



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	ZENIA, CA	<b>Accident Number:</b>	LAX93LA148
<b>Date &amp; Time:</b>	03/01/1993, 1758 PST	<b>Registration:</b>	N91CL
<b>Aircraft:</b>	LANGERUD VARIEZE	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	1 Fatal
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

THE INSTRUMENT RATED PILOT DEPARTED DURING MARGINAL VFR CONDITIONS. ABOUT 48 MINUTES LATER, THE PILOT CONTACTED THE AIR ROUTE TRAFFIC CONTROL CENTER AND ADVISED HIM THAT HE WAS UNSURE OF HIS POSITION AND REQUESTED ASSISTANCE. THE SECTOR CONTROLLER COULD NOT RADAR IDENTIFY THE AIRPLANE AND INSTRUCTED THE PILOT TO CONTACT ANOTHER SECTOR CONTROLLER. THE PILOT BECAME CONFUSED AND ATTEMPTED TO CONTACT VARIOUS AIR TRAFFIC CONTROLLERS WITHOUT SUCCESS. AN AIRCRAFT IN THE VICINITY OF THE ACCIDENT AIRPLANE MADE INITIAL VISUAL CONTACT, BUT THE ACCIDENT AIRPLANE ENTERED INTO THE CLOUDS AND COULD NOT BE RELOCATED. THE AIRPLANE'S LEFT WING STRUCK SOME TREES IN A MOUNTAINOUS AREA WHILE IN A STEEP DESCENDING ATTITUDE. THE WRECKAGE EXAMINATION DISCLOSED NO EVIDENCE OF ANY PREEXISTING MALFUNCTIONS OR FAILURES.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT'S POOR WEATHER EVALUATION AND CONTINUED FLIGHT INTO INSTRUMENT METEOROLOGICAL CONDITIONS. THE LOW CEILING WAS A FACTOR.

## Findings

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

### Findings

1. (F) OBJECT - TREE(S)
2. (C) WEATHER EVALUATION - POOR - PILOT IN COMMAND
3. (C) VFR FLIGHT INTO IMC - CONTINUED - PILOT IN COMMAND
4. (C) BECAME LOST/DISORIENTED - INADVERTENT - PILOT IN COMMAND
5. (F) WEATHER CONDITION - LOW CEILING

## Factual Information

### History of the Flight

On March 1, 1993, at about 1758 hours Pacific standard time, an amateur built Langerud Varieze airplane, N91CL, collided with some trees after encountering instrument meteorological conditions about 10 miles northwest of Zenia, California. The pilot was conducting a visual flight rules (vfr) personal flight to Hayward, California, and he did not file a flight plan. The airplane, owned and operated by the pilot, was destroyed. The certificated private pilot, the sole occupant, sustained fatal injuries. The flight originated at Roseburg Municipal Airport (RBG), Roseburg, Oregon, at about 1600 hours. Search and Rescue personnel found the wreckage on March 12, 1993, at 0945 hours.

The registered owner told Mr. Pete Wilhelmson, airworthiness inspector, Federal Aviation Administration (FAA), Sacramento [California] Flight Standards District Office, that the pilot purchased the airplane on the accident date. The pilot only performed two or three high speed taxi runs before departing on the accident flight.

At 1040 hours, the pilot contacted the McMinnville [Oregon] Automated Flight Service Station (AFSS) and requested and received a weather briefing from Roseburg, Oregon, to Hayward, California. The AFSS specialist provided the pilot with the current and forecasted weather which indicated that visual meteorological conditions prevailed. The cloud bases along the pilot's intended route of flight varied between 4,500 feet to 7,500 feet msl along the northern route of the flight; the cloud bases varied between 2,500 msl feet to clear conditions along the southern route of the flight. The AFSS specialist advised the pilot that a frontal system was off the coast and moving east and that the freezing level was between 6,000 to 8,000 feet msl.

The AFSS specialist advised the pilot that all navigational aids along the pilot's intended route of flight were operational. He also advised the pilot that no notice to airman's (NOTAMS) existed at Hayward Airport.

At 1648:21 hours, the pilot contacted the Seattle ARTCC R-36 sector controller and reported that he was "...a little lost." The controller asked the pilot his location and instructed him to squawk [set code on his transponder] 6640. The pilot acknowledged the controllers instructions and stated that he was "...about twenty miles or thirty er I'm not sure south of Fort Jones [VOR - a very high frequency omni range navigational facility] at 10,000 feet mean sea level (msl).

The R-36 sector controller asked the pilot his heading and the pilot responded 170 degrees [all headings/bearings in this report are oriented toward magnetic north]. At 1650:51 hours, the sector controller asked the pilot if he was receiving the Red Bluff [California] or Fort Jones [California] VOR; the pilot responded, in part, "...the VOR is broken or something."

At 1651:16 hours, the R-36 sector controller instructed the pilot to contact the Oakland ARTCC sector controller on either 132.2 or 124.85 Mhz frequency. He also advised the pilot to call him back if he was unable to establish two-way communications with the Oakland ARTCC sector controller. The pilot acknowledged the R-36 sector controller's instructions.

At 1651:41 hours, the Seattle R-36 sector controller called the Oakland R-42 sector controller and advised him of the lost airplane. At 1655:43 hours, the Oakland R-42 sector controller advised the Seattle R-36 sector controller that the Oakland D-10 sector controller was talking

to N91CL.

At 1653:27 hours, the pilot (N91CL) contacted the Seattle D-10 sector controller and reported that he was lost and with an inoperative VOR. The D-10 sector controller instructed the pilot to squawk transponder code 6640 and asked him if he was in vfr conditions. The pilot responded, "...I'm vfr but I have a layer of clouds below me so I can't see the ground."

At 1654:41 hours, the D-10 sector controller asked the pilot what was his last known position. The pilot responded, "It was about Crescent City [California} about fifteen [or] twenty minutes ago." At 1655:04 hours, the pilot stated that he was flying at 10,500 feet msl in response to the controller's inquiry.

At 1656:10 hours, the D-10 sector controller instructed the pilot to squawk 7700 [the emergency transponder code]. The pilot did not respond. The D-10 sector controller contacted the Oakland ARTCC sector controller and advised him that he lost communications with N91CL. The Oakland sector controller advised the Seattle D-10 sector controller that Oakland ARTCC has no traffic information on N91CL.

At 1657:19 hours, America West Flight 54 attempted to contact N91CL, but without success. At 1659:03 hours, the Seattle D-10 sector controller asked United Airlines Flight 1473 to attempt contact with N91CL. Flight 1473 called N91CL several times and at 1700:03 hours, the N91CL pilot responded, "are you speaking with me?" The pilot aboard Flight 1473 told N91CL pilot that the D-10 sector controller asked them to try and contact him. N91CL's pilot did not respond. Flight 1473 reattempted to contact N91CL several more times, but without success.

At 1701:02 hours, the pilot called the D-10 sector controller; the controller responded, but the pilot did not acknowledge the response. At 1701:56 hours, the pilot [N91CL] called the Seattle R-30 sector controller twice. The R-30 sector controller responded, but did not receive a response from the pilot.

At 1703:43 hours, the pilot [N91CL] called the D-10 sector controller. Flight 1473 responded and instructed the pilot [N91CL] to squawk 7700 Again, the pilot [N91CL] did not respond. The sector controller did not receive N91CL's call.

There were no other known communications between N91CL and any other FAA Air Traffic Facilities or any other airborne aircraft. In a recorded land line communications at 2201 hours between the Seattle and Oakland area managers, the Oakland area manager stated that he talked with N91CL's previous owner. The owner told him that the pilot had only performed some high speed taxiing before departing on the accident flight.

The Oakland area manager also stated that one of the Oakland sector controllers had an Ameriflight aircraft fly next to N91CL, but the Ameriflight pilot was unable to get N91CL's pilot's attention. The Ameriflight pilot reported that N91CL was flying "in and out of the clouds" at 11,000 feet msl. Due to inclement weather at the accident site, the wreckage was not found until March 12, 1993.

The accident coordinates are: 40 degrees, 07 minutes north latitude and 123 degrees, 30 minutes west longitude.

#### Crew Information

The pilot held a commercial pilot certificate with airplane single engine land, multiengine land, and instrument - airplane ratings. The pilot received the airplane - instrument rating on May

29, 1992, and the commercial pilot certificate with a multiengine rating on July 5, 1992. A designated airman medical examiner issued the pilot a second- class medical certificate on February 10, 1992; the certificate did not contain any limitation endorsements.

Safety Board investigators obtained and examined the pilot's personal flight hours logbook. The flight times reflected on page three of this report were obtained from the examination. The logbook examination also revealed that the pilot had logged 2.9 hours in the preceding 90 days before departing on the accident flight; the 90 days column on page three includes the accident flight.

The pilot's commercial pilot's application form, FAA Form 8710-1, dated July 4, 1992, indicated that he flew two airplane's on the commercial pilot's flight test; a Cessna 172 and a Cessna 310. Satisfactory completion of the flight test satisfied the biennial flight review requirements of the current federal aviation regulations.

The accident airplane's previous owners reported that the pilot had not flown the accident airplane before departing on the accident flight. One of the owner's said that they tried to dissuade the pilot from flying that day due to the approaching inclement weather. The pilot demurred and elected to depart.

#### Aircraft Information

The aircraft and engine data reflected on page 2 of the report were obtained from the examination of the airframe/engine maintenance logbooks. The logbooks examination revealed that a certificated airframe/powerplant mechanic performed the last annual inspection on the airplane on January 4, 1993. There were no reported deferred maintenance discrepancies noted during the examination.

#### Meteorological Information

The weather data reflected on page 4 of this report was the Redding Airport, Redding, California, 1830 hours surface weather observation. Search and rescue personnel reported that a search was initiated on March 1, 1993, and was terminated east of the accident area due to clouds obscuring the mountainous terrain. The clouds reduced the visibility to about 1/4 mile.

#### Communications

A review of the communications transcripts between the pilot and the FAA Air Traffic Control Facilities, disclosed several communications difficulties. The two-way communications between the pilot and sector controllers were only momentarily established.

The FAA provided the Safety Board with a National Track Analysis Program (NTAP) radar data on what is believed to be the accident airplane. The air traffic control facility provided a radar plot on a portion of a sectional chart. The NTAP data showed that the last transponder target on code 7700 occurred at 1744:37. At this time the airplane's altitude was 11,200 feet msl and its coordinates were 40 degrees, 45.34 minutes north latitude and 112 degrees, 27.55 minutes west longitude. The last coordinates were 53 miles northeast of the accident site.

#### Wreckage and Impact Information

The FAA, Sacramento FSDO, conducted the on scene investigation. The inspectors reported that the broken tree branches and the wreckage examination disclosed the airplane's left wing struck some trees while on a heading of 320 degrees while in a "steep declining [flight] path." After the initial tree impact, the airplane continued about another 90 feet and then struck more

trees leaving the entire main gear assembly in the branches about 40 feet above the ground. The airplane came to rest at the base of a large girth oak tree trunk; a section of the tree fell on the main fuselage area. The wreckage was confined "within a 25-foot circle."

All of the airplane's major components and flight controls were found at the main wreckage site. Both wings separated from their respective wing-to-fuselage attach points. The left wing and the airplane's aft section were found folded toward the fuselage; the right wing was found, inverted, about 15 feet forward and to the right of the main wreckage. The flight control surfaces remained attached at their respective attach points. The flight controls could not be operated by their respective operational mechanisms due to severe impact damage. All of the fractured control cables exhibited extensive overload characteristics.

The engine separated from its firewall attach points, but was found at the main wreckage area. The engine did not exhibit any catastrophic internal failures. The oil tank, carburetor, vacuum pump, and a few minor external air ducts separated from the engine accessory section.

The propeller hub assembly remained attached at the engine crankshaft. One propeller blade broke into two pieces with the remaining section impacted in the ground.

There was no fire.

#### Medical and Pathological Information

The Trinity County Coroner's Office, Weaverville, California, conducted the post-mortem examination on the pilot. The pathologist attributed the pilot's death to "multiple traumatic injuries." There was no evidence that the pilot had any condition or disease which would have detracted from his ability to fly an aircraft.

The FAA, Civil Aeromedical Institute (CAMI), Oklahoma City, Oklahoma, performed the toxicological examinations for drugs and alcohol. One of the specimens retained for toxicological examinations contained a 0.01% ethanol (alcohol) content and was negative for drugs; the remaining two specimens were negative for ethanol or drugs.

The manager of the Civil Aeromedical Institute's Toxicology and Accident Research Laboratory attributed the 0.01% ethanol content to putrefaction.

#### Additional Information

Neither the Safety Board nor the FAA assumed custody of the wreckage. The FAA inspectors left the wreckage at the accident site.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	24, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Front
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 2 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	02/02/1992
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	240 hours (Total, all aircraft), 4 hours (Total, this make and model), 112 hours (Pilot In Command, all aircraft), 7 hours (Last 90 days, all aircraft), 7 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	LANGERUD	<b>Registration:</b>	N91CL
<b>Model/Series:</b>	VARIEZE VARIEZE	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	Yes
<b>Airworthiness Certificate:</b>	Experimental	<b>Serial Number:</b>	1317
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	01/04/1993, Annual	<b>Certified Max Gross Wt.:</b>	1100 lbs
<b>Time Since Last Inspection:</b>	4 Hours	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	765 Hours	<b>Engine Manufacturer:</b>	CONTINENTAL
<b>ELT:</b>	Installed, activated, aided in locating accident	<b>Engine Model/Series:</b>	O-200-A
<b>Registered Owner:</b>	LUIS GARCIA	<b>Rated Power:</b>	100 hp
<b>Operator:</b>	LUIS GARCIA	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Night/Dark
Observation Facility, Elevation:	RDD, 502 ft msl	Distance from Accident Site:	74 Nautical Miles
Observation Time:	1800 PST	Direction from Accident Site:	55°
Lowest Cloud Condition:	Unknown / 6000 ft agl	Visibility	15 Miles
Lowest Ceiling:	Overcast / 6000 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	280°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	9° C / 7° C
Precipitation and Obscuration:			
Departure Point:	ROSEBURG, OR (RBG)	Type of Flight Plan Filed:	None
Destination:	HAYWARD, CA (HWD)	Type of Clearance:	None
Departure Time:	1600 PST	Type of Airspace:	Class G

## Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	A. D LLORENTE,	Report Date:	06/30/1994
Additional Participating Persons:	PETER WILHELMSON; SACRAMENTO, CA		
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 <a href="mailto:pubinquiry@ntsb.gov">pubinquiry@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).