



National Transportation Safety Board Aviation Accident Final Report

Location:	Parker, AZ	Accident Number:	LAX03FA066B
Date & Time:	01/11/2003, 1600 MST	Registration:	N4994V
Aircraft:	Grumman F6F-5	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None

Flight Conducted Under: Part 91: General Aviation - Air Race/Show

Analysis

A Cessna 182 and a Grumman F6F-5 collided in flight on the downwind leg of the airport traffic pattern for runway 19. The Cessna was departing on runway 19 with a left climbing turnout northbound, and the Grumman F6F-5 warbird was returning to land and had entered the airport traffic area from the north. The collision occurred about midfield on the left downwind leg for runway 19 when the Grumman overtook the climbing Cessna. The Grumman pilot was monitoring the Unicom frequency and reported several miles from the airport inbound for the overhead approach to runway 19. He overheard other aircraft in the pattern and decided to follow an F-86 warbird that was turning base to final for an overhead approach. He flew over the runway centerline about 600 feet above ground level. Near the departure end of the runway he looked left to see if there was any traffic on the downwind leg. No traffic was observed so he announced that he was in the left break for downwind and turned left to the downwind leg and climbed to the pattern altitude. At pattern altitude he was abeam the departure end of the runway. He located his reported traffic in the pattern; one was on final, one on base, and the F-86 was on his right on a wide downwind and ahead of him. He chose to follow the F-86. About midfield, while straight and level on the downwind leg, the pilot started the Before Landing Check List. During that procedure he checked his position relative to the runway. At that instant, another aircraft came into view from below and ahead of him and the collision occurred. He transmitted the collision information and subsequently landed with substantial damage to the left wing. The left wing of the Grumman impacted at the base of the rudder and vertical stabilizer of the Cessna, thus severing it from the airplane. The uncontrolled airport was sponsoring an Air Expo, which consisted of static and aerial formation flights, flybys, and parachuting events. The airport routinely provides an aeronautical advisory station (CTAF) on 122.725 MHz, and provides wind and preferred runway information. The CTAF operator at the airport did not recall hearing the Cessna on frequency. Visual examination of the Cessna's two damaged communication radios with only 25 kc frequency spacing revealed the top radio was selected to 122.7, and the other was 121.902 MHz. The Grumman airplane had one with 25 kc frequency spacing; however, the pilot was using a handheld VHF radio for transmissions on 75 kc spacing for the airport's CTAF frequency, 122.725.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: failure of both pilot's to see and avoid one another while maneuvering in the traffic pattern. A factor in the accident was the inability of the Cessna pilot to communicate on the CTAF frequency due to the limitations of his radios.

Findings

Occurrence #1: MIDAIR COLLISION

Phase of Operation: APPROACH - VFR PATTERN - DOWNWIND

Findings

1. (F) TRAFFIC ADVISORY - NOT POSSIBLE - PILOT OF OTHER AIRCRAFT
2. (C) VISUAL LOOKOUT - INADEQUATE - PILOT IN COMMAND
3. (C) VISUAL LOOKOUT - INADEQUATE - PILOT OF OTHER AIRCRAFT

Factual Information

HISTORY OF FLIGHT

On January 11, 2003, about 1600 mountain standard time, a Cessna 182H, N8567S, collided with a Grumman F6F-5, N4994V, in midair about 1 mile east of Parker, Arizona. Both airplanes were operated by the pilots under 14 CFR Part 91. The private pilot and passenger in the Cessna sustained fatal injuries. The airline transport pilot in the Grumman was not injured. The Cessna was destroyed; the Grumman received substantial damage to the left wing tip and performed an uneventful landing at the Parker (uncontrolled) Airport. Visual meteorological conditions prevailed during the personal flights, and no flight plan had been filed for either airplane. Both airplanes departed the Parker airport prior to the collision.

On the day of the accident, Parker Airport, also known as Avi Suquilla, was hosting an "Air Expo" and there were over 4,000 people in attendance. The Air Expo was to provide a static display of the airplanes for the attendees. Aircraft operators performed aerial formation flights, flybys, and parachuting demonstrations. The event was sponsored by the Blue Water Casino; the airport and casino are enterprises of the Colorado River Indian Tribe (CRIT). The Grumman airplane was participating in the event with other "Warbirds" owned by private individuals and organizations.

There were no Notices to Airman (NOTAM), nor notifications made to the Federal Aviation Administration (FAA) Airman Information Manual (AIM), or to the FAA Flight Service Stations.

According to witnesses, the transient Cessna was departing on runway 19 with a left climbing turnout northbound on the downwind leg, destined for Lake Havasu City. The Grumman was returning to Parker Airport to land after a local photo shoot with another airplane. The collision occurred about midfield on the left downwind leg for runway 19. The Grumman pilot stated that he was not aware of the Cessna's departure or position, and observed it just before the collision.

Thereafter, the airport manager dispatched the attending fire department equipment and a police helicopter to the scene. The manager assisted in the parking and securing of the Grumman away from the attending crowd.

The Grumman F6F pilot submitted a written statement. The Grumman pilot said he was monitoring the Unicom frequency and reported several miles inbound for the overhead approach to runway 19. He overheard other aircraft in the pattern and decided to follow an F-86 warbird that was turning base to final for an overhead approach. He flew over the runway centerline about 600 feet above ground level. Near the departure end of the runway he looked left to see if there was any traffic on the downwind leg. No traffic was observed so he announced that he was in the left break for downwind and turned left to the downwind leg and climbed to the pattern altitude. At pattern altitude he was abeam the departure end of the runway. He located his reported traffic in the pattern; one was on final, one on base, and the F-86 was on his right on a wide downwind and ahead of him. He chose to follow the F-86. About midfield, while straight and level on the downwind leg, the pilot started the Before Landing Check List. During that procedure he checked his position relative the the runway. At that instant, another aircraft came into view from below and ahead of him and the collision occurred. He transmitted the collision information and subsequently landed with substantial

damage to the left wing.

PERSONNEL INFORMATION

Cessna Pilot Information

The Cessna pilot held a private pilot certificate and was rated for airplane single engine land. The pilot held a third-class medical certificate issued July 26, 2001. At the time of the medical certificate examination, the pilot reported a total flight time of 1,000 hours with 22 hours in the past 6 months. No additional pilot information was obtained.

Grumman Pilot Information

The Grumman pilot held an Airline Transport Pilot certificate and was type rated in numerous airplanes. He holds a flight instructor's certificate for airplane single and multiengine land and instrument airplane. At the time of the accident, the pilot's most recent first-class flight physical occurred on October 15, 2002. The pilot filed a National Transportation Safety Board accident report form in which he reported a total flight time of 12,700 flight hours, with 35 hours in the accident make and model airplane.

AIRCRAFT INFORMATION

Cessna Airplane Information

The 1965 Cessna 182H, airplane is a single engine hi-wing four-place with a fixed tri-cycle landing gear. The most recent documented annual inspection occurred on August 19, 2002, at 3,362 total flight hours.

Grumman Airplane Information

The vintage Grumman F6F-5, airplane is a single engine, single seat, low wing airplane with retractable conventional landing gear. The airplane has a special airworthiness certificate in the Experimental/Exhibition category. The operator is required to conform to the restrictions, limitations, and requirements established by the FAA for this airplane dated May 1, 1980.

The most recent required maintenance, a Condition Inspection, occurred on March 2, 2002. At that inspection, it was determined to have a total of 2,075.3 flight hours with 10 hours since that inspection.

COMMUNICATION INFORMATION

The airport routinely provides an aeronautical advisory station (Unicom) on 122.725 MHz, and provides wind and preferred runway information. Under normal procedures, the Unicom operator would log the call sign of aircraft using the airport. On the day of the accident, due to the volume of traffic, the log was not used. The Unicom operator did not recall hearing the Cessna on frequency. Preliminary visual examination of the Cessna's two damaged communication radios revealed the top radio was indicating 122.7, and the other was 121.902 MHz. The Grumman airplane had one Gables head VHF radio with 25 kc frequency spacing. The older VHF radios did have the ability to receive 50 and 75 kc transmissions by way of "bleed over." The pilot used a handheld VHF radio for transmissions on 75 kc spacing as for the Parker 122.725.

WRECKAGE AND IMPACT INFORMATION

The wreckage path was measured over about 747 feet. From the Cessna location the main

wreckage path was about 353 degrees. At the start of the wreckage path was located a plastic dorsal fin from the vertical stabilizer, about 246 feet south of the main wreckage.

Examination of the Grumman's left wing revealed a leading edge impact 13 inches inboard from the wing outboard rib. Imbedded in the Grumman wing were components of the Cessna's vertical stabilizer and rudder. Impact signatures on the components indicated an initial strike to the rudder 10 inches up from the bottom trailing edge. The vertical stabilizer and rudder were severed from the Cessna and located 342 feet beyond the main Cessna wreckage. At 60 feet abeam and east of the vertical stabilizer and rudder was the wing tip cover for the Grumman. The lower portion of the rudder below the severed line was located an additional 113 feet, with the Cessna tail cone found an additional 46 feet.

ADDITIONAL INFORMATION

The Safety Board did not take possession of either aircraft.

Pilot Information

Certificate:	Airline Transport; Flight Instructor	Age:	40, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Single
Other Aircraft Rating(s):		Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	10/01/2002
Occupational Pilot:		Last Flight Review or Equivalent:	11/01/2002
Flight Time:	12700 hours (Total, all aircraft), 35 hours (Total, this make and model), 10430 hours (Pilot In Command, all aircraft), 225 hours (Last 90 days, all aircraft), 75 hours (Last 30 days, all aircraft), 20 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Grumman	Registration:	N4994V
Model/Series:	F6F-5	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Experimental	Serial Number:	93879
Landing Gear Type:	Retractable - Tailwheel	Seats:	1
Date/Type of Last Inspection:	03/02/2002, Condition	Certified Max Gross Wt.:	12480 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	2075 Hours	Engine Manufacturer:	Pratt & Whitney
ELT:	Not installed	Engine Model/Series:	R-2800-79
Registered Owner:	Planes of Fame	Rated Power:	2000 hp
Operator:	Planes of Fame	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	EED, 983 ft msl	Distance from Accident Site:	41 Nautical Miles
Observation Time:	1556 MST	Direction from Accident Site:	330°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	12 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	350°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.09 inches Hg	Temperature/Dew Point:	20° C / 4° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Parker (P20)	Type of Flight Plan Filed:	None
Destination:	(P20)	Type of Clearance:	None
Departure Time:	1530 MST	Type of Airspace:	Class G

Airport Information

Airport:	Avi Suquilla Airport (P20)	Runway Surface Type:	Asphalt
Airport Elevation:	452 ft	Runway Surface Condition:	Dry
Runway Used:	19	IFR Approach:	None
Runway Length/Width:	4780 ft / 75 ft	VFR Approach/Landing:	Traffic Pattern

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	34.144167, -114.251111

Administrative Information

Investigator In Charge (IIC):	GEORGE E PETERSON	Report Date:	10/27/2005
Additional Participating Persons:	Bruce Smith; Federal Aviation Administration; Scottsdale, AZ		
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 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](#).