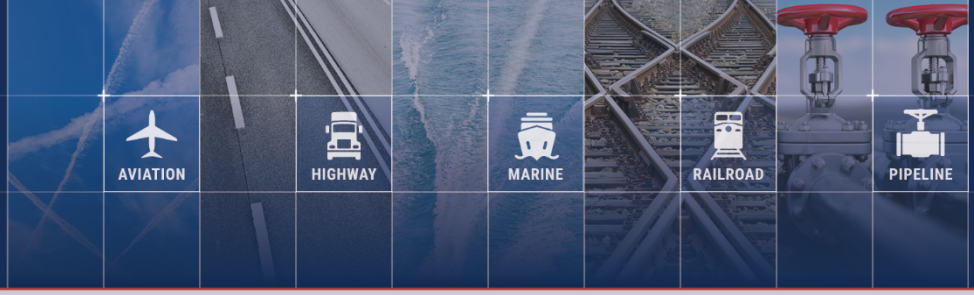

Aviation Investigation Final Report

Location:	SALINAS, California	**Accident Number:**	LAX98FA264
Date & Time:	August 15, 1998, 10:30 Local	**Registration:**	N8820H
Aircraft:	North American NAVION	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The non-instrument rated private pilot was cleared for takeoff with a northbound departure under a special visual flight rules clearance. The ceiling was 400 feet above ground level (AGL) and the visibility 5 miles. A few minutes after takeoff the pilot reported his position as clear of Class D airspace. The controller told him he could remain on frequency in case he needed to contact the tower due to weather. He had previously been informed that weather conditions were lower north of the airport. An eyewitness reported seeing a northbound aircraft beneath the clouds flying at an estimated altitude of 200 feet AGL. The controller attempted to contact the pilot without success. As the control tower operator was trying to reestablish communications he began receiving an emergency locator transmitter signal. The aircraft was subsequently located by emergency rescue personnel on the southern slope of rising terrain north of the airport. The airplane impacted the hillside at an elevation of 470 feet mean sea level. An examination of the aircraft failed to identify any mechanical discrepancies. The pilot did not have a current biennial flight review.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's attempt to continue visual flight operations into an area of known instrument meteorological conditions resulting in controlled flight into rising terrain.

Findings

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

Findings
1. LIGHT CONDITION - DAYLIGHT
2. WEATHER CONDITION - DRIZZLE/MIST
3. WEATHER CONDITION - LOW CEILING
4. (C) VFR FLIGHT INTO IMC - ATTEMPTED - PILOT IN COMMAND

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

Findings
5. TERRAIN CONDITION - RISING

Factual Information

HISTORY OF FLIGHT

On August 15, 1998, about 1030 hours Pacific daylight time, a North American Navion, N8820H, collided with terrain after departure from Salinas, California. The aircraft was destroyed and the pilot and his passenger sustained fatal injuries. The aircraft was being operated as a personal flight by the pilot/owner when the accident occurred under 14 CFR Part 91. The flight originated from the Salinas Municipal Airport at 1024. Basic visual meteorological conditions prevailed at the accident site and no flight plan had been filed.

Review of the air-to-ground communications tape recordings for the Salinas airport disclosed that the pilot requested and received a special visual flight rules (VFR) departure clearance at 1019. The clearance specified that the pilot was cleared out of the control zone to the north at and below 2,000 feet msl. At 1020, the aircraft was cleared for takeoff from runway 31, after requesting a right turn departure. The pilot reported abeam the dolomite mines reporting point and clear of the Class D airspace at 1023. At that time his clearance was cancelled but he was also advised that he could remain on frequency in case he needed to contact the tower due to weather. When the special clearance was issued, the airport control tower operator also informed the pilot that weather conditions were lower north of the airport.

An eyewitness located near the intersection of Boronda Drive and Constitution Drive in Salinas, reported seeing a northbound aircraft beneath the clouds flying at an estimated altitude of 200 feet agl. The witness described the cloud base at the time as very low, foggy, and thick. He estimated his sighting was about 1045.

At 1028, the control tower operator was unsuccessful in attempting to recontact the pilot; as well as checking with other local air traffic control (ATC) facilities to include the Buchanan Field (Concord) control tower, Monterey approach control, Bay approach control, and Oakland flight service station (FSS). These facilities reported negative contact with the airplane.

At 1030, the control tower operator began receiving an emergency locator transmitter (ELT) signal on 121.5 MHz.

Approximately 1237, the aircraft was located by Monterey County Emergency Services rescue personnel.

PERSONNEL INFORMATION

The pilot had been issued a private pilot certificate on March 11, 1994, with a prohibition against night flying. No pilot logbook(s) was recovered.

According to his current Federal Aviation Administration (FAA) third-class medical certificate, he was required to wear glasses for distance vision and have glasses available for near vision.

According to the pilot's family, his last biennial flight review was accomplished on February 1, 1996.

AIRCRAFT INFORMATION

Review of the aircraft logbook disclosed that the airframe had accrued a total time in service of 4,971.21 hours as of December 31, 1997. An altitude encoder test had been entered in the records with a date of November 26, 1992; however, the entry bore no signature for return to service. An annual inspection had been entered and signed on June 20, 1998, with no aircraft time indicated. The aircraft recording tachometer, which was located at the accident site, read 2,519.30 hours.

A fuel receipt was found dated August 14, 1998, for the purchase of 45.7 gallons of aviation fuel; however, the grade of fuel and name of vendor were not listed. FAA inspectors reported that the fuel vendor at the Salinas Municipal airport stated that he had not sold fuel to the pilot on the date reflected on the fuel receipt.

METEOROLOGICAL INFORMATION

At 0947, the visibility at Salinas Municipal airport was reported to be 5 miles in mist. The ceiling was reported as 400 feet overcast with 0.8 sky coverage.

WRECKAGE AND IMPACT INFORMATION

According to Monterey County Sheriff's deputies, the accident site was located at 350 Crazy Horse Canyon Road, Salinas. An FAA operations inspector reported the location as 8 nautical miles from the Salinas visual Omni range tactical air control (VORTAC) along the 055-degree radial. The inspector reported that the aircraft impacted 30- to 40-degree rising terrain near the 500 feet msl elevation on a southwestern slope. The aircraft was found at rest about 70 feet upslope from the initial ground scar.

Although the fuel tanks were virtually empty when FAA inspectors arrived on the scene, they reported a strong odor of fuel in the vicinity of the aircraft.

Safety Board investigators first examined the aircraft on September 8, 1998, after it was recovered by Plain Parts and transported to their storage facility in Pleasant Grove, California.

The airframe was laid out for examination. The nose of the aircraft from the firewall forward showed evidence of downward buckling. The leading edges of both wings showed evidence of aft crushing. The landing gear was found in the "up" position; however, the cockpit gear

control handle was broken. The flaps were found in the fully retracted position. All flight control surfaces were present and control continuity was established from the cockpit to the control surface actuators. The elevator trim tab and trim control wheel were both found in the neutral position. The aileron and rudder trims were controlled through bendable fixed tabs on their respective surfaces.

The fuel selector switch was positioned on "both." The aircraft was equipped with tip tanks and both exhibited evidence of hydraulic deformation.

Both propeller blades were separated from the hub. The first blade exhibited leading edge damage, trailing edge damage, torsional bending, and chordwise striations. The second blade was bent aft 360 degrees at midspan. This blade also exhibited chordwise striations and leading edge damage.

The propeller governor was removed from its "T" drive pad and visually inspected. The governor was found with its control arm in the high rpm position. The governor contained oil and when subjected to hand rotation, pumped oil. The governor base gasket screen contained oil and was clean and free of visible contamination.

The engine was removed from the airframe for inspection. The carburetor was separated from the engine at the accident site and the left exhaust manifold was crushed aft and upward. The right exhaust manifold showed minimal deformation.

All six cylinders were removed and visually inspected. All had chrome bores, which appeared smooth. The valves, springs, retainers, rocker arms, shafts, and pushrods were present and undamaged. Evidence of lubrication was also present.

All six pistons were removed from their cylinders and visually examined. Their skirts were smooth with no evidence of scoring. The rings were present on each piston, could be turned freely in their grooves, and evidence of lubrication was noted.

The through bolts for both crankcase halves were in place. The crankshaft would rotate only slightly and then with considerable effort. Further examination revealed that the splined portion of the shaft was slightly bent. Both counterweights were in place and moved freely on their pins. The crankshaft gear was in place and appeared undamaged. No discoloration was noted on any of the crankshaft journals and evidence of lubrication was present throughout the case halves.

The camshaft and the camshaft gear were in place and undamaged. No evidence of scoring, pitting, or flat spots were found on any of the cam lobes or followers.

All six connecting rods were visually examined and were found to be straight with no evidence of buckling or bending. The rods were secure in their journals. There was no discoloration and evidence of lubrication was present.

The oil screen was removed and visually inspected. The screen contained oil and deposits that were consistent with carbon. No metallic particles were noted.

The top 1, 3, 5 and the bottom 1 through 6 spark plugs were removed and examined. They exhibited wear patterns and coloration that, according to the Champion Spark Plugs Check-A-Plug chart was consistent with normal service time and heat range. The top plugs 2, 4, and 6 were missing.

The fuel pump was removed from its "T" drive and visually inspected. The pump drive coupling was present and the pump rotated freely with hand rotation.

The carburetor was recovered from the accident site separated from the engine. The throttle valve was found in the half open position. The mixture arm was found in the midrange position. The carburetor fuel inlet screen was removed and inspected. The screen was clean, though some particulate matter was found in the screen housing.

The generator was removed and visually inspected. The drive gear and coupling were both in place. The generator turned freely with hand rotation.

The vacuum pump was removed from its "T" drive pad position and visually inspected. The pump drive coupling was in place but responded to hand rotation only with considerable forced being applied. The pump was disassembled and the rotor vanes were found to be in place with evidence of some wear.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was conducted on August 17, 1998, by the Monterey County Coroner's Office, with specimens retained for toxicological examination. The toxicological test results were negative for alcohol and all screened drug substances.

ADDITIONAL INFORMATION

The wreckage was released to Universal Loss Management, Fresno, California, a representative of the registered owner, on January 6, 2000.

The on-scene photographs and negatives contained in this report were provided by the FAA operations inspector.

A request for radar data was made by Safety Board investigators through the FAA Western Pacific Region, Quality Assurance Staff (AWP-533), for any radar data that might have recorded the preimpact movements of the accident aircraft. The staff manager reported that, after reviewing the radar data for the time period, he found that none of the radar facilities in the area had captured any targets that could reasonably be associated with the flight path or

time frame of the accident aircraft.

An inventory of the aircraft components that had been recovered was conducted by Safety Board investigators. The ELT, the engine ignition harness, both magnetos, and the top spark plugs for the Nos. 2, 4 and 6 cylinders were missing. The FAA inspector stated that he did not remove or recall seeing any of these components during the time he spent on site.

Pilot Information

Certificate:	Private	**Age:**	81,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:**	Yes
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	April 2, 1997
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	2505 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	North American	**Registration:**	N8820H
Model/Series:	NAVION NAVION	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	NAV-4-820
Landing Gear Type:	Retractable - Tricycle	**Seats:**	5
Date/Type of Last Inspection:	May 20, 1997 Annual	**Certified Max Gross Wt.:**	3233 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Continental
ELT:	Installed, activated, aided in locating accident	**Engine Model/Series:**	E225-4
Registered Owner:	ROY LEE SINGLETON	**Rated Power:**	225 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:**	Day
Observation Facility, Elevation:	SNS ,84 ft msl	**Distance from Accident Site:**	8 Nautical Miles
Observation Time:	10:47 Local	**Direction from Accident Site:**	235°
Lowest Cloud Condition:	Unknown	**Visibility**	5 miles
Lowest Ceiling:	Overcast / 400 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	10 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	290°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	15°C / 13°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	, CA (SNS)	**Type of Flight Plan Filed:**	None
Destination:	CONCORD , CA (CCR)	**Type of Clearance:**	Special VFR
Departure Time:	10:20 Local	**Type of Airspace:**	Class G

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:	1 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	36.760643,-121.649681(est)

Administrative Information

Investigator In Charge (IIC):	Crispin, Robert
Additional Participating Persons:	TERJE KRISTIANSEN; SAN JOSE , CA MICHAEL J GRIMES; LANCASTER , CA
Original Publish Date:	September 28, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=43822