935 hours Pacific standard time, a Cessna 182P, N8579M, collided with mountainous terrain during cruise flight near Danville, California. The airplane, owned and operated by Comstock Air Services of Sacramento, California, was destroyed during the impact sequence. The commercial pilot sustained fatal injuries. The purpose of the flight was to deliver canceled checks to the Livermore Airport under the provisions of 14 CFR Part 135. The airplane had departed Livermore at 1923 and was en route to Sacramento on a 14 CFR Part 91 positioning flight when the accident occurred.

The owner of the company received a telephone call about 2100 from Flight Service (FSS) who told him that the accident airplane's flight plan had not been closed. They also said that the Sacramento Executive Tower told FSS that the airplane had not landed at the airport.

At 0955 on January 20, Contra Costa County Sheriff's Department Search and Rescue personnel located the wreckage of the airplane on a mountainside near Danville.

Shortly after the accident timeframe, the weather began to deteriorate at Livermore Airport. At 2014, Livermore was reporting 2-1/2 miles visibility with heavy rain; 2,900 broken; 5,000 overcast; temperature 54 degrees Fahrenheit; dew point 54 degrees; and altimeter 29.96 inHg.

A commercial pilot who said he lived approximately 4 miles from the accident site called the Federal Aviation Administration (FAA) and reported that between 1900 and 2000 he heard an aircraft flying low nearby. He estimated the airplane's altitude to be between 500 and 1,000 feet above ground level (agl). He said that the weather was "not good." He also stated that he stopped and listened to the airplane, and remarked that the "engine sounded good to him." The individual is a 1,800-hour pilot with an instrument rating and certified flight instructor certificate.

On January 22, 1999, the pilot witness told investigators that the weather was "raining with winds blowing pretty good," at a speed he estimated at 15-20 mph. He said that the pilot "was definitely scud running, but he didn't think that visibility was a problem." He also added that he had owned a Cessna 182 for several years and that he listened to the engine and it sounded "good and strong." Based on the witness's address, it was determined that the he lived approximately 8 miles west of the accident site. It could not be determined if the accident airplane was the same airplane described by the witness because no radar data was available.

A deputy with the Contra Costa County Sheriff's Office responded to an alarm call at 1900 in the Blackhawk/Alamo area. The deputy said that it was pouring down rain between 1830 and

1900 and it continued to rain heavily all night. A Lieutenant who was called out to work the missing aircraft case stated that traditionally, the area of the crash sight gets socked in due to the terrain. She stated that there are huge differences in the temperature up in the hills, which causes the weather to close in.

The owner of the company supplied Safety Board investigators with a written statement from another pilot who landed at Livermore Airport at 1945. This pilot described the weather conditions as "marginal VFR, with light rain, 3-4 miles visibility and ceilings around 3,000 feet." He added that he was in and out of the clouds, but he had visual contact with the ground 95 percent of the time.

AIR TRAFFIC CONTROL

The Safety Board obtained certified re-recordings of the telephone and radio contacts between the pilot and involved Federal Aviation Administration (FAA) facilities. The following transcriptions were made from those tapes.

The pilot called Rancho Murietta Flight Service Station (AFSS) Preflight 11 position according to the certified re-recording during the time period 0015-0030 Universal Coordinated Time.

Pilot: (hereby referred to as "P"), Flight Service (FSS). P: I'd like to file a VFR flight plan. FSS: Go ahead. P: N8579M, Skylane 182, True Airspeed 120, Executive Terminal at 0630 local, round robin to Livermore. Altitude 3,500 feet, fuel on board 3 1/2 hours. Time en-route 1 hour 30 minutes. One passenger on board. Based at Sacramento Executive, color White with orange/brown stripes. One person on board, the pilot. FSS: On file. P: I'd like to get the standard forecast

FSS: Forecast IFR conditions, Sacramento to Vacaville not happening at this time. Ceilings occasionally less than 1,000 feet and 3 miles visibility. Mountain obscurement including the foothills now through the evening. Moderate turbulence, the surface up to 18,000 feet. Icing the entire way, occasional moderate rime and mixed icing in clouds and precipitation up to 20,000 feet. Freezing level currently, 5,000 to 7,000 feet. Looking at the latest radar summary, showers widely scattered to scattered for the entire route. I'm looking at the Sacramento radar, and it shows up on it as well. Right over the radar site, to 30 miles North of Stockton, there is strong to very strong, I should say heavy to very heavy precipitation returns in those areas. All the rest looks light. Southbound to Livermore, cloud layers 3,000 to 5,000 broken to overcast, higher layers above and some scattered layers as low as 2,300 feet. The forecast for the route for the Bay Area including Livermore Valley, 2,000 scattered to broken, 4,000 overcast, tops to 20,000 feet with scattered light rain showers. Gradually becoming between 7-10 PM 1,000 scattered to broken, 2,000 overcast, visibility 3-5 miles with light rain and mist. Tops to 25,000 feet. So it sounds like after 7-800 PM, it will be pretty marginal VFR, so I'd keep that in mind. There are no Notems for the route now until 10 PM, everything is operational.

The following re-recording is for position Inflight One, which occurred between 0232-0243

hours UTC. Pilot: (hereby referred to as "P"), and Rancho Radio referred to as "RR."

P: Rancho Radio, 8579M RR: 8579M, Rancho Radio, Go ahead. P: Flight Exec. VFR flight plan to Livermore and return. RR: 79M, Flight plan is activated. Do you have the Airmet's for mountain obscuration, IFR conditions and current information along the route? P: 79M, affirmative RR: 79M, Roger. VFR not recommended. Have a good day.

The pilot contacted Livermore Tower and said he was 11 miles to the North, landing with information Juliet (ATIS, which is a continuous broadcast of recorded non-control information including weather observations, in areas of high activity.) Information Juliet at 0250 Zulu or 1850 local was as follows: Wind 210-12 knots, visibility 5 miles, rain and mist. Ceiling 3,000 broken, 6,000 overcast, temperature 13 degrees Celsius, dew point 11 degrees Celsius, altimeter 29.95. ILS runway 25 in use, landing and departing Runway 25R.

The following is a re-recording of the conversations between the pilot of N8579M, hereby referred to as "P." and the Livermore Control Tower, referred to as "LCT."

P: 8579M, 11 miles to the North, landing with Juliet. LCT: 79M, enter and report 2 mile right base for Runway 25R. Be advised there is a moderate rain shower at the field at this time. Ceiling 2,800 broken, 4,700 overcast with 3 miles visibility. P: 79M, Roger, 2 mile right base for 25R. P: 79M, 2 mile right base for 25R. LCT: 79M, not in sight. 25R, cleared to land. P: Cleared to land. LCT: 79M, I have the approach lights on Cat 3 flashing. P: 79M, Thanks. LCT: 79M, taxi to row 44, Did you have a clearance outbound, or would you like to file one? P: 79M, negative.

The following re-recording concerns conversations between the pilot of N8579M and the Livermore Ground control:

P: Livermore Ground, 8579M, row 44, taxi with Juliet. LGC: 8579M, Livermore Ground, taxi to Runway 25R. P: 8579M, ready for takeoff. Request right downwind departure. LGC: 8579M, Livermore Tower. 25R, cleared for takeoff, right downwind departure approved.

PERSONNEL INFORMATION

A copy of the pilot's airman and medical records on file at the FAA Airman and Medical Records Center in Oklahoma City were obtained. Review of the records revealed that the pilot held a commercial pilot certificate with airplane ratings for single engine land and rotorcraft helicopters, and, instrument ratings for both airplanes and helicopters. His most recent first-class medical certificate was issued on November 13, 1998, without limitations. As of the date of his last medical, the pilot had reported a total time of 3,750 hours of flight time.

The pilot listed his aeronautical experience in a form for his employer dated February 6, 1998. He listed a total flight time of 3,516 hours; 620.1 hours cross-country; 367.9 hours night flight; 88.5 hours night cross-country; and 729.1 hours instrument (both actual and simulated). The pilot had passed his Airline Transport Pilot (ATP) written test, but had not finished his flight training.

According to the owner of the company, the pilot started working for them on August 8, 1998. He began his flight training with the company on July 6, 1998, and completed his initial training with a flight check, which was completed on August 9, 1998, in accordance with 14 CFR 135.293, 135.297 and 135.299. The pilot was checked out in three airplanes at the time of his accident; the Cessna 182R, Cessna 182P, and Cessna 207. The pilot had flown approximately 266 hours with the company since he was hired.

The pilot completed a FAA FAR Part 135 airman competency/proficiency check on August 9, 1998 in a Cessna 182. On the form, the check pilot listed all the flight maneuvers as conducted satisfactorily. The total flight time for the competency check was 2.0 hours. Additionally, the pilot completed a Part 135 airman check in a Cessna 182R and Cessna 207 aircraft on August 29, 1998, and September 21, 1998, respectively, with all maneuvers listed as completed in a satisfactory manner.

The pilot had last flown on January 14, 1999. He flew 1.4 hours and recorded two night landings when he flew from Sacramento Executive to Livermore and returned to Sacramento.

The pilot had completed a biennial flight review on February 20, 1998. He had completed four trips to Livermore in a 3-week period preceding the accident flight. According to company records, the pilot had flown 58 of the Sacramento to Livermore legs during 1998.

The owner of the company reported that a normal route of flight was straight down the Victor Airway from Sacramento to Livermore, which would put the pilot on a right base in the traffic pattern for Livermore Airport. He stated that the standard fuel load was 65 gallons. He said on the day of the accident flight the airplane was topped off prior to departing Sacramento.

The owner of the company was not aware of the pilot having any medical problems. He said he was a "happy guy who loved what he was doing." The company held pilot safety meetings 10-12 times per year. The last safety meeting the pilot attended was during December 1998. The owner said that he frequently discussed nighttime operations, and that the normal practice was to file IFR at night. He said that he encouraged the pilots to follow the instrument departure procedures (SID) for the airport to keep "themselves clear." He stated that the accident pilot liked to fly VFR instead of IFR. The Comstock Air Services Operation's manual was reviewed by the Safety Board. There was no requirement listed that the pilots had to file an IFR flight plan or follow SID departure procedures. The owner said "he had the landmarks laid out, and he knew the landmarks during both daytime and nighttime operations." The owner asked his pilots to consider all the factors, and to pick the safest way to do the mission. He said that he saw the accident pilot right before he left for Livermore and the pilot remarked,

"it's VFR and should be an easy flight."

AIRCRAFT INFORMATION

The airplane, serial number 18264633, was manufactured on March 12, 1976, and had accumulated a total time in service of 10,066 hours. A 100-hour inspection was performed on the aircraft on December 15, 1998. The airframe total time as of the inspection was recorded as 10,038.8 hours, with a tachometer time of 8,352.7 hours. The altimeter, remote encoder, and transponder were checked as outlined in 14 CFR 91.411 of the FAR on December 01, 1998, and were found in satisfactory condition. Additionally, the pitot static system was tested and found within limits prescribed in 14 CFR 23.1325 on December 1, 1998.

The engine was inspected in accordance with a 100-hour inspection on December 15, 1998, with a total time on the engine of 1,591.7 hours and 99.7 hours since major overhaul (SMOH).

The propeller was inspected in accordance with a 100-hour inspection on December 15, 1998, with a total time on the propeller of 4,046.4 hours and 1,270.8 hours SMOH.

METEOROLOGICAL INFORMATION

The Safety Board prepared a Meteorological Factual Report based on the meteorological conditions surrounding the accident site. According to the Senior Meteorologist, a surface analysis chart prepared by the National Weather Service (NWS) National Centers for Environmental Prediction (NCEP) for 1900 January 19, 1999, showed an area of low pressure centered just off the Washington coast. A trough extended southeastward from the low into southeastern Oregon-northern Nevada. An area of high pressure was located well off the southern California. No fronts were depicted over California.

Additionally, the factual report stated that the NCEP 850 millibar (about 5,000 feet) and 700 millibar (about 10,000 feet) analysis charts for 1600 showed a weak trough of low pressure along the Pacific west coast. Station wind plots and closely packed isobars on the charts indicated moderate to strong southwesterly winds through central California, and plotted values of dew point depression indicated high relative humidity values in the regions.

The surface aviation weather observations near the accident location were reviewed. Hayward Air Terminal (KHWD), has a field elevation of 47 feet msl, and is located about 237 degrees at 17 nautical miles from the accident location. At 1943, they issued a special weather observation: wind 180 degrees at 4 knots; visibility 3 miles; present weather moderate rain mist; sky condition scattered 1,500 feet broken, 2,100 feet overcast 3,000 feet; temperature 13 degrees Celsius; dew point 13 degrees Celsius; altimeter 29.96 inHg.

Concord-Buchanan Field (KCCR), has a field elevation of 23 feet msl and is located about 312 degrees at 15 nautical miles from the accident location. At 1947, the METAR was reported: wind 160 degrees at 13 knots; visibility 3 miles; present weather moderate rain; sky condition

scattered 800 feet broken 2,000 feet overcast 5,000 feet; temperature 13 degrees Celsius; dew point 12 degrees Celsius; altimeter setting 29.94 inHg.

A review of the surface observations and upper air data indicated that the lower atmosphere had a narrow temperature-dew point spread around the accident time.

A review of the Terminal Aerodrome Forecast (TAF) for Oakland prepared by the San Francisco NWS Office, and Sacramento prepared by the Sacramento NWS Office, revealed that conditions were marginal for VFR flight throughout central California due to low ceilings, reduced visibility's, and scattered moderate to heavy rain.

A review of the Aviation Area Forecasts (FA) for the Pacific Coast Area, issued by the Aviation Weather Center (AWC) at Kansas City, Missouri, revealed that advisories for IFR conditions and mountain obscuration were valid for portions of central California around the time of the accident.

SEARCH AND RESCUE

The Langley Air Force Base Search and Rescue personnel first picked up a signal of an ELT hit at 0743 on January 19, 1999. At 0834, the satellite made another pass and confirmed the ELT signal. According to Langley records, at 0850, they opened an incident report on the missing aircraft.

The Safety Board contacted the FAA Western-Pacific Region Headquarters Air Traffic Division, (AWP-533), located in Hawthorne, California. One of the Quality Assurance staff reported that Bay Tracon monitors 121.5 with an antenna located on the field in Oakland, California. The facility is operated 24-hours a day. A review of Section 3 "Communications Procedures" of the Air Traffic Control Handbook states in part . . . "ARTCC's (the facility's name) need not monitor 121.5 and 243.0 MHz if other ATC facilities monitor those frequencies in a given area."

According to a review of the sheriff's report, at 0955 on January 20, 1999, the wreckage of a single engine airplane crash was located in the unincorporated city of Danville. The Contra Costa County Sheriff's deputies responded to the location, which was a remote mountainside with no roadway access. The sheriff's office said they checked the wreckage but that they could not fully search all the wreckage due to the precarious position of the airplane on the mountainside. They stated the wreckage was on a 65- to 70-degree slope and was "very unstable." According to the sheriff's office report, the airplane left Livermore at 1923 on January 19, 1999. At 1935, the airport received an ELT signal in the vicinity of Johnson Road and Camino Tassajara road in the unincorporated town of Danville.

According to the Contra Costa SAR, the airplane had crashed into the mountainside with both wings and tail section at the site. Additionally, SAR personnel informed Safety Board personnel that there was a smell of aviation fuel at the accident site. The seat belt was not found around the pilot when rescue personnel arrived at the crash site.

WRECKAGE AND IMPACT INFORMATION

The aircraft wreckage was oriented on a magnetic heading of 350 degrees and at an elevation of 1,900 feet mean sea level, (msl). The area where the airplane impacted was composed of primarily rocks with some shrub bushes and scrub brush oriented on a 65- to 70-degree slope. The airplane was located at 37 degrees 49 minutes 8 seconds north by 121 degrees 48 minutes West.

Some of the search and rescue personnel were stranded on site due to weather that was moving through the area and they had to hike out. They reported that the hillside was extremely unstable and that they were concerned that the wreckage could easily become dislodged and slide down the slope, posing a hazard to the investigative team. Safety Board personnel made the decision to attempt to examine the wreckage and account for all four corners of the airplane and take some photographs before leaving the scene and having the airplane recovered.

Examination of the wreckage and the site confirmed that all four corners of the airplane, the engine, and propeller were accounted for in the debris path. Both wing tip navigation light lenses were located at the crash site, about a wing span apart from each other, with the right lens being slightly higher than the left lens on the hillside. There was no evidence of a pre- or postimpact fire.

The propeller had been twisted off its mounting flange. The attach bolts were sheared and stripped. The engine was located in the middle of the cockpit area and was lying on its left side. The oil sump, induction, and exhaust systems were crushed and broken. The starter, magnetos, oil cooler, propeller governor, and carburetor were broken off the engine. Additionally, the alternator was crushed. The wreckage was then airlifted from the mountainside to a trailer and transported to a secure recovery facility for further examination. Later that evening, rain and low clouds moved back into the area, making any attempt to return to the site unfeasible.

AIRCRAFT EXAMINATION

The airframe and powerplant were examined at Plain Parts in Sacramento, California, on January 22, 1999, with a representative of Teledyne Continental Motors present. The engine was disassembled. The Hobbs meter on the airplane read 3,937.7 hours. The engine turned freely when the propeller was rotated by hand. The oil filter was removed and the filter was examined and found to be clean of any debris. The left and right magnetos were hand rotated and both were observed to produce sparks when rotated. A "thumb compression" check was performed on the engine. The spark plugs were removed and no discrepancies were noted them. The vacuum pump was disassembled and its drive coupler was found intact. All the cylinders were found intact on the engine pump. According to the representative, the top spark plugs, (Champion RHB40E) were dry and clean, and showed normal wear when compared to a

Champion Check-A-Plug Card. Continuity was established from the front of the engine to the rear. The oil screen was found to be clean.

The airframe was examined by the Safety Board with technical assistance from Cessna Aircraft Company. Control cable continuity was established from each flight control from the control surface to where it entered the cabin. All of the flight controls were attached to their associated aerodynamic surfaces. The flap actuator was found in a "full up" position. Both wings had separated from the fuselage. The leading edges of both wings were damaged.

Both tips of the propeller had pieces separated from them, and both blades were loose in the hub. Both blades had S-bending and chordwise scratches noted on them. Blade A was bowed forward and then back. The fuel selector was found in the "both" position. The fuel cap areas of both bladder tanks had separated from the wing. Cessna Aircraft Company personnel attributed this separation to be a manner similar to being "blown out" by hydraulic pressure.

The cabin area of the airplane was heavily deformed during the impact sequence. Both forward seats had separated from their seat tracks. The two rear seats were still attached. The instrument panel and firewall were damaged and compressed. According to rescuers, the pilot's lap belt was not buckled when he was found. Examination of the lap belt webbing and stitching showed no signs of strain or deformation.

TESTS AND RESEARCH

A review of the FAA Form 337, Major Repair and Alteration for Airframe, Powerplant, Propeller or Appliance, revealed that the accident airplane had an ARNAV systems R-15B LED Loran C installed in the airplane on May 1, 1990. According to the form, the aircraft panel placarded "ARNAV Loran C approved for VFR use only."

The Loran unit was removed from the airplane and sent to the manufacturer, ARNAV, for examination. The unit was examined on March 17, 1999. According to the Safety Board personnel who witnessed the examination, the display unit was removed and replaced with an undamaged display unit and an attempt to power up the device was attempted. It was unsuccessful. The memory chip was removed and installed in a test circuit board and power was applied to the unit. The manufacturer determined that the destination and present position data were not in the memory, so the test was determined to be unsuccessful. The manufacturer determined that there were approximately 60 database waypoints in the memory, although they could not tell if any of those were being used for the accident flight.

MEDICAL AND PATHOLOGICAL INFORMATION

The Contra Costa County Office of Sheriff-Coroner performed an autopsy on the pilot, with tissue and fluid samples retained for toxicological examination. The samples were submitted to the FAA Civil Aeromedical Institute (CAMI) in Oklahoma City, Oklahoma. Separate toxicological studies were conducted at the request of the Contra Costa County Sheriff-

Coroner's office.

CAMI reported the samples from the pilot were negative for all screened drug substances.

The separate toxicological examination, performed in Las Vegas, Nevada, reported the samples for the pilot were negative for all screened drug substances.

ADDITIONAL INFORMATION

The wreckage was released to the registered owner on January 22, 1999. At the time the release was executed, the wreckage and all recovered components were located at the facilities of Plain Parts in Sacramento.

Additional parties to the investigation not included on page 5 are:

Chuck Mote National Air Traffic Controller's Association Tucson, Arizona

Pilot Information

Certificate:	Commercial	**Age:**	51,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	November 13, 1998
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	3819 hours (Total, all aircraft), 112 hours (Total, this make and model), 85 hours (Last 90 days, all aircraft), 18 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N8579M
Model/Series:	182P 182P	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	18264633
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	December 15, 1998 100 hour	**Certified Max Gross Wt.:**	2950 lbs
Time Since Last Inspection:	28 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	10067 Hrs	**Engine Manufacturer:**	Continental
ELT:	Installed, activated, aided in locating accident	**Engine Model/Series:**	O-470
Registered Owner:	COMSTOCK AIR SERVICES INC	**Rated Power:**	230 Horsepower
Operator:		**Operating Certificate(s) Held:**	On-demand air taxi (135)
Operator Does Business As:		**Operator Designator Code:**	AVGA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Night/dark
Observation Facility, Elevation:	LVK ,397 ft msl	**Distance from Accident Site:**	7 Nautical Miles
Observation Time:	19:53 Local	**Direction from Accident Site:**	181°
Lowest Cloud Condition:	Scattered / 2200 ft AGL	**Visibility**	3 miles
Lowest Ceiling:	Overcast / 3000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots / None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	220°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	12°C / 12°C
Precipitation and Obscuration:	Light - None - Drizzle		
Departure Point:	LIVERMORE (LVK)	**Type of Flight Plan Filed:**	VFR
Destination:	SACRAMENTO (SAC)	**Type of Clearance:**	VFR
Departure Time:	19:23 Local	**Type of Airspace:**	Class B

Airport Information

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

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	37.810523,-121.969924(est)

Administrative Information

Investigator In Charge (IIC):	Childress, Deborah
Additional Participating Persons:	MICHAEL J BECKER; OAKLAND , CA ORIN KOUKOL; SACRAMENTO , CA SCOTT BOYLE; ARVADA , CO HENRY SODERLUND; WICHITA , KS
Original Publish Date:	June 22, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=45664