



National Transportation Safety Board Aviation Accident Final Report

Location:	Cabazon, California	Accident Number:	LAX08FA058
Date & Time:	February 2, 2008, 13:40 Local	Registration:	N354TJ
Aircraft:	Cessna 340A	Aircraft Damage:	Destroyed
Defining Event:	VFR encounter with IMC	Injuries:	4 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane departed under daytime visual meteorological conditions on a cross-country flight from an airport on the east side of a mountain range to a destination on the west side of the mountains. The airplane, which had been receiving flight following, then collided with upsloping mountainous terrain in a mountain pass while in controlled flight after encountering instrument meteorological conditions. The controller terminated radar services due to anticipation of losing radar coverage within the mountainous pass area, and notified the pilot to contact the next sector once through the pass while staying northwest of an interstate highway due to opposing traffic on the south side of the highway. The pilot later contacted the controller asking if he still needed to remain on a northwesterly heading. The controller replied that he never assigned a northwesterly heading. No further radio communications were received from the accident airplane. Radar data revealed that while proceeding on a northeasterly course, the airplane climbed to an altitude of 6,400 feet mean sea level (msl). A few minutes later, the radar data showed the airplane turning to an easterly heading and initiating a climb to an altitude of 6,900 feet msl. The airplane then started descending in a right turn from 6,900 feet to 5,800 feet msl prior to it being lost from radar contact about 0.65 miles southeast of the accident site. A weather observation station located at the departure airport reported a scattered cloud layer at 10,000 feet above ground level (agl). A weather observation system located about 29 miles southwest of the accident site reported a broken cloud layer at 4,000 feet agl. A pilot, who was flying west bound at 8,500 feet through the same pass around the time of the accident, reported overcast cloud coverage in the area of the accident site that extended west of the mountains. The pilot stated that the ceiling was around 4,000 feet msl and the tops of the clouds were 7,000 feet msl or higher throughout the area. Postaccident examination of the airframe and both engines revealed no anomalies that would have precluded normal operation.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:
The pilot's continued visual flight into instrument meteorological conditions and failure to maintain terrain clearance while en route. Contributing to the accident were clouds and mountainous terrain.

Findings

Personnel issues	Decision making/judgment - Pilot
Environmental issues	Below VFR minima - Decision related to condition
Environmental issues	Mountainous/hilly terrain - Response/compensation
Environmental issues	Clouds - Not specified
Environmental issues	Mountainous/hilly terrain - Not specified

Factual Information

HISTORY OF FLIGHT

On February 2, 2008, approximately 1340 Pacific standard time, a Cessna 340A, N354TJ, collided with mountainous terrain while maneuvering near Cabazon, California. The private pilot and his three passengers were killed; impact forces destroyed the airplane. The pilot, the registered owner, operated the airplane under provisions of 14 Code of Federal Regulations (CFR) Part 91. The personal cross-country flight originated from the Bermuda Dunes Airport (UDD), Palm Springs, California, about 1330, with a planned destination of the Chino Airport, Chino, California. Visual meteorological conditions prevailed at the nearest official reporting station; instrument meteorological conditions prevailed in the accident area. No flight plan had been filed.

A family member reported the airplane overdue to the Federal Aviation Administration (FAA) on February 6, 2008, after becoming concerned that the pilot had not been seen since February 2, 2008. The FAA issued an alert notification (ALNOT). On the afternoon of February 6, 2008, the Civil Air Patrol commenced search and rescue operations in the vicinity of where the last FAA radar return was observed.

Aerial units located the airplane on the afternoon of February 9, 2008, within mountainous terrain about 6.75 miles northeast of the Banning Municipal Airport, Banning, California.

Review of Air Traffic Control communications and radar data from Southern California (SCT) Terminal Radar Approach Control (TRACON), revealed that radar services were terminated due to anticipation of losing radar coverage within Banning Pass. SCT notified the pilot to contact the next sector once through the pass while staying northwest of Interstate 10 due to traffic in the opposite direction. The pilot later contacted SCT, asking the controller if he still needed to remain on the northwesterly heading. The controller replied that he never assigned a northwesterly heading. Radar contact was lost at 1340, and no further radio communications were received from the accident airplane.

Review of recorded radar data revealed that the flight originated from Bermuda Dunes, and proceeded on a northeasterly course. At 1337, radar data depicted the target turning left to an easterly heading at a Mode C reported altitude of about 6,400 feet mean sea level (msl). At 1339, the airplane climbed to an altitude of 6,900 feet until initiating a descending right turn from 6,900 feet to 5,800 feet prior to losing radar contact. The last radar return was 0.65 miles southeast of the accident site.

PERSONNEL INFORMATION

The 75-year-old pilot held a private pilot certificate with airplane single-engine land, airplane multiengine land, and instrument airplane ratings. The pilot was issued a third-class medical certificate on October 31, 2006, with the limitation "Must wear corrective lenses." At the time of his most recent medical application, the pilot reported that he had accumulated 5,972 total hours of flight time.

AIRCRAFT INFORMATION

The six-seat, low-wing, retractable gear, Cessna 340A airplane, serial number 340A0042, was manufactured in 1976, and was certified in the normal category. The airplane was powered by two Teledyne Continental Motors (TCM) TSIO-520-NB engines (right engine serial number 519528, and left engine serial number 519500), rated at 310 horsepower driving two three-bladed Hartzell constant speed propellers. The airframe and engine logbooks were not located during the course of the investigation.

METEOROLOGICAL INFORMATION

A weather reporting station at the Palm Springs International Airport (PSP), Palm Springs, California, located 19.75 miles southeast of the accident site reported at 1353, wind from 320 degrees at 8 knots; visibility 10 statute miles; scattered cloud layer at 10,000 feet, scattered cloud layer at 20,000 feet; temperature 16 degrees Celsius; dew point 2 degrees Celsius; and an altimeter setting of 29.99 inches of Mercury.

A weather reporting station at the March Airbase, Riverside, California, located about 29 miles southwest of the accident site reported at 1355, wind from 310 degrees at 5 knots; visibility 10 statute miles; broken cloud layer at 4,000 feet; temperature 11 degrees Celsius; dew point 4 degrees Celsius; and an altimeter setting of 30.06 inches of Mercury.

In a written statement, a pilot of a Cessna 170 flying west bound at 8,500 feet msl through Banning Pass around 1415 the day of the accident reported an overcast cloud coverage in the area of the Banning Municipal Airport and extending west to the Interstate 91 and Interstate 215 interchange. The pilot stated that the ceiling was around 4,000 feet msl and the tops of the clouds were 7,000 feet msl or higher throughout the area.

WRECKAGE AND IMPACT INFORMATION

Examination of the accident site revealed that the first identified point of contact (FIPC) was on the southern face of a ridge within Millard Canyon. The FIPC was about 15 feet below the peak at an elevation of 4,800 feet msl. The wreckage distribution path extended over the peak and downslope on the northern face of the ridge. It was approximately 130 yards in length and oriented on a magnetic heading of 360 degrees. The wreckage was extremely fragmented and scattered throughout thick vegetation. Investigators located all primary flight controls at the accident site.

On the southern side of the ridge line near the FIPC, investigators found portions of the right wing-tip fuel tank, right engine, right propeller, and various metal debris. The angle between the initial impact crater and the right propeller, which was embedded within terrain, was about 45 degrees. Portions of the left and right ailerons, rudder, elevator, left and right wing, and fuselage were fragmented and scattered throughout heavily wooded terrain on the northern slope of the ridge within thick vegetation.

The wreckage was recovered to the facilities of Air Transport, Phoenix, Arizona, for further

examination.

MEDICAL AND PATHOLOGICAL INFORMATION

The Riverside County Sheriff's Coroner's Office conducted an autopsy on the pilot. The medical examiner determined that the cause of death was "multiple blunt force trauma."

No toxicology tests were performed on the pilot.

TESTS AND RESEARCH

Examination of the recovered airframe and flight control system components revealed no evidence of preimpact anomalies.

The left propeller separated from the engine crankshaft by a fracture of the crankshaft just behind the propeller flange. The flange remained attached to the hub. The crankshaft fracture exhibited 45-degree shear lips, with an angular and grainy features; no material smearing was observed on the fracture faces.

The three propeller blades remained in the blade clamps and attached to the hub in the normal fashion. The three blades were numbered for identification. No chordwise scoring perpendicular to the blade span was observed on any of the blades; the scratches on the face and cambered sides were a chaotic jumble of various multidirectional spanwise and angled scratches. Blade L1 exhibited minor leading edge nicks and was smoothly curved toward the face side with a tip end twist opposite the cambered side. Blade L2 had a large nick in the tip end leading edge, and exhibited a trailing edge sine wave pattern with a tip end twist opposite the cambered side. Blade L3 displayed a tip end curl and twist opposite the cambered side, with minor leading edge damage, and an observable trailing edge sine wave pattern.

The right propeller separated from the engine crankshaft by a fracture of the crankshaft just behind the propeller flange. The flange remained attached to the hub. The crankshaft fracture exhibited massive smearing of the fracture face with bluing evident.

The three propeller blades remained in the blade clamps and attached to the hub in the normal fashion. The three blades were lettered A thru C for identification. All three blades exhibited extensive leading edge damage, chordwise scoring, and trailing edge sine wave patterns. Blade RA exhibited a 1.25-inch diameter leading edge gouge, and was smoothly curved toward the face side with a tip end twist opposite the cambered side. Blade RB had a large gouge in the tip end leading edge, and exhibited a trailing edge sine wave pattern with a tip end twist opposite the cambered side. Blade RC displayed a tip end curl and twist opposite the cambered side, with massive leading edge damage, and an observable trailing edge sine wave pattern.

Examination of the left and right engines revealed no anomalies that would have precluded normal operation.

History of Flight

Enroute	VFR encounter with IMC (Defining event)
Enroute	Controlled flight into terr/obj (CFIT)

Pilot Information

Certificate:	Private	Age:	75, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	October 31, 2006
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	5972 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N354TJ
Model/Series:	340A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:		Serial Number:	340A0042
Landing Gear Type:		Seats:	6
Date/Type of Last Inspection:		Certified Max Gross Wt.:	5990 lbs
Time Since Last Inspection:		Engines:	2 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Teledyne Continental
ELT:	Installed, not activated	Engine Model/Series:	TSIO-520 SER
Registered Owner:		Rated Power:	300 Horsepower
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:	13:53 Local	Direction from Accident Site:	
Lowest Cloud Condition:		Visibility	10 miles
Lowest Ceiling:	Overcast / 4000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	320°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.98 inches Hg	Temperature/Dew Point:	16 °C / 2 °C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Palm Springs, CA (UDD)	Type of Flight Plan Filed:	None
Destination:	Chino, CA (CNO)	Type of Clearance:	VFR flight following
Departure Time:	13:30 Local	Type of Airspace:	Unknown

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	3 Fatal	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 Fatal	Latitude, Longitude:	34.000278, -116.778892(est)

Administrative Information

Investigator In Charge (IIC):	Plagens, Howard
Additional Participating Persons:	John P Shaper; Federal Aviation Administration FSDO; Riverside, CA Henry Soderlund; Cessna Aircraft Company; Wichita, KS Jason Lukasik; Teledyne Continental Motors; Mobile, AL
Original Publish Date:	March 5, 2009
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=67504

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](#).