



National Transportation Safety Board Aviation Accident Final Report

Location:	Garberville, CA	Accident Number:	SEA08LA021
Date & Time:	11/06/2007, 0855 PST	Registration:	N5049Q
Aircraft:	CESSNA 340	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	3 Fatal
Flight Conducted Under:	Part 91: General Aviation - Business		

Analysis

The pilot arrived in the vicinity of his destination airport, which was located in a narrow river valley. The airport was located within a large area of Visual Flight Rules (VFR) conditions with clear skies and almost unlimited visibility, but the pilot discovered that the airport was covered by a localized dense layer of fog about 200 to 250 feet thick. There were no instrument approaches to the non-controlled airport. Witnesses reported that the pilot flew at low-level up the valley, and eventually entered the fog as the flight approached the airport. About one mile prior to reaching the airport, the pilot attempted to climb out of the valley, but the airplane began impacting trees on the rising terrain. The airplane eventually sustained sufficient damage from impacting the trees that it descended into the terrain. Post-accident inspection of the airframe and engines found no evidence of a mechanical failure or malfunction.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's intentional visual flight rules (VFR) flight into instrument meteorological conditions (IMC), and his failure to maintain clearance from the trees and terrain during climb. Contributing to the accident were the weather conditions of fog and a low ceiling, and the mountainous/hilly terrain.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER

Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings

1. (F) WEATHER CONDITION - FOG
2. (F) WEATHER CONDITION - LOW CEILING
3. (C) VFR FLIGHT INTO IMC - INTENTIONAL - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: CLIMB

Findings

4. (F) TERRAIN CONDITION - MOUNTAINOUS/HILLY
5. (F) OBJECT - TREE(S)
6. (C) CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND

Factual Information

On November 6, 2007, at 0855 Pacific standard time, a Cessna 340, N5049Q, impacted trees while in a climb about one-quarter mile southwest of Garberville Airport, Garberville, California. The airline transport pilot and his two passengers were killed in the accident, and the airplane, which was owned by Roy E. Ladd, Inc., of Redding, California, was destroyed by the impact and the post-crash fire. The 14 CFR Part 91 business flight, which departed Redding, California, about 55 minutes prior to the accident, was operating in an area of dense fog and a low ceiling.

According to witnesses and aviation surface weather observations (METAR's), on the morning of the accident, the weather around the northern part of California, including the coast, was clear with almost unlimited visibility. The weather conditions around Garberville were the same, except in an area directly over and immediately adjacent to the South Fork of the Eel River. Along the river, and specifically in the area where it flows along the east side and then to the south of the Garberville Airport, there was a band of dense low-level fog. According to a witness, the fog extended about one-quarter to one-half mile from each side of the river, and in most places from the surface to about 200 to 250 feet above ground level (AGL). Although the fog was somewhat patchy in some areas northeast of the airport, along the steeper terrain south of the airport it was "very dense" and "extremely heavy."

According to a witness, when the airplane first arrived in the area of the non-controlled airport, it could be heard maneuvering overhead, but could not be seen because of the dense fog. There are no published instrument approaches into the Garberville Airport, and after the airplane had maneuvered around the area for about five minutes, witnesses heard the airplane south of the airport proceeding to the north. Soon thereafter, two witnesses saw the aircraft flying to the north within the band of dense fog. According to the witnesses, the aircraft was about as high above the ground as a standard telephone/power pole, and both the pilot and one of the passengers could clearly be seen inside. At that time, the airplane was located about one and one-quarter mile southwest of the airport, and according to the witnesses, everything about the airplane looked and sounded normal. Soon after passing their location, there was a significant increase in the airplane's engine power, and according to the witnesses, it seemed to them that the airplane was starting to climb. One of the two of these two witnesses said that to him it sounded as if the airplane may have made a slight turn after it began to climb. Although the airplane soon went out of sight, both of these witnesses heard the sound of the impact.

Another individual, who was located about one-quarter mile north of the two aforementioned witnesses, saw the airplane in a climb at what he estimated to be 200 feet above the river. Although everything sounded normal about the airplane, about five seconds after it passed his location this witness could hear the airplane colliding with trees, and ultimately impacting the terrain. All of the witnesses stated that the engines ran strong and smooth until the final impact. One witness said that it sounded like one engine may have been at a higher power setting than the other.

The on-site investigation determined that the airplane initially collided with a number of trees on steeply up-sloping terrain. The initial impact point was about 500 feet short of where the airplane came to rest. Along this track several airplane parts were scattered, including one aileron, a main landing gear strut and wheel, antennas, an engine cowling, and a number of sections of the airplane's skin.

The airplane came to rest in densely forested terrain. The wreckage site was about 800 feet mean sea level (msl). A post-crash fire consumed about sixty percent of the airplane's structure.

On December 19, 2007, both engines underwent further inspection and partial teardowns. All accessories that had not been thermally destroyed were removed and partially disassembled for inspection. Continuity from the crankshaft propeller flange to the accessory gears and valve train was established for both engines. One cylinder was removed from each engine in order to gain visual access to the interior of the crankcase. The inspection of both engines did not reveal any malfunctions or anomalies that would have prevented normal operation and the production of full rated horsepower.

A detailed analysis of the airframe structure and flight control continuity was not possible due to the extent of the damage sustained during multiple collisions with the trees and the thermal destruction of the post-crash fire.

A toxicology examination performed by the Federal Aviation Administration's Forensic Toxicology Research Team on specimens taken from the pilot were negative for ethanol in the muscle and liver. The examination was negative for all drugs except Ibuprofen in the liver and heart. The standard tests for carbon monoxide and cyanide could not be performed.

An autopsy performed by the Humboldt County Coroner's office determined that the cause of death was blunt force trauma due to an aircraft accident.

Pilot Information

Certificate:	Airline Transport	Age:	62, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 2 With Waivers/Limitations	Last FAA Medical Exam:	05/01/2007
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	18500 hours (Total, all aircraft), 17 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N5049Q
Model/Series:	340	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	D4318
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	03/01/2007, Annual	Certified Max Gross Wt.:	2700 lbs
Time Since Last Inspection:		Engines:	2 Reciprocating
Airframe Total Time:	7691 Hours as of last inspection	Engine Manufacturer:	Teledyne Continental
ELT:	Installed, not activated	Engine Model/Series:	TSIO-520-NB
Registered Owner:	Roy E. Ladd, Inc.	Rated Power:	335 hp
Operator:	Roy E. Ladd, Inc.	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:		Visibility	0.25 Miles
Lowest Ceiling:	Obscured / 50 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	Calm /	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	7°C / 7°C
Precipitation and Obscuration:	Heavy - Fog		
Departure Point:	Redding, CA (KRDD)	Type of Flight Plan Filed:	None
Destination:	Garberville, CA (O16)	Type of Clearance:	None
Departure Time:	0800 PST	Type of Airspace:	

Airport Information

Airport:	Garberville Airport (O16)	Runway Surface Type:	
Airport Elevation:	546 ft	Runway Surface Condition:	
Runway Used:	N/A	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Valley/Terrain Following

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	2 Fatal	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 Fatal	Latitude, Longitude:	40.075833, -123.816667

Administrative Information

Investigator In Charge (IIC):	Orrin K Anderson	Report Date:	11/10/2008
Additional Participating Persons:	Marcus Carr; Federal Aviation Administration; Oakland, CA		
Publish Date:	11/10/2008		
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.nts.gov/pubdms/ .		

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](#).