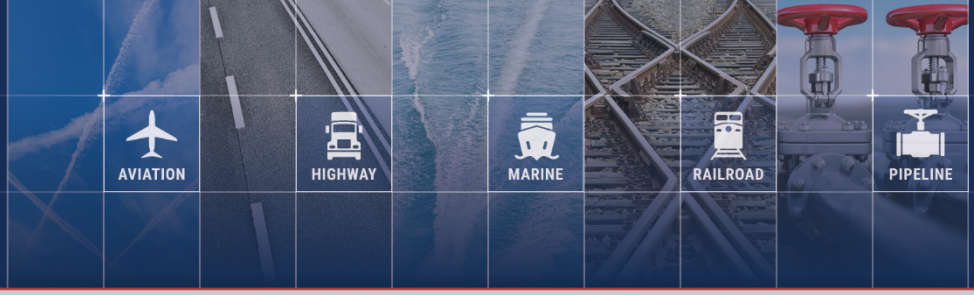

Aviation Investigation Final Report

Location:	TEHACHAPI, California	**Accident Number:**	LAX95FA072
Date & Time:	January 3, 1995, 10:52 Local	**Registration:**	N94296
Aircraft:	CESSNA A185F	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

FAMILY MEMBERS SAID THAT, BEFORE FLIGHT, THE NONINSTRUMENT-RATED PILOT HAD OBTAINED WEATHER INFORMATION FROM A COMMERCIAL COMPUTER SERVICE (COMPUSERVE); HOWEVER, NO RECORDS WERE FOUND TO VERIFY THE COMPLETENESS OF THE WEATHER INFORMATION THAT HE HAD RECEIVED. CLOUDS AND RAIN WERE FORECAST ALONG THE ROUTE WITH MOUNTAIN OBSCURATION DUE TO CLOUDS, FOG, AND PRECIPITATION. ACCORDING TO MODE C RADAR DATA, THE AIRPLANE DESCENDED TO ABOUT 200 FEET ABOVE THE GROUND AS IT ENTERED TEHACHAPI PASS. TWO GROUND WITNESSES REPORTED THAT THEY SAW THE AIRPLANE ABOUT 100 FEET ABOVE AND TO THE NORTH SIDE OF THE HIGHWAY THAT TRAVERSED THE PASS. THEY COULD BARELY SEE THE AIRCRAFT DUE TO CLOUDS AND SNOW SHOWERS. REPORTEDLY, THE AIRPLANE BEGAN A LEFT TURN, AND THEN THE NOSE OF THE AIRPLANE PITCHED UP AS THE WINGS CONTINUED INTO A STEEP BANK. THE AIRCRAFT THEN PITCHED NOSE DOWN AND CRASHED INTO THE GROUND.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE NONINSTRUMENT-RATED PILOT'S CONTINUED FLIGHT INTO KNOWN ADVERSE WEATHER, AND HIS FAILURE TO MAINTAIN ADEQUATE AIRSPEED WHILE MANEUVERING TO REVERSE DIRECTION. FACTORS RELATING TO THE ACCIDENT WERE: THE MOUNTAINOUS TERRAIN, AND ADVERSE WEATHER CONDITIONS.

Findings

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

Findings
1. (F) TERRAIN CONDITION - MOUNTAINOUS/HILLY
2. (F) WEATHER CONDITION - LOW CEILING
3. (F) WEATHER CONDITION - SNOW
4. (F) WEATHER CONDITION - OBSCURATION
5. (C) FLIGHT INTO KNOWN ADVERSE WEATHER - CONTINUED - PILOT IN COMMAND

Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: MANEUVERING - TURN TO REVERSE DIRECTION

Findings
6. (C) AIRSPEED - NOT MAINTAINED - PILOT IN COMMAND
7. (C) STALL - INADVERTENT - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

HISTORY OF FLIGHT

On January 3, 1995, at 1052 Pacific standard time, a Cessna A185F, N94296, collided with mountainous terrain after encountering instrument meteorological conditions in a mountain pass near Tehachapi, California. The aircraft was owned and operated by the pilot. The weather conditions reported by a National Weather Service observer in the town and by eyewitnesses to the accident consisted of a 50-foot overcast with the visibility 1/2 mile in snow showers. The aircraft was destroyed in the ground collision sequence and postcrash fire. The certificated private pilot, the sole occupant, sustained fatal injuries. The flight originated at Prescott, Arizona, on the day of the accident about 0830 Pacific standard time as a personal flight to Novato, California.

According to a statement from the pilot's wife, he flew this route from Prescott to Novato on a regular basis. She noted that the pilot obtained what she described as a "weather briefing" from a computer service called Compuserve just before he left for the airport.

Compuserve was contacted and a representative of the company reported that its system recorded two sessions of use for the pilot's account number on January 3, 1995. The first was from 1042:00 to 1045:52 Eastern standard time and the second session was from 1047:07 to 1048:06. The company representative said it had no way of determining in detail what services the customer used during the sessions. The company records do disclose that the user was in the "weather system information" menu and looked at a radar summary map. According to the company, an option in the weather system menu is aviation weather reports.

After departure from Prescott, there is no documented record that the pilot communicated with any Federal Aviation Administration (FAA) ground station.

Recorded radar data was obtained from the TRACON facility at Edwards Air Force Base. Review of the data revealed that a VFR beacon code matching the expected track of the aircraft was identified. Radar contact was lost after the target entered the Tehachapi Pass at a time frame matching the accident location and time. The radar data and a flightpath chart are attached to this report.

Detailed review of the recorded data disclosed a VFR beacon code target traversing the Mojave Desert in a westerly direction from just south of the city of Barstow. While the target tracked a generally straight line course until reaching a point north of the Palmdale airport, the Mode C reported altitude varied from about 2,000 feet agl to as low as 500 feet. From the location north of Palmdale, the target began a wide S-turn shaped course generally following Highway 14 north until it turned into the Tehachapi Pass. The altitude profile of the target

climbed with the terrain and maintained a ground clearance of 600 feet or below. As the target entered the pass, the Mode C reported altitude was 200 feet above the ground.

Two ground witnesses located on the highway observed the accident sequence of events. One witness was putting chains on his car tires when his attention was attracted to the sound of a low- flying aircraft. He looked up and observed the aircraft about 100 feet above the ground flying in a westerly direction on the north side of the highway. The witness said he could barely see the aircraft because of the clouds and snow showers. The aircraft began a left turn; the witness saw the nose of the aircraft pitch up in the turn as the wings continued to bank to a near-vertical orientation. The aircraft then pitched nose down and collided with the ground.

PERSONNEL INFORMATION

No personal flight records were recovered for the pilot. On an insurance application dated August 14, 1994, the pilot reported a total time of 1,684 hours, with 1,271 in the accident aircraft make and model. According to FAA airman record files, the pilot did not hold an instrument rating. No information was available from any source to detail the amount and recency of the pilot's instrument flight time. The pilot's wife stated that her husband flew between Prescott and Novato twice a week.

AIRCRAFT INFORMATION

No maintenance records were recovered for the aircraft, and family members said they believed the pilot kept the logbooks in the aircraft. A mechanic at the Novato airport who is the holder of an FAA-approved Inspection Authorization stated that he performed an annual inspection on the aircraft in August or September of 1994. The mechanic could not produce detailed records; however, he did state that the engine had a total time of 2,294.6 hours at the time he performed the annual. No information was available regarding dates or times of any engine overhaul. The engine installed in the aircraft was a Continental IO-520-D, serial No. 563984. Cessna Aircraft production records revealed that the engine found on the aircraft was the original factory installation.

The aircraft was equipped with Flint Aero auxiliary fuel tanks installed in each outboard wing bay. The fiberglass tanks were each placarded at 12 gallons total, with 11.5 usable gallons.

METEOROLOGICAL INFORMATION

No official weather observation stations are located in the Tehachapi Mountains or Pass. A designated observer who reports to the National Weather Service (NWS) is located in the town of Tehachapi, which is located about 2 miles west of the accident site. At the time of the accident, the observer reported sky conditions overcast with visibility 1/2 mile in snow showers. Three eyewitnesses to the accident were located on a highway just below the accident site and also reported that low ceilings existed with very limited visibilities due to snow showers.

Federal Aviation Administration records of weather briefings provided by the Flight Service Station (FSS) network disclosed no evidence that the pilot obtained either a preflight weather briefing or in-flight weather advisories. According to a statement from the pilot's wife, he obtained what she described as a "weather briefing" from a computer service called Compuserve just before he left for the airport.

Compuserve was contacted and a representative of the company reported that its system recorded two sessions of use for the pilot's account number on January 3, 1995. The company representative said it had no way of determining in detail what services the customer used during the sessions. The company records do disclose that the user was in the "weather system information" menu and looked at a radar summary map. According to the company, an option in the weather system menu is aviation weather reports.

Copies of the aviation weather information available on the NWS and FAA systems during the time frame the pilot was on-line with his computer service were obtained and examined. The records and reports are attached to this report as an exhibit.

The area forecast (FA) encompassing the route of flight was issued on January 3 with a valid time group from 0345 to 2200. The synopsis section noted that a high-level trough and an associated cold front were expected to move into central and southern California by 1000. The greater San Joaquin Valley of California was forecasted to experience scattered to broken clouds at 5,000 feet with visibilities of 3 to 5 miles in light rain showers after 0800. The interior California mountains and deserts were expected to see sky conditions of 3,000 to 5,000 feet scattered, 8,000 broken, visibilities 3 to 5 miles in light rain, with isolated thunderstorms and cumulonimbus cloud tops greater than 30,000 feet. Interior mountain areas, including the Tehachapi range, could expect occasional mountain obscurement by clouds, fog, and precipitation. Occasional moderate rime and mixed icing in precipitation were forecast for the area between 7,000 and 20,000 feet.

The William J. Fox Airport at Lancaster is the closest official weather observation station to the east of the Tehachapi range. By 1000, the terminal forecast for the station was calling for sky conditions of 1,500 to 3,000 broken with visibilities of 3 miles in rain and/or snow showers.

The Bakersfield airport is the closest official weather observation station to the west of the Tehachapi range. By 0800, the terminal forecast for the station was calling for sky conditions of 5,000 broken with visibilities of 3 miles in rain showers.

The TWEB (continuous transcribed weather broadcast) route forecast for the route from Palmdale to Bishop (immediately east of the Tehachapi Mountain Range and the accident site) called for occasional ceilings below 1,000 feet and visibilities below 3 miles in rain and/or snow showers.

WRECKAGE AND IMPACT INFORMATION

The accident site is in a pass in the Tehachapi Mountain Range at an elevation of 4,200 feet msl. The Tehachapi Mountains separate the Antelope Valley from the greater San Joaquin Valley. A major interstate highway crosses the mountain range in the pass.

The slope of the mountain at the aircraft point of rest was about 35 degrees. The site is about 150 feet above the highway, and offset laterally from the pavement edge about 600 feet.

The aircraft was extensively fire damaged, with almost total destruction to the cabin and forward fuselage areas.

MEDICAL AND PATHOLOGICAL INFORMATION

The pilot sustained fatal injuries and an autopsy was conducted by the Kern County Coroner's Office on January 4, 1995, with specimens retained for toxicological examination. The results of the toxicological tests were negative for alcohol and all screened drug substances.

TESTS AND RESEARCH

The aircraft was recovered from the site and examined in detail at a storage facility at the Santa Paula airport on January 18, 1995.

Both wings exhibited extensive and symmetrical leading edge damage and aft crushing back to the area of the main spar.

The left wing was extensively burned in the area of the inboard fuel cell. Flight control system continuity was established from the root outboard to the control surfaces.

The right wing was unburned. Hydraulic signatures were observed to the inboard fuel cell. Control system continuity was established from the root outboard to the tip.

The empennage fixed and movable control surfaces remained attached to the structure. Control cable continuity was established from the empennage separation point to the control bellcranks.

The engine was examined. Rotation of the crankshaft produced accessory gear and valve train continuity. Compression was noted in each cylinder. One magneto produced a spark with hand rotation. The second magneto was damaged. The spark plugs exhibited normal operating signatures, with minor ovaling and clean electrodes.

The vacuum pump was located and examined. Disassembly revealed no unusual internal operating condition. The drive coupling was present and melted.

The propeller hub was extensively fragmented. Both propeller blades exhibited extensive

leading edge damage, chordwise striations, and torsional twist signatures.

Evidence of extensive aft fuselage crush deformation was noted from the nose back to the area of the cabin doors.

ADDITIONAL INFORMATION

The wreckage was released to the representatives of the registered owner at the conclusion of the examination.

Pilot Information

Certificate:	Private	**Age:**	44,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Unknown
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--no waivers/lim.	**Last FAA Medical Exam:**	May 13, 1993
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	1750 hours (Total, all aircraft), 1300 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	**Registration:**	N94296
Model/Series:	A185F A185F	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	18503303
Landing Gear Type:	Tailwheel	**Seats:**	4
Date/Type of Last Inspection:	September 30, 1994 Annual	**Certified Max Gross Wt.:**	3350 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	CONTINENTAL
ELT:	Installed, not activated	**Engine Model/Series:**	IO-520-D
Registered Owner:	MICHAEL A. RHEA	**Rated Power:**	300 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:	TSP ,3996 ft msl	**Distance from Accident Site:**	2 Nautical Miles
Observation Time:	10:50 Local	**Direction from Accident Site:**	95°
Lowest Cloud Condition:	Unknown	**Visibility**	0.5 miles
Lowest Ceiling:	Overcast / 100 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	0°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	
Precipitation and Obscuration:	N/A - Blowing - Snow		
Departure Point:	PRESCOTT , AZ (PRC)	**Type of Flight Plan Filed:**	None
Destination:	NOVATO , CA (O56)	**Type of Clearance:**	None
Departure Time:	08:30 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:**	35.120414,-118.510459(est)

Administrative Information

Investigator In Charge (IIC):	Rich, Jeff
Additional Participating Persons:	ADRIAN GRIEVE; VAN NUYS , CA STEVE WILSON; WICHITA , KS MICHAEL GRIMES; MOBILE , AL
Original Publish Date:	June 13, 1996
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=28905