



National Transportation Safety Board Aviation Accident Factual Report

Location:	CHANDLER, AZ	Accident Number:	LAX98FA066
Date & Time:	01/01/1998, 1746 MST	Registration:	N20118
Aircraft:	Cessna 172M	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	2 Fatal, 1 Serious
Flight Conducted Under:	Part 91: General Aviation - Personal		

HISTORY OF FLIGHT

On January 1, 1998, at 1746 hours mountain standard time, a Cessna 172M, N20118, collided with power lines during cruise flight on the Gila River Indian Reservation near Chandler, Arizona. The aircraft was destroyed during the impact with the power lines and subsequent collision with a barbed wire fence. The pilot and one passenger sustained fatal injuries; the other passenger sustained serious injuries. The aircraft was operated by Sunbird Flight Services in Chandler. The pilot rented the aircraft for a local flight under 14 CFR Part 91 when the accident occurred. Visual meteorological conditions prevailed and a VFR flight plan was not filed. The flight originated from Chandler at 1710.

There were two witnesses (a husband and wife) to the crash sequence. The wife said she heard the airplane flying nearby. She said the airplane was flying from west to east toward the mountain. She stated that she thought the airplane was "extremely low" and said he (the pilot) was at the height of the power lines. She thought that he better gain or lose altitude in order to miss the power lines. She said he "didn't try to miss the power lines . . . I don't think he saw them." She stated that the airplane hit the power line and there was an explosion and a flash of fire, followed almost immediately by a second explosion and flash of fire. She said the airplane flipped over in the air and then the airplane "fell to the ground like a rock." She called 911 for paramedics and the fire rescue squad. She stated that it was "still light enough to see the power lines."

The husband said he witnessed the airplane flying down the canal. He said the airplane was flying "steady, straight and level but at an extremely low level." He said the airplane was flying close to the fence, which ran parallel to the canal. He said he thought the pilot would gain altitude to miss the power lines but he didn't. He stated that the time of the crash was 1746, because the time clock in their shop was knocked off line from the power interruption.

Another witness was interviewed by telephone on January 5, 1998. She said she lived at the south end of a housing development, which backs up to the reservation. She stated she was walking her dog on the reservation approximately 1740, when she saw an aircraft fly by. She

said the sun had set, and she looked to the west and observed a plane fly past her from west to east. She said it sounded low, and she said she was surprised to see it at such a low level. She said she watched it fly in a completely straight line until he was out of sight. She estimated his height above the ground to be approximately "that of a tall palm tree."

PERSONNEL INFORMATION

The pilot invited the female occupant to go flying with him, since according to her mother, she had an interest in becoming a pilot. The female occupant reportedly invited the male observer to come along on the flight. The Gila River Police Department identified occupant seating positions, with the assistance of the Gila River Fire Department. According to their report, two male subjects were seated in the two front seats of the aircraft with the female.

The pilot was issued his private pilot certificate on October 10, 1994. His most recent second-class medical certificate was issued on October 3, 1997, with the limitation that he must wear glasses for near and distant vision. The pilot's personal flight records were reviewed. According to the information listed in his flight log, the pilot had accrued a total flight time of about 198 hours, with 135 hours of pilot-in-command time, and 46 hours in the Cessna 172. He completed a biannual flight review on January 20, 1997, in a Cessna 172. The pilot had logged approximately 20 hours of night flight time; with 4 hours logged in the preceding 30 days.

AIRCRAFT INFORMATION

The airplane had a 100-hour inspection on December 5, 1997, at a tachometer time of 8,854 hours. The last annual inspection was performed on July 13, 1997, at a tachometer time of 8,462 hours.

METEOROLOGICAL INFORMATION

According to the Williams Gateway Airport, there was no unusual meteorological phenomena observed in the area at the time of the accident. Additionally, neither eyewitness reported any unusual weather phenomena when they witnessed the accident.

The Safety Board calculated the location of the Sun and Moon for the date/time of the accident site. Civil twilight was observed on the accident date at 1801. The angle of the sun was calculated to be -3.0 degrees below the horizon on an azimuth of 233.5 degrees. The magnetic bearing of the aircraft wreckage was oriented on a bearing of 080 degrees. The moon's altitude was calculated to be 33.5 degrees, with 13 percent illumination for the date of the accident.

During the examination of the wreckage, it was noted that there was a small hill located directly in front of the direction of travel.

WRECKAGE AND IMPACT INFORMATION

According to the Gila River Police Department report, they received a telephone call approximately 1750 to notify them of an airplane going down north of State Route 87 in the area of mile marker 155. This is a farm area with the Central Arizona Project Flood Control Canal running through it from east to west.

The airplane was located on the edge of a field just south of the flood control canal. One of the power lines that was down transverses the flood control canal north and south along Pear Road. Portions of the aircraft skin, a left wingtip, navigation antenna, and vertical fairing were found at the bottom of the flood canal.

White paint transfer marks were found on the seven strand copper wires located on the ground about half way between the two poles. According to the operator of the power lines, the tension strength was measured about 1,100 pounds. The power lines were operated and maintained by the Bureau of Indian Affairs, San Carlos Irrigation Project. The bottom power line was a three-strand copper wire and the top strand was made of aluminum. According to the power company, the aircraft struck the copper wire, which was the conductor wire. The height of the bottom strand was measured at 30 feet 8 inches from the ground, with the distance from the power line to the aircraft wreckage at 367 feet.

The airplane's engine was examined on-scene. The left magneto had separated from the accessory case mount. The left magneto was free to rotate and spark was observed when rotated by hand. The right magneto remained attached to the accessory case. The carburetor received impact damage and was separated from the oil sump. The throttle valve was noted in the closed position. The mixture control lever on the carburetor was separated and the mixture control shaft was found about 1/3 rich. Residual fuel was observed in the carburetor float bowl. The bowl was clean; and fuel was found in the gascolator. All spark plugs were removed and examined for wear. Round shaped electrodes and a normal wear pattern was noted on the spark plug gaps. All ignition wires were found attached to their respective spark plugs. The vacuum pump remained attached to the accessory case and was free to rotate.

The propeller separated from the crankshaft flange and was located approximately 30 feet from the main wreckage. The propeller displayed torsional bending, chordwise scratching, and leading edge gouges. The propeller bolts remained with the propeller hub and displayed bending.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was conducted on the pilot by the Pima County Medical Examiner's office on January 2, 1998. According to the autopsy report, the Medical Examiner listed the cause of death as multiple traumatic injuries. The Medical Examiner retained tissue and fluid samples for toxicological examination. The samples were submitted to the FAA Civil Aeromedical Institute (CAMI) in Oklahoma City, Oklahoma. Separate toxicological studies were conducted by the medical examiner's office. According to both toxicological studies, the pilot was negative for all screened drug substances.

ADDITIONAL INFORMATION

The Safety Board did not take custody of the wreckage. It was last seen at the accident site under the protection of the local authorities.

Pilot Information

Certificate:	Private	Age:	47, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	10/03/1997
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	198 hours (Total, all aircraft), 46 hours (Total, this make and model), 135 hours (Pilot In Command, all aircraft), 11 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N20118
Model/Series:	172M 172M	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Utility	Serial Number:	17261024
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	12/05/1997, 100 Hour	Certified Max Gross Wt.:	2300 lbs
Time Since Last Inspection:	75 Hours	Engines:	1 Reciprocating
Airframe Total Time:	8929 Hours	Engine Manufacturer:	Lycoming
ELT:	Installed	Engine Model/Series:	O-320-E2D
Registered Owner:	PHILIP F. REMMEL	Rated Power:	150 hp
Operator:	SUNBIRD FLIGHT SERVICES	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Dusk
Observation Facility, Elevation:	IWA, 1380 ft msl	Distance from Accident Site:	15 Nautical Miles
Observation Time:	1745 MST	Direction from Accident Site:	170°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	30 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	21° C / 3° C
Precipitation and Obscuration:			
Departure Point:	, AZ (CHD)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	VFR
Departure Time:	1710 MST	Type of Airspace:	Class D

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	DEBORAH L CHILDRESS
Additional Participating Persons:	DEAN HENNIES; SCOTTSDALE, AZ JEFFREY R POSCHWATTA; KENT, WA FRED LEEPER; WICHITA, KS
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 pubinquiry@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .