National Transportation Safety Board
Aviation Accident Final Report

Location:	Bishop, CA	**Accident Number:**	LAX02FA251
Date & Time:	08/11/2002, 0123 PDT	**Registration:**	N690TB
Aircraft:	Aero Commander 690A	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	4 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot entered the left-hand traffic pattern at an uncontrolled airport on a dark moonless night. Witnesses reported observing the airplane in a left descending turn. As the airplane turned onto the base leg, its left bank angle suddenly became steep. The airplane rapidly descended until colliding with level desert terrain 1.63 nm from runway 30's threshold. There were no ground reference lights in the accident site area. An examination of the airplane structure, control systems, engines, and propellers did not reveal any evidence of preimpact malfunctions or failures. Signatures consistent with engine power were found in both the engines and the propellers. The wreckage examination revealed that the airplane descended into the terrain in a left wing and nose low attitude. Fragmentation evidence, consisting of the left navigation light lens and left propeller spinner, was found near the initial point of impact. The wreckage was found principally distributed along a 307- to 310-degree bearing, over a 617-foot-long path. The bearing between the initial point of impact and the runway threshold was 319 degrees. The pilot's total logged experience in the accident airplane was 52 hours, of which only 1.6 hours were at night. The pilot was familiar with the area, but he had made only two nighttime landings within the preceding 90 days. Review of the recorded ATC communications tapes did not reveal any evidence of pilot impairment during voice communications with the pilot.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain an appropriate terrain clearance altitude while maneuvering in the traffic pattern due to the sensory and visual illusions created by a lack of ground reference lights and/or terrain conspicuity, and the dark nighttime conditions.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: APPROACH - VFR PATTERN - BASE LEG/BASE TO FINAL

Findings
1. TERRAIN CONDITION - OPEN FIELD
2. (F) LIGHT CONDITION - DARK NIGHT
3. (C) PROPER DESCENT RATE - NOT OBTAINED/MAINTAINED - PILOT IN COMMAND
4. (C) ALTITUDE - INADEQUATE - PILOT IN COMMAND
5. (C) VISUAL/AURAL PERCEPTION - PILOT IN COMMAND

Factual Information

HISTORY OF FLIGHT

On August 11, 2002, about 0123 Pacific daylight time, an Aero Commander 690A, N690TB, descended into terrain near the Bishop Airport, Bishop, California. The accident occurred during a descending turn between the base and the final approach legs in the airport's traffic pattern. The airplane was destroyed. The commercial certificated pilot and three passengers were fatally injured. The airplane was owned by the pilot who was operating it under 14 CFR Part 91. Visual meteorological conditions prevailed during the dark, nighttime flight, and no flight plan had been filed. The accident flight departed from Oakland, California, on August 11, about 0031.

About 4.5 hours earlier (a few minutes after 2007), the pilot had completed a flight from Bishop to the Metropolitan Oakland International Airport. Oakland. During this flight the pilot was accompanied by a friend. After arrival at Oakland, about 2025, the pilot purchased fuel for the return nighttime flight to Bishop. By prior arrangement, the pilot had agreed to transport two additional passengers from Oakland to Bishop. The passengers arrived in Oakland via a scheduled airline flight. The passengers, along with several hundred pounds of their luggage, boarded the pilot's airplane, and the accident flight commenced.

According to the Federal Aviation Administration (FAA), at no time during the pilot's flight between Oakland and Bishop did he communicate that he was experiencing any difficulty with the airplane. By 0102:14, the pilot had climbed to 17,500 feet mean sea level (msl) and was over the Sierra Nevada Mountains.

At 0116:31, the pilot informed an Oakland Air Route Traffic Center controller that he had "Bishop in sight" and was starting a descent under visual flight rules. The controller acknowledged the pilot's transmission, terminated radar service, advised the pilot to change to the advisory frequency, and said "good night." About this time, at 0116:34, the last radar return shows the airplane descending through 16,600 feet.

The pilot replied to the controller at 0116:47, and stated "local control good night sir thanks." There were no further recorded transmissions from the pilot.

As the airplane approached the Bishop airport, two ground-based witnesses observed the airplane's lights. The witnesses described their observations to the National Transportation Safety Board investigator. Based upon the witnesses' statements, the airplane entered the Bishop airport's left traffic pattern, turned left onto the base leg for runway 30 and descended. During the subsequent left turn onto the final approach leg to runway 30, the airplane's bank angle suddenly increased until reaching between 70 and 90 degrees. Then the airplane descended rapidly. The airplane impacted level desert terrain about 1.6 nautical miles southeast (142 degrees, magnetic) from runway 30's landing threshold.

PERSONNEL INFORMATION

The pilot held a commercial pilot certificate with airplane multiengine land and instrument airplane ratings. He was also rated to fly a CE-500.

The pilot's personal flight time logbook was provided to the Safety Board investigator for review. The logbook covered the period from January 29, 1990, when the pilot's total flight time was listed as being 829.3 hours, to August 9, 2002, when the pilot's total flight time was

3,799.6 hours. A review of the logbook shows that the pilot first flew N690TB on May 8, 2002.

By the time of the accident, the pilot's total logged flight experience in the Aero Commander 690A was about 52 hours. During the 90 days preceding the accident, the pilot had flown for about 52 hours, all in the accident airplane. Prior to the accident flight, 1.6 hours of this time were at night.

The pilot's logbook further indicates that during this 90-day period preceding the accident, he had made two landings at night. This does not include the landing at Oakland, which occurred about sunset.

AIRPLANE INFORMATION

The Aero Commander 690A was manufactured in 1973. It had a standard, normal, airworthiness certificate. The airplane was not equipped with cockpit voice or flight data recorders, nor were they required under FAA regulations.

The airplane's maintenance records indicated that on May 8, 2002, at a Hobb's hour meter time of 1,678.6 hours and a listed total airplane time of 3,726.8 hours, the airplane received an annual inspection.

According to information in the airplane's logbook number 3, the last maintenance that was performed was dated July 10, 2002. This maintenance involved removal and replacement of the left and right propeller governors and other items. The repair station that performed the work indicated that the airplane was approved for return to service at an indicated meter time of 1,712.8 hours. The Safety Board investigator calculated that the airplane's total time on this date was about 3,761 hours. At the time of the accident, the airplane's total time was estimated at 3,782 hours.

The Airesearch Manufacturing Company of Arizona (subsequently called Garrett, Allied-Signal and Honeywell) manufactured the two model TPE331-5-251K turboshaft engines that were installed in the airplane. The maintenance records indicate that the engines' and airframe's total time were the same.

Regarding the pressurization system, according to the airplane's flight manual, the system can be set to maintain a normal cabin differential pressure of 5.2 pounds per square inch (psi). The maximum (red line) differential pressure is 5.4 psi.

On July 31, 2002, the accident airplane was examined by a Reno, Nevada, repair station for a discrepancy. The repair station's documentation indicates that it found a pressurization leak in the airplane. In summary, the repair station found many leaks on the left and right-hand side of the airplane between fuselage stations 5.54 and 144.0. Most of the leaks were located along fuselage seams. Minor leaks were located around the windows and the main entry door seal. The owner was advised of the leaks. It was the owner's decision to take the airplane "as is" and have the leaks corrected in Chico, California. The repair station's director of maintenance reported that no log entry was made approving the airplane for return to service. The airplane was put back together, whereupon the owner reportedly flew it back to Bishop.

A pilot who flew the airplane on August 8, 2002, reported that the cabin pressure was 3.2 psi and commented that the system was in need of repair. He stated that at 21,000 feet msl, the cabin pressure was at 10,000 feet. Reportedly, a passenger on the flight noticed an air leak in

the floor air duct. The pilot reported advising the owner that the airplane was not maintaining adequate pressure during his flight. The owner reportedly told him that a part had been ordered at a repair facility in Chico, California, to resolve the problem. The owner told him he planned to take the airplane to Chico for repair the following week.

METEOROLOGICAL INFORMATION

Sunset and the end of civil twilight occurred at Oakland on August 10 at 2008 and 2036, respectively.

At 0123 on August 11, the moon was not visible at Bishop. It had set the previous day at 2136, and was to rise at 0922 on August 11.

At 0056 and 0156 on August 11, the Bishop airport reported its weather conditions, in part, as follows: wind from 300 degrees at 3 and 5 knots, respectively. The visibility was 10 statute miles, and the sky was clear. The altimeter was 30.04 inches of mercury, and the temperature was 18 and 16 degrees Celsius, respectively.

The Bishop airport is equipped with an automatic surface observing system (ASOS), which continuously transmits the local weather conditions.

AIDS TO NAVIGATION

According to the FAA, all electronic aids to navigation pertinent to the airplane's route of flight were functional on the day of the accident.

COMMUNICATION

None of the personnel who provided services to the accident pilot reported any difficulties or abnormal occurrences. The FAA reported that its handling of the accident pilot/airplane was routine.

AIRPORT AND GROUND FACILITIES

The Bishop airport, elevation 4,120 feet msl, is uncontrolled. The airport has runways 12-30, 16-34, and 07-25. Runway 30 is the longest at the airport, and its length is 7,498 feet. The runway is 100 feet wide, and it has an asphalt surface.

According to the FAA's "Airport Facility Directory," the standard traffic pattern for arriving airplanes is to the left. Also, there are no published obstructions on the approach path to runway 30. The Safety Board investigator noted none during the on-scene accident site investigation.

Airport management indicated that the high intensity runway lights installed on runway 30 could be activated upon transmitting on the common air traffic advisory frequency (CTAF). A two-box visual approach slope indicator (VASI) is installed on the left side of the runway. The VASI provides arriving pilots with guidance for a 3.5-degree approach slope, with a threshold crossing height of 55 feet.

According to the Bishop airport management, on the accident date, there were no notices to airmen pertinent to nighttime operations utilizing runway 30. The airport's rotating beacon was functional. Management also opined that the runway lights on runway 30 were operational, and that their activation system was functional. There were no current reports of abnormalities associated with their remote activation.

WRECKAGE AND IMPACT INFORMATION

The Safety Board investigator's on-scene examination of the accident site and airplane wreckage revealed that the initial point of ground impact (IPI) occurred on level desert terrain at the following global positioning satellite (GPS) coordinates: 37 degrees 20.472 minutes north latitude by 118 degrees 20.393 minutes west longitude. The accident site elevation is about 4,090 feet msl. The area surrounding the accident site was devoid of structures and lights.

The magnetic bearing and distance from the IPI to the threshold of runway 30 is about 319 degrees and 1.63 nautical miles. The wreckage fragment located closest to the runway was found at GPS coordinates 37 degrees 20.551 minutes north latitude by 118 degrees 20.472 minutes west longitude. The calculated bearing and distance between these wreckage locations (the principal wreckage distribution path) is approximately 307 to 310 degrees and 617 feet. In the vicinity of the IPI, airplane components and fragmented structure associated with the right and left side of the airplane were principally found in the field to the right and left side of the wreckage distribution path's central axis.

At the IPI's impact crater, a red navigation light lens fragment and a component from the airplane's left wingtip were located. Several yards from this location, fragments from the left engine's propeller spinner were found. Fragmented portions of the undercarriage, lower fuselage structure, and cockpit interior, including the cabin and cockpit seats, were found farther northwest. (See the wreckage distribution diagram and photographs for additional details.)

GPS measurements indicated that the right wing was about 504 feet and 300 degrees from the IPI, and the main wreckage was about 81 feet and 351 degrees beyond the right wing.

The outboard 10-foot-long portion (in a spanwise direction) of the left wing was fragmented and destroyed. The cockpit and the cabin were also destroyed. The aft empennage, right wing, horizontal stabilizer, and the rudder were partially intact. The elevators were found attached to the horizontal stabilizer.

The outboard portion of the left wing's main spar and stringers were found bent and separated in an aft direction. The leading edge of the wing was crushed in an aft direction.

The majority of the leading edge of the right wing was observed intact and was not crushed. The outboard 5-foot-long portion (in a spanwise direction) of the right wing was found crushed in an aft direction and fragmented.

The rudder's trim tab was found attached to its respective hinge. It appeared to be in a neutral position.

Evidence of fuel was noted in the vicinity of both engines. The landing gear was in the down and locked position.

An impact damaged drum-pointer type altimeter was found in the field and separated from the cockpit. The altimeter was observed set to between 30.05 and 30.06 inches of mercury, and it was indicating 4,160 feet.

No evidence of fire was observed in any of the examined wreckage.

MEDICAL AND PATHOLOGICAL INFORMATION

The pilot held a second-class aviation medical certificate that was issued on July 15, 2002. The certificate bore the limitation that the pilot must possess corrective lenses for distant vision.

An autopsy of the pilot was performed by the Inyo County Coroner's Office, 325 West Elm Street, Bishop, California 93514. The FAA's Civil Aeromedical Institute's Toxicology and Accident Research Laboratory performed toxicological tests on specimens from the pilot. The tests revealed the presence of ethanol in blood. No ethanol was detected in vitreous. Acetaldehyde was detected in blood and vitreous. According to the manager of the FAA's laboratory, the ethanol found in this case was from post mortem formation and not from the ingestion of ethanol.

TESTS AND RESEARCH

Airport Lights.

On the evening of August 14, 2002, the Safety Board investigator inspected the airport's lighting system, and the following three outages were noted. One threshold light located near the left side of runway 30's centerline was found inoperative. One runway light located on the left side of the runway, approximately abeam the downwind VASI box, was found inoperative. One runway light located on the left side of the runway, approximately abeam the upwind VASI box, was found inoperative. Upon being advised of the outages, airport management took corrective action.

According to the FAA, Bishop airport management is responsible for maintaining the lighting system in a safe and serviceable condition. According to information contained in FAA Advisory Circular 150/5340-26, entitled "Maintenance of Airport Visual Aids Facilities," in Chapter 4, Section 4, and in Appendix I, Table 7, runway and taxiway edge lights should be inspected daily for outages. There is an allowable percentage of unserviceable lights, but they should not be adjacent to each other except in limited specified areas. The nonfunctioning lights that the Safety Board investigator observed were not adjacent to each other.

Accident Time Determination.

The California Highway Patrol (CHP) received a 911 emergency telephone call from an eyewitness. According to the CHP, because of a preexisting outage pertaining to this 911 telephone line, no recording was made of the call.

On August 15, the dispatcher who had received the 911 call was interviewed by the Safety Board investigator. The dispatcher indicated she recalled that the reporting party stated he had heard an airplane and looked up at it. The airplane appeared to make a U-turn, and it was in an "awkward or weird angle." Thereafter, he lost sight of the airplane and heard a "thud" sound, causing him to believe it had crashed. The dispatcher estimated that it took between 1 and 1 1/2 minutes for their 911 call to be completed and for the call to be logged into the CHP's computer system. The logged event time was 0125:46 hours.

Based upon the CHP information, the Safety Board investigator estimated that the accident occurred about 0123.

Air Traffic Control.

The Safety Board's Operational Factors Division conducted an air traffic control examination of the FAA's handling of the accident airplane. In summary, the Safety Board Group Chairman Report indicated that a review of the ATC transcript showed the last controller to communicate

with the pilot provided him with an altimeter setting for Fresno, California, which was 29.81 inches of mercury. The pilot was not provided with the local altimeter setting for the Bishop airport. In pertinent part, FAA Air Traffic Control Order 7110.65 requires that the destination airport's altimeter setting be provided to an arriving airplane under certain circumstances when an approach control facility does not serve the destination airport.

Air Traffic Communications.

The FAA and the Safety Board investigator reviewed the voice recording made of the pilot's communications with the Oakland Airport's local controller, and with en route radar controllers. During the communications, no evidence was heard of the pilot experiencing any difficulty communicating with the controllers. The FAA did not report any evidence of the pilot exhibiting slurred speech, or a lack of responsiveness to its air traffic instructions.

Airframe Examination.

In summary and pertinent part, the airplane manufacturer participant reported the following observations concerning the airplane's structure and flight controls:

Regarding the control yokes, the left and right side control columns were observed separated from their support structure. The control yokes remained attached to the control columns and the continuity between the sprockets, chains and cables was detected when the yokes were rotated. The cables that remained attached exhibited a broomstraw separation or had been cut during the recovery.

Regarding the rudder, the left and right cables were found attached to the tail cone section by the autopilot bridle cables. Movement of the cables, fore and aft, revealed free and easy movement of the autopilot rudder servo. One of the cables was noted to have been cut, and the other displayed a broomstraw appearance at a length that corresponded to the forward cabin, under-floor location.

Regarding the elevator, the up elevator cable displayed a broomstraw appearance adjacent to the location of the aft elevator idler pulley. The down elevator cable had been cut during the recovery. The elevator up and down cables remained attached to the tail cone section by the autopilot bridle cables. Movement of the cables, fore and aft, revealed free and easy movement of the autopilot elevator servo. The associated components of the elevator control system were examined, and no evidence of preimpact separations was noted.

Regarding the wings and ailerons, the right wing was found separated from the fuselage and was mostly intact. The left wing was severely fragmented. No evidence was found of any preimpact separations of components associated with the operation of the ailerons.

Regarding the flaps, control cable continuity was established between the left and right outboard and inboard flap pulleys. Due to the extent of damage, continuity could not be determined between the inboard flap pulleys and the master and slave pulleys or the hydraulic flap actuator.

Regarding the elevator and rudder trim, the control cables associated with both the elevator and rudder trim systems were observed to be separated at several locations and had a broomstraw appearance or had been cut during the recovery. The control wheels, gears, and drums that operate the systems were observed loose in the wreckage. The chains, sprockets,

and flex drive assemblies in the empennage were disengaged. Trim position at the time of the accident could not be determined.

The complete set of photographs taken by the participant during its on-scene and follow-up wreckage examination is on file with the company. These photographs are not included in the Safety Board's report.

Engine Examination.

The engines were examined at Honeywell, Phoenix, Arizona, under the direction and supervision of the Safety Board investigator. Following the examination, the participant summarized its observations and made the following statements.

The left engine (serial number P-06180) was operating at the time of impact as evidenced by metal spray deposits on the 2nd and 3rd stage stator vanes and the 2nd and 3rd stage turbine wheel blades. The right engine (serial number P-06184) was operating at the time of impact as evidenced by metal spray deposits on the 2nd and 3rd stage stator vanes and 2nd and 3rd stage turbine wheel blades. The power section of the right engine continued to operate for some period of time following the initial propeller strike, as evidenced by the separation of the torsion shaft at the aft phenolic bushing area.

The participant opined that the evidence indicated both engines were operating at the time of impact. In addition, no preexisting conditions were identified in either engine that would have interfered with their normal operation.

The complete set of photographs taken by the participant during its on-scene and subsequent teardown examination is on file with the company. These photographs are not included in the Safety Board's report.

Propeller Examination.

The propellers were examined at Hartzell Propeller, Inc., Piqua, Ohio, under the direction and supervision of the Safety Board investigator. Following the examination, the participant summarized its observations and made the following statements.

The blades from both propellers had significant damage. The left propeller had especially strong twisting of the blades. The right propeller blades did not have much twisting, but had significant gouges and tearing at the tips. These conditions indicate that both propellers had power on at the time of the impact. The difference in the type of blade damage is attributed to the manner of impact. The propellers did not appear to have impacted symmetrically as evidenced by aft bending on the left propeller blades and forward bending on the right propeller blades, as well as by the greater severity of damage to the left propeller. The left propeller had a "witness mark" at the 29.8-degree blade angle. This position would be consistent with normal power on operation.

The complete set of photographs taken by the participant during its teardown examination is on file with the company. These photographs are not included in the Safety Board's report.

Radar Track Data.

The FAA National Track Analysis Program (NTAP) recorded radar data indicates that the airplane climbed above 14,000 feet about 0046. The maximum altitude the airplane obtained during its en route flight was 17,500 feet. The airplane was descending through 16,600 feet at 0116, the time of the last radar hit.

Pilot Currency and Federal Aviation Regulations.

According to 14 CFR Part 61.57, in pertinent part, no person may act as pilot-in-command of an aircraft carrying passengers during the period beginning 1 hour after sunset and ending 1 hour before sunrise unless within the preceding 90 days that person has made at least three takeoffs and three landings to a full stop during the period beginning 1 hour after sunset and ending 1 hour before sunrise, and that person has acted as sole manipulator of the flight controls.

In the 90 days preceding the accident, the accident pilot's logbook indicates that he had made two night landings, which were on May 26 and July 25, respectively. On August 11, 2002, sunset in Oakland occurred at 2008, and the pilot landed at Metropolitan Oakland International Airport within a few minutes after 2007.

On Demand Operation (Air Taxi) Regulations.

According to the FAA, the pilot's possession of a commercial pilot certificate was only one of several requirements that he needed in order to transport passengers for hire. The pilot had indicated to FAA personnel his intent to obtain the requisite air carrier (air taxi) operating certificate, which would have provided the requisite authorization pursuant to 14 CFR Part 135. However, the authorization had not been granted.

Personnel at the passengers' Bishop-based business office indicated to the Safety Board investigator that the passengers desired to reimburse the pilot for the cost of their transportation. However, the pilot pointed out that he "did not have enough time in the aircraft type to act formally as a charter pilot." It was therefore agreed that "in exchange for the favor of the flight" the pilot would receive a photograph from the passengers, who were professional photographers.

The FAA's Western Pacific regional counsel reported to the Safety Board investigator that this type of compensation in lieu of holding the requisite air carrier certificate is not permissible under its existing regulations. The pilot did not appear to have been sharing expenses.

Personnel located at a Bishop airport company, where the pilot had been based, reported to the Safety Board investigator that the pilot had likely flown his airplane on other "charter" flights. One person reported having heard a taped telephone message on a company answering machine in which the caller indicated that he wanted to "charter" the pilot for an additional flight in July 2002.

ADDITIONAL INFORMATION

The airplane wreckage was released to the owner's assigned insurance adjuster on September 10, 2003. No parts were retained.

Pilot Information

Certificate:	Commercial	**Age:**	46, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	**Seat Occupied:**	Unknown
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	**Last FAA Medical Exam:**	07/15/2002
Occupational Pilot:		**Last Flight Review or Equivalent:**	07/27/2001
Flight Time:	3802 hours (Total, all aircraft), 52 hours (Total, this make and model), 3710 hours (Pilot In Command, all aircraft), 48 hours (Last 90 days, all aircraft), 18 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Aero Commander	**Registration:**	N690TB
Model/Series:	690A	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	No
Airworthiness Certificate:	Normal	**Serial Number:**	11109
Landing Gear Type:	Retractable - Tricycle	**Seats:**	
Date/Type of Last Inspection:	05/08/2002, Annual	**Certified Max Gross Wt.:**	10250 lbs
Time Since Last Inspection:	55 Hours	**Engines:**	2 Turbo Prop
Airframe Total Time:	3782 Hours at time of accident	**Engine Manufacturer:**	Airesearch
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	TPE331-5-251K
Registered Owner:	Thomas F. Reid	**Rated Power:**	840 hp
Operator:	Thomas F. Reid	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	**Condition of Light:**	Night/Dark
Observation Facility, Elevation:	BIH, 4120 ft msl	**Distance from Accident Site:**	2 Nautical Miles
Observation Time:	0056 PDT	**Direction from Accident Site:**	322°
Lowest Cloud Condition:	Clear	**Visibility**	10 Miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	3 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	300°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.04 inches Hg	**Temperature/Dew Point:**	18°C / -2°C
Precipitation and Obscuration:			
Departure Point:	Oakland, CA (OAK)	**Type of Flight Plan Filed:**	None
Destination:	Bishop, CA (BIH)	**Type of Clearance:**	None
Departure Time:	0031 PDT	**Type of Airspace:**	Class G

Airport Information

Airport:	Bishop (BIH)	**Runway Surface Type:**	Asphalt
Airport Elevation:	4120 ft	**Runway Surface Condition:**	Dry
Runway Used:	30	**IFR Approach:**	None
Runway Length/Width:	7498 ft / 100 ft	**VFR Approach/Landing:**	Full Stop; Traffic Pattern

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	3 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	4 Fatal	**Latitude, Longitude:**	39.341111, -118.340000

Administrative Information

Investigator In Charge (IIC):	WAYNE POLLACK	**Report Date:**	03/30/2004
Additional Participating Persons:	Don Morgan; Federal Aviation Administration; Reno, NV Geoffrey Pence; Twin Commander Aircraft Corporation; Arlington, WA Peter Baker; Honeywell; Phoenix, AZ Thomas McCreary; Hartzell Propeller; Piqua, OH Domenic Torchia; National Air Traffic Controller Association(NATCA)		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov, or at 800-877-6799. Dockets released after this date are available at http://dms.ntsb.gov/pubdms/.		