Aviation Investigation Final Report

Location:	MAMMOTH LAKES, California	**Accident Number:**	LAX95FA210
Date & Time:	June 16, 1995, 22:30 Local	**Registration:**	N333HF
Aircraft:	Cessna P210N	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot had received four weather briefings prior to departing on the cross-country flight between Long Beach and Mammoth, California. The briefer informed the pilot that variable weather conditions existed, including mixed icing in clouds, mountain obscurement, and precipitation. No flight plan was filed for the dark nighttime flight over the high mountainous terrain. Witnesses heard the airplane, with its engine running, collide with trees and terrain near their mountain campground. The accident site was at an approximate elevation of 7,300 feet msl. The witnesses estimated that the ceiling was about 200 feet above ground level, and snowing. The pilot's medical certificate had expired. The FAA declined to issue the pilot another medical certificate because his diabetes was insufficiently controlled.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's continued flight into instrument meteorological conditions during dark nighttime over mountainous terrain; and his failure to maintain an adequate altitude to ensure terrain clearance. Thw weather and terrain were factors.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: CRUISE

Findings

1. (F) LIGHT CONDITION - DARK NIGHT
2. IN-FLIGHT PLANNING/DECISION - INADEQUATE - PILOT IN COMMAND
3. WEATHER EVALUATION - MISJUDGED - PILOT IN COMMAND
4. PREFLIGHT BRIEFING SERVICE - DISREGARDED - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: CRUISE

Findings
5. (F) TERRAIN CONDITION - MOUNTAINOUS/HILLY
6. (F) WEATHER CONDITION - SNOW
7. (F) WEATHER CONDITION - LOW CEILING
8. (C) VFR FLIGHT INTO IMC - CONTINUED - PILOT IN COMMAND
9. (C) ALTITUDE/CLEARANCE - INADEQUATE - PILOT IN COMMAND

Factual Information

HISTORY OF FLIGHT

On June 16, 1995, at 2230 hours Pacific daylight time, a Cessna P210N, N333HF, collided with trees and terrain northwest of Bishop, California. The aircraft was destroyed and the commercial pilot, the sole occupant, received fatal injuries. The aircraft was being operated as a personal flight by the pilot when the accident occurred. The flight originated from Daugherty Field, Long Beach, California, at approximately 2130. Instrument meteorological conditions prevailed at the accident site, and no IFR flight plan had been filed.

Witnesses at the accident site reported hearing the sound of an engine which gradually grew louder. As the engine sound increased, they heard a sharp crack followed by the sound of an engine accelerating. The acceleration sound was immediately followed by a loud bang. Upon investigating the source of the sounds, witnesses found aircraft wreckage along with several ground fires in the midst of the French Camp campgrounds about 0.5 mile south of Tom's Place, California.

The accident site was located at 37 degrees 33.5 minutes north latitude and 118 degrees 41.3 minutes west longitude, and at an approximate elevation of 7,300 feet msl.

PERSONNEL INFORMATION

The pilot was employed as a ground school instructor and held an advanced ground school instructor certificate. According to his employer, he had taught 10,000 students over the course of 20,000 hours of classroom instruction. His areas of instruction were preparation for the FAA instrument and flight engineer written examinations.

The pilot also held an instrument rating and an instrument flight instructor certificate. The FAA reported that the pilot's certified flight instructor certificate would have expired on September 30, 1995.

According to the owner, the pilot had been giving him instrument flight instruction in the accident aircraft while under VFR conditions. The owner reported that the pilot had previously flown the aircraft to Mammoth Lakes, California, (the owner's home) but had always been accompanied by another licensed pilot. The owner also stated in his written report that the pilot did not have his permission to fly the aircraft.

AIRCRAFT INFORMATION

Following a review of the aircraft logbooks by FAA airworthiness inspectors, the FAA

coordinator reported that their examination did not identify a record of any discrepancies that would have adversely effected aircraft airworthiness.

Based upon an examination of the aircraft's logbooks, the Cessna delivery documents, and statements made by the airplane's owner, all instruments required for flight into IFR conditions were installed in the airplane. The airplane was equipped with a Loran, a moving map display, storm scope, and an autopilot that had navigation coupling capability.

The aircraft load consisted of the pilot and fuel. The amount of fuel onboard the aircraft at the time of departure was unknown, as neither fuel slips nor witnesses were found.

METEOROLOGICAL INFORMATION

On the day of the accident, the pilot had requested and received four weather briefings from the Hawthorne Flight Service Station (FSS) prior to his departure. He also reported to the FSS weather briefer that he had made several calls to friends in the Mammoth Lakes area, but had been told that the weather was clear and sunny on one call and then falling snow on the next. A transcript of those briefings is appended to this report.

Weather at the accident site was described by nearby witnesses as a 200-foot overcast with light snow falling. A review of the sun and moon illumination table revealed that it was a dark night. The Automated Surface Observing System (ASOS) at Bishop, California, reported 6,000 feet overcast with rain falling at the time of the accident. The weather north of Bishop in the Owens Valley during the pilot's last FSS weather briefing at 1936 was reported as not available by the weather briefer. The briefer did suggest that darkness could adversely effect VFR navigation while crossing the ridge from the Owens Valley toward the Mammoth-June Lakes airport.

AIDS TO NAVIGATION

At the time of the accident, the pilot was not flying on an established airway. High Desert Terminal Radar Approach Control facility (TRACON) lost radar contact with the aircraft at 2144, approximately 46 minutes prior to the accident, without receiving an acknowledgment from the pilot. An unfolded L3-L4 IFR en route low altitude chart was found in the aircraft wreckage. The expiration date on the chart was March 30, 1995. Both the accident site and the Mammoth Lakes airport are on the L5 chart.

According to the February 2, 1995, L-5 IFR low altitude en route chart, the minimum en route altitude for airway V381 is 13,000 feet and is 14,300 feet msl for V230. Both of these airways are in proximity to Mammoth Lakes airport and the accident site. The L-5 off route obstruction clearance altitude is 16,500 feet msl. The San Francisco sectional chart shows the maximum elevation figure (MEF) is 13,500 feet msl in the area of the accident site.

After reviewing their radar data, Los Angeles Center quality assurance personnel reported that

their tape showed no returns for any 1200 code, or primary targets in the vicinity of the last discrete code (1027) received. They stated that when center radar contact was lost at 2144, the aircraft was indicating 6,500 feet msl, which is the base of their coverage. A further review showed no returns for any discrete code, 1200 code, or any primary target in the vicinity of the accident site from 2144 until 2230.

COMMUNICATIONS

The aircraft was handed off by Southern California TRACON to High Desert TRACON at 2019. All hand off positions had been combined due to light traffic. The pilot reported that he was descending to 5,500 feet msl west of Fox Field at 2022. Subsequently, he did not report leveling off at any altitude.

At 2043, the pilot asked TRACON if the pilot of N245CT had a PIREP. The pilot of N245CT replied directly that he was in the clear but that he had departed Inyokern airport not Mammoth. An unidentified transmission stated that there had been no PIREPS for the last 2 hours.

When radar services were terminated by High Desert TRACON at 2201, the pilot did not acknowledge the call. The pilot had been assigned a discrete code of 1027 and had not been advised to change his code or squawk, 1200 code, when radar service was terminated. There is no record of the pilot communicating with anyone from that time until the accident. A transcript of the pilot's communications with High Desert TRACON is appended to this report.

AIRPORT INFORMATION

Mammoth Lakes Airport, the reported destination, does not have a published instrument approach procedure. The field elevation of the airport is 7,128 feet msl.

WRECKAGE AND IMPACT INFORMATION

An inspection of trees near the accident site revealed a series of freshly broken limbs and a trail of aircraft debris leading up to several ground scars and major portions of the aircraft wreckage. The long axis of the wreckage distribution was on a bearing of 330 degrees magnetic. The length of the debris path was approximately 375 feet.

The first tree impact mark found was in proximity to debris identified as the midspan structure from the right wing. There were also impact marks found on several more trees found beyond the initial impact mark.

A circular swath measuring 53 inches in diameter was found near the base of a tree in proximity to the final location of the propeller. The propeller had separated from the engine crankshaft and all three blades exhibited chordwise scoring, while two of the blades exhibited torsional bending.

The engine was found separated from the fuselage and was located adjacent to the propeller. The crankshaft was separated aft of the oil seal and exhibited a 45-degree fracture surface. The right half of the crankcase exhibited a fracture above the No. 5 cylinder pad. The No. 1, 3, 4, 5, and 6 rocker covers were crushed and broken. The No. 4 and 6 rocker boxes were separated from their heads. The No. 4 exhaust valve stem and the No. 6 intake valve stem were bent. The turbocharger compressor impeller and exhaust turbine were found coupled and rotated freely. The top spark plugs were removed from all six cylinders. All the plugs exhibited gray-brown coloration. According to the Continental Engine party representative, the electrodes were neither burned nor eroded.

The main fuselage was found beyond the initial impact point in the final portion of the debris path and exhibited both impact and fire damage.

The fuel selector handle and valve were found positioned on the right main tank.

The landing gear selector was in the down position. The gear down locks on both of the main landing gear were found unlocked.

All flight control surfaces, the propeller, and the vertical and horizontal stabilizers were located along the accident site debris path. The flap jack screw was extended 4 inches which, according to the Cessna Aircraft party representation, corresponds to fully retracted flaps. The elevator trim actuator was found extended 1.95 inches which again, according to the Cessna party representative, corresponds to 15 degrees tab up (nose down) trim.

The aircraft altimeter indicated 7,700 feet msl and the Kollsman's setting was 29.96 inHg. The current Bishop altimeter at the time of the accident was 29.96 inHg.

The aircraft structure, including the empennage, fuselage, and cockpit were destroyed during a postimpact ground fire. There were also fires at several locations which involved nearby trees.

MEDICAL AND PATHOLOGICAL INFORMATION

According to medical records maintained by the FAA, the pilot had been diagnosed with high blood pressure. At the time of the accident the status of the pilot's medical certificate was pending as he was attempting to have his medical certificate reinstated.

The FAA reported that it last issued the pilot an aviation medical certificate on May 13, 1992. When the pilot applied for another certificate on November 4, 1993, the FAA denied its issuance due to his insufficiently controlled diabetes.

An autopsy was performed by the Mono County Coroner. Toxicological samples were forwarded to the Civil Aeromedical Institute (CAMI) for screening. CAMI reported negative findings for all substances screened.

ADDITIONAL INFORMATION

The emergency locator transmitter (ELT) was found armed. No ELT signal was reported heard by any of the rescue personnel.

The aircraft wreckage was recovered by H.L.M. Air Services, Inc., and transported to a storage site in Santa Paula, California. All wreckage was released to USAIG on October 25, 1995.

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	58,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane single-engine; Instrument airplane	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 Expired	**Last FAA Medical Exam:**	May 13, 1992
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	3900 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N333HF
Model/Series:	P210N P210N	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	P21000598
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	February 16, 1995 Annual	**Certified Max Gross Wt.:**	3800 lbs
Time Since Last Inspection:	50 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	2200 Hrs	**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	TSIO-520-P6
Registered Owner:	DANIEL A. HAUS GROUP, INC.	**Rated Power:**	300 Horsepower
Operator:	WILLIAM D. HENDERSON	**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:	BIH ,4120 ft msl	**Distance from Accident Site:**	21 Nautical Miles
Observation Time:	21:56 Local	**Direction from Accident Site:**	110°
Lowest Cloud Condition:	Unknown	**Visibility**	10 miles
Lowest Ceiling:	Overcast / 5500 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots / None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	340°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	8°C / 6°C
Precipitation and Obscuration:	N/A - None - Rain		
Departure Point:	LONG BEACH (LGB)	**Type of Flight Plan Filed:**	None
Destination:	(MMH)	**Type of Clearance:**	None
Departure Time:	21:30 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:**	37.579887,-118.840217(est)

Administrative Information

Investigator In Charge (IIC):	Crispin, Robert
Additional Participating Persons:	ROBERT WAGNER; RENO , NV KRIS WETHERELL; WICHITA , KS JOE HUTTERER; WICHITA , KS MICHAEL J GRIMES; LANCASTER , CA
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