



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	BANNING, CA	<b>Accident Number:</b>	LAX94FA243B
<b>Date &amp; Time:</b>	06/09/1994, 1630 PDT	<b>Registration:</b>	N6383H
<b>Aircraft:</b>	CESSNA T207A	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	2 Fatal

**Flight Conducted Under:** Part 91: General Aviation - Other Work Use

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## Analysis

THE PA-28, N4512Z, WAS WESTBOUND IN LEVEL FLIGHT ABOUT 1,000 FT AGL, ABOUT 2 MILES NORTH OF AN AIRPORT AT WHICH AN INTERMEDIATE STOP WAS PLANNED. THE CE-T207A, N6383H, WAS MANEUVERING IN LEFT TURNS WHILE CONDUCTING AERIAL PHOTOGRAPHY, AND HAD JUST INITIATED A TURN TOWARD THE EAST. THE LEFT WINGS OF EACH AIRCRAFT WERE STRUCK BY THE OTHER AIRPLANE. WITNESSES INDICATED THAT ABOUT 2 SECONDS BEFORE IMPACT, THE PA-28 ATTEMPTED TO AVOID A COLLISION BY BEGINNING A CLIMBING RIGHT TURN. EACH AIRCRAFT CONTINUED PAST THE OTHER AND THEN BOTH SPIRALED TO THE GROUND. THE WEATHER CONDITIONS WERE CLEAR, VISIBILITY 3 MILES IN HAZE. NEITHER AIRPLANE WAS IN RADAR OR VOICE CONTACT WITH ANY FAA FACILITY.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE FAILURE OF BOTH PILOTS TO SEE AND AVOID EACH OTHER. THE HAZE WAS A FACTOR.

## Findings

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Occurrence #1: MIDAIR COLLISION  
Phase of Operation: MANEUVERING

### Findings

1. (F) WEATHER CONDITION - HAZE/SMOKE
  2. (C) VISUAL LOOKOUT - INADEQUATE - PILOT IN COMMAND
  3. (C) VISUAL LOOKOUT - INADEQUATE - PILOT OF OTHER AIRCRAFT
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Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: DESCENT - UNCONTROLLED

## Factual Information

### HISTORY OF THE FLIGHT

On June 9, 1994, about 1630 hours Pacific daylight time, a Piper PA28-161, N4512Z, collided with a Cessna T207A, N6383H, about 2 miles north of Banning, California. Both aircraft were being operated under visual flight rules (VFR) under Title 14 CFR Part 91. N4512Z, operated by Air Desert Pacific, La Verne, California, was destroyed. A noncertificated student pilot, the sole occupant, received fatal injuries. The accident flight departed the Blythe Airport, Blythe, California, about 1529 hours as the return portion of an authorized solo cross-country flight that originated at Brackett Field, La Verne, about 1200 hours. The pilot had filed a VFR flight plan. Visual meteorological conditions prevailed.

N6383H, operated by I.K. Curtis Services, Inc., Burbank, California, was destroyed by impact and postimpact fire. A certificated commercial pilot and a photography technician passenger received fatal injuries. The flight originated at the Burbank-Glendale-Pasadena Airport, Burbank, about 1149 hours as a photographic survey flight over areas in the San Fernando Valley, Banning, and San Diego. No flight plan was filed.

Witnesses reported that N4512Z was observed flying westbound about 1,000 feet above the ground (agl). The pilot had planned to stop at Banning airport as part of his cross-country solo flight. N6383H was observed to be maneuvering in the area in a left turn. The purpose of the flight was to photograph specific targets in the area of the accident. Each target specified an altitude of 1,200 feet above the ground. Due to differences in ground elevation, the aircraft's mean sea level altitude varied from 3,300 feet to 3,600 feet.

Just prior to impact, witnesses indicated that N4512Z appeared to begin an evasive maneuver by climbing. Following impact, both aircraft continued past each other about 500 feet and then spiral to the ground. Following ground impact, the wreckage of N6383H initiated about a 20-acre grass fire. The wreckage of N4512Z was located about 1/2 mile west of N6383H. The left wing of N4512Z was located about halfway between the two wreckage sites.

### OTHER DAMAGE

About a 20-acre brushfire was ignited by the wreckage of N6383H. The fire damaged several buildings on the Morongo Indian Reservation.

### CREW INFORMATION

The pilot of N4512Z was issued a student pilot/third-class medical certificate on December 4, 1991. The pilot held a current third-class medical certificate that was issued on April 14, 1994, and contained no limitations.

The pilot of N6383H held a commercial pilot certificate with airplane single-engine and multiengine land and instrument airplane ratings. The most recent first-class medical certificate was issued to the pilot on July 21, 1993, and contained no limitations.

### AIRCRAFT INFORMATION

N4512Z had accumulated a total time in service of 5,431 flight hours. The most recent annual inspection was accomplished on June 1, 1994. N6383H had accumulated a total time in service of 8,545 flight hours. The most recent annual inspection was accomplished on March 25, 1994. Examination of the maintenance records for each aircraft revealed no unresolved maintenance

discrepancies against either aircraft prior to departure.

#### METEOROLOGICAL INFORMATION

The closest official weather observation station is Beaumont, California, which is located 7 nautical miles west of the accident site. At 1646 hours, a surface observation was reporting in part: Sky condition and ceiling, clear; visibility, 3 miles in haze; temperature, 97 degrees F; dew point, 44 degrees F; wind, 320 degrees at 8 knots.

Palm Springs, California, is located 25 nautical miles east of the accident site. At 1536 hours, a surface observation was reporting in part: Sky condition and ceiling, clear; visibility, 25; temperature, 109 degrees F; wind, 120 degrees at 15 knots; altimeter, 29.74 inHg.

#### COMMUNICATIONS

The two aircraft were not in radar contact or voice communication with any known Federal Aviation Administration (FAA) air traffic control (ATC) facilities at the time of the accident. N4512Z had previously been receiving VFR traffic advisories from the Palm Springs, California, Terminal Radar Approach Control Facility (TRACON) from 1603 to 1624 hours. Advisory services had been terminated about 6 minutes before, approximately 7 miles east of the accident site.

#### AERODROME AND GROUND FACILITIES

The Banning Airport is located about 2 miles south of the accident site. The published elevation of the airport is 2,219 feet mean sea level (msl). The traffic pattern altitude is 3,219 feet, 1,000 feet above the ground (agl). The airport is equipped with a single hard-surfaced runway on a 080/260 degree magnetic orientation. The runway is 5,200 feet long by 150 feet wide. The airport/facility directory indicates that a right-hand traffic pattern (north of the airport) is utilized when landing on runway 26.

#### WRECKAGE AND IMPACT INFORMATION

N4512Z

National Transportation Safety Board investigators examined the wreckage of both aircraft at the accident site on June 10, 1994, and, after retrieval, at Aero Aviation, Compton, California, on June 11, 1994. Numerous segments of both airplane's wing structure were located scattered between the separated wing of N4512Z and the point of ground impact of N6383H. Additionally, numerous portions of both airplanes were located scattered up to about 1/4 mile south of the ground impact site of N6383H. N4512Z was painted white with blue and grey accent striping. N6383H was painted white with butterscotch and brown trim.

The left wing of N4512Z separated about 6 feet inboard from the wing tip faring attach point. The outboard wing tip faring was missing. The wing was located at latitude 33 degrees, 56.58 minutes North and longitude 116 degrees, 49.82 minutes West, about 1/4 mile east of the main fuselage. The wing is predominately painted white with a grey paint stripe oriented chordwise at the outboard end. A blue chordwise stripe is about 1 inch inboard from the grey stripe.

The inboard end of the separated wing displayed aft crushing, wrinkling, and upward curling of the inboard separated end, beginning about 1 inch inboard of the stall warning sensor. The wing spar exhibited aft bending and curling at the point of separation. Yellow/green paint transfers were noted on the underside of the wing, along the folded edges of the wing skin, and the forward face of the wing spar structure at the point of separation. About 2 feet of the

outboard end of the aileron remained attached to the wing at the outboard hinge bracket. The trailing half of the wing structure, from the inboard separated end of the aileron, to the aft face of the wing spar in an inboard direction, was torn away and missing, exposing the aft face of the spar.

The underside of the separated wing exhibited three diagonal scratches with faint blue paint smudges oriented from the outboard leading edge corner towards the inboard trailing edge of the wing. The angle of scratch marks was measured in relation to the chordline of the wing. The most forward scratch was oriented at a 25-degree angle from the chordline. The next aft mark was oriented at a 52-degree angle and the most aft mark at a 30-degree angle. The outboard, underside of the leading edge, exhibited an indentation with diagonal scratches and blue smudges.

The airplane's main fuselage struck the ground at latitude 33 degrees, 56.64 minutes North and longitude 116 degrees, 50.18 minutes West on about a 045-degree heading. The right wing remained attached to the fuselage and exhibited extensive spanwise leading edge aft crushing and folding back to the wing spar. The leading edge also exhibited several semicircular aft crushing areas located about 6 feet, 10 feet, and 15 feet inboard from the outboard wing tip faring attach point. The aileron and flap remained attached to the wing.

The inboard portion of the left wing remained attached to the fuselage. It was extensively crushed and folded aft in a chordwise direction back to the wing spar and was broken at the inboard spar attach point. About 4 1/2 feet out from the inboard end of the wing, just outboard of the left main gear, is the point of wing separation; however, a 3 1/3-foot-segment of the wing spar was located lying adjacent to the inboard wing spar end. The outboard end of the wing spar and the inboard mating end of the spar segment exhibited upward bending and aft curling. The spar segment also exhibited "S"-type spanwise bending and torsional twisting. The wing skin and structure around the exposed spar segment was torn away and missing. The empennage was crushed and folded in a forward direction. The vertical stabilizer displayed semicircular aft crushing of the leading edge back to the rudder attach point. The rudder remained attached to the vertical stabilizer. The horizontal stabilizer and its trim tab assembly remained attached to the empennage. The upper portion of the airplane fuselage, from the top of the windshield to the vertical stabilizer attach point, was crushed and folded along the longitudinal axis of the aircraft. The entire upper portion of the roof area was located forward of the main fuselage, lying upside down. The upper fuselage surface had evidence of several blue paint smudges. The entire cabin and cockpit area was crushed, fragmented, and folded in a forward direction. The engine cowling was located about 300 yards east of the main fuselage. It exhibited tearing of the aft attach screws, wrinkling and crushing of the lower left side, and numerous blue paint smudges.

Due to the impact damage, Safety Board investigators were unable to operate the flight controls by their respective control mechanisms. The instrument panel was extensively crushed forward to the firewall and both were crushed under the engine.

The engine sustained extensive impact damage to the underside and front portion of the engine. The magnetos and vacuum pump sustained impact damage and were separated from the accessory gear case.

The propeller assembly remained connected to the engine crankshaft. The blades were both bent aft about 45 degrees. Both exhibited extensive leading edge gouging, chordwise

scratching, and torsional twisting.

### N6383H

The wreckage examination revealed that the airplane struck the ground on about a 020-degree heading at latitude 33 degrees, 56.70 minutes North and longitude 116 degrees, 49.76 minutes West. The cockpit, cabin, and the empennage of the airplane were oriented forward of the landing gear and engine, lying upside down and extensively consumed by fire. The vertical stabilizer, rudder, and right horizontal stabilizer were consumed by fire. The right wing was oriented in a vertical, leading edge-down attitude and exhibited extensive spanwise leading edge aft crushing. The lift strut remained attached to the its wing attach point and was bent midspan about 90 degrees in an inboard direction. The lower end of the lift strut was fire damaged and separated from the fuselage attach point. The aileron and flap remained attached to the wing. The wing and flap were fire damaged at the inboard end. The flap actuator was not extended and the manufacturer reported that it was consistent with the flap being in the up position. A fire damaged auxiliary fuel tank that normally is attached at the outboard end of the wing, and which forms the wing tip fairing, was separated from the wing and lying adjacent to the wing tip.

The left wing, from the inboard carry-through structure to the lift strut attach point, was fire damaged. The upper wing lift strut was fire damaged and still attached to the wing. The lift strut was melted about midspan and the lower end was attached at its fuselage attach point and was fire damaged. The wing spar was separated about 4 feet outboard from the upper lift strut attach point. The outboard end was not fire damaged and exhibited an aft and upward curling of the lower edge of the spar web.

The left outboard auxiliary fuel wing tip tank was separated from the wing and was not present at the impact site. It was located at latitude 33 degrees, 56.57 minutes North and longitude 116 degrees, 49.89 minutes West. Examination of the fuel tank revealed that it had separated from the wing at its inboard attach point. A blue paint transfer mark and a black smudge was located on the inboard, underside edge of the tank about midchordline. The paint marks were oriented at a 40-degree angle from the inboard edge of the tank toward the outboard leading edge of the tank. The left wing position light assembly was still attached to the tip tank. Examination of the light bulb filament revealed that it was attached to its support posts and was tightly coiled.

Portions of the left wing aileron and outboard end of the left flap were located in the desert south of the main wreckage. This area contained numerous torn and separated portions of both airplanes. The recovered pieces of the left wing aileron and flap were extensively deformed and broken. They were not fire damaged.

Due to the impact and postimpact fire damage that incinerated most of the aircraft, Safety Board investigators were unable to operate the flight controls by their respective control mechanisms.

The engine was located between the landing gear struts and the inboard end of the right wing. It sustained extensive impact damage to the front portion of the engine and fire damage to the aft end. The engine accessories were broken and separated from the engine. The engine valve covers and cylinder heads received impact damage on the left side of the engine. The magnetos and the turbocharger separated from the engine.

The three bladed propeller assembly separated from the crankshaft. The propeller hub

assembly was shattered and not located. One propeller blade was located adjacent to the engine and displayed aft bending, slight torsional twisting, and blackening from soot. The nonchambered side of the blade exhibited spanwise scratch marks located 15 inches inboard from the tip. A gouge and missing section of the trailing edge was located 6 inches inboard from the tip. The chambered side of the blade exhibited chordwise gouging and scratching from 8 inches inboard from the tip to midspan. From about 10 inches inboard from the tip at the leading edge, to about 14 inches outboard from the blade root at the trailing edge, diagonal scratch marks and yellow/green paint marks were oriented on about a 45-degree angle.

A second propeller blade was located under the engine. It exhibited extensive leading edge gouging, chordwise scratching, torsional twisting, and fire damage. About 2 inches of the tip was fractured and separated. The third propeller blade was recovered buried in the ground at the impact site and displayed similar destruction.

#### MEDICAL AND PATHOLOGICAL INFORMATION

A post mortem examination of both pilots was conducted by the Office of the Coroner, Riverside County, 3610 11th St., Riverside, California, on June 13, 1994. The examination revealed that the cause of death for both pilots was attributed to multiple traumatic injuries.

A toxicological examination of the pilot of N4512Z was conducted by the U.S. Department of Defense, Armed Forces Institute of Pathology, on July 6, 1994. The examination was negative for all screened drugs. A trace amount of acetaldehyde and 1-propanol, and 27 mg/dl of ethanol were found in a kidney.

A toxicological examination of the pilot of N6383H was conducted by the U.S. Department of Defense, Armed Forces Institute of Pathology, on July 1, 1994. The examination was negative for alcohol and all screened drugs.

#### ADDITIONAL INFORMATION

The position of the sun in relation to the accident site was computed at 272.6 degrees at an elevation of 40.3 degrees. Chapter 5 of the Airman's Information Manual (AIM), Section 5-77 states in part: "...When meteorological conditions permit, regardless of type of flight plan or whether or not under control of a radar facility, the pilot is responsible to see and avoid other traffic, terrain or obstacles."

#### WRECKAGE RELEASE

The Safety Board released the wreckage of both N4512Z and N6383H, located at Aero Retrieval, Compton, California, to the respective owner's representatives on June 21, 1994. No parts or components were retained by the Safety Board.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	32, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<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 1 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	07/21/1993
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	5032 hours (Total, all aircraft), 1160 hours (Total, this make and model), 4927 hours (Pilot In Command, all aircraft), 148 hours (Last 90 days, all aircraft), 47 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	CESSNA	<b>Registration:</b>	N6383H
<b>Model/Series:</b>	T207A T207A	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	20700504
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	3
<b>Date/Type of Last Inspection:</b>	03/25/1994, Annual	<b>Certified Max Gross Wt.:</b>	3800 lbs
<b>Time Since Last Inspection:</b>	88 Hours	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	8545 Hours	<b>Engine Manufacturer:</b>	CONTINENTAL
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	TSIO-520-M
<b>Registered Owner:</b>	I.K. CURTIS SERVICES, INC.	<b>Rated Power:</b>	285 hp
<b>Operator:</b>	I.K. CURTIS SERVICES, INC.	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	BUO, 2300 ft msl	Distance from Accident Site:	7 Nautical Miles
Observation Time:	1646 PDT	Direction from Accident Site:	270°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	3 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	320°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	36° C / 7° C
Precipitation and Obscuration:			
Departure Point:	BURBANK, CA (BUR)	Type of Flight Plan Filed:	None
Destination:	SAN DIEGO, CA	Type of Clearance:	VFR
Departure Time:	1149 PDT	Type of Airspace:	Class G

## Airport Information

Airport:	BANNING (BNG)	Runway Surface Type:	
Airport Elevation:	2219 ft	Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	

## Wreckage and Impact Information

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

## Administrative Information

Investigator In Charge (IIC):	SCOTT R ERICKSON,	Report Date:	04/25/1995
Additional Participating Persons:	BRIAN FINNEGAN; WICHITA, KS MIKE MONROE; RIVERSIDE, 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](#).