



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Albany, Texas	Accident Number:	FTW02FA211
Date & Time:	July 18, 2002, 09:30 Local	Registration:	N42BA
Aircraft:	North American AT-6A	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

One witness reported the airplane flew over between 500-700 feet agl, "wagged his wings" and departed the area; a second witness reported the airplane perform a barrel roll type maneuver 1-2 times, and then departed the area. Another witness observed the airplane flying at an estimated 300 feet agl. A witness, who was on an oil drilling rig located 0.4 nautical miles from the accident site, observed the airplane in level flight (approximately 500 feet agl) fly by the rig, climb, turn left in a 30 degree bank, and departed the area. Witnesses reported the prevailing winds were 5 to 10 miles per hour, skies clear with a few clouds, and the temperature approximately 82 degrees Fahrenheit. The airplane impacted a rocky creek bed bordered on one side by a 74-foot ravine. Mesquite trees, brush, grasses, and cactus, were found in the vicinity of the main wreckage and the surrounding ranch land. Deformation of the airplane and the physical evidence at the accident site was consistent with a near vertical left wing low attitude at the time of the accident. Impact forces destroyed the airplane. No evidence of an in-flight mechanical and/or flight control malfunction was found that would have rendered the airplane uncontrollable prior to the impact. In the previous 6 months, the 3,861.1-hour private pilot logged 39.5 hours (3.8 in the last 30 days) in the accident aircraft.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain aircraft control.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: MANEUVERING

Findings

1. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Findings

2. TERRAIN CONDITION - GROUND

Factual Information

HISTORY OF FLIGHT

On July 18, 2002, approximately 0930 central daylight time, a North American AT-6A, single-engine airplane N42BA, struck the terrain during an uncontrolled descent while maneuvering near Albany, Texas. The private pilot, who occupied the forward cockpit, received fatal injuries, and the airplane was destroyed. The airplane was owned and operated by the pilot. Visual meteorological conditions prevailed for the 14 Code of Federal Regulations Part 91 personal flight, and a flight plan was not filed. The local flight departed Albany Municipal Airport, approximately 0830.

A witness, located 2 miles south of the pilot's residence, reported to the NTSB investigator-in-charge (IIC) that approximately 0830 the airplane flew over, "wagged his wings" and then departed to the west. This witness estimated the airplane was between 500 and 700 feet above ground level (AGL). This witness was to meet the pilot at 1200; however, the pilot never made the appointment. A second witness, who was located 1 1/2 miles south of Albany, observed the airplane perform a barrel roll type maneuver 1-2 times approximately 0900, and then fly south. A witness near the river observed the airplane flying south at an estimated 300 feet agl. Another witness, who was on an oil drilling rig located at 32 degrees 54.38 minutes North; 099 degrees 30.15 minutes West (0.4 nautical miles on a measured magnetic heading of 136 degrees from the accident site), reported to the NTSB IIC that approximately 0900, the airplane flew from east to west in level flight (approximately 500 feet agl) by the rig, climbed, turned left in a 30 degree bank, and departed the area to the northeast.

According to the witnesses, the prevailing winds were from the south at 5 to 10 miles per hour. The weather was clear with a few clouds, and the temperature was approximately 82 degrees Fahrenheit.

At 0700, on July 19, 2002, search and rescue activities were initiated by the Civil Air Patrol (CAP). The Texas Department of Public Safety (DPS), Confederate Air Force, Shackelford County Sheriff's Department, and civilian pilots assisted in the search area (estimated at 945 square miles). Approximately 1830, the wreckage of the aircraft was located and rescue personnel responded to the accident site.

PERSONNEL INFORMATION

On March 20, 1986, the pilot was issued his private pilot certificate with the airplane single-engine land rating. The pilot was issued a third class medical certificate on April 12, 2002, with the limitation "Holder shall wear corrective lenses." On the pilot's last medical application, he reported a total pilot time of 3,778 hours of which 83 were in the previous 6 months. In the

private pilot's logbook, on July 13, 2002, his accumulated logged flight time was 3,861.1 hours. From November 22, 2001, through July 13, 2002, the pilot logged 47.3 hours (3.8 in last 30 days) in the accident aircraft.

AIRCRAFT INFORMATION

On June 15, 1993, N42BA, a North American AT-6A, serial number 88-9723, was issued an experimental special airworthiness certificate (category: exhibition/air racing). Registration to the current owner/pilot was dated July 21, 2000. The airplane was equipped with the Pratt & Whitney R-1340-AN1 (serial number 16104) reciprocating (9-cylinder) radial engine rated at 600 horsepower, driving a Hamilton Standard, model 12D40-305, 2-bladed propeller installed. The last major overhaul of the engine was performed in 1988. On July 2, 2001, the last condition inspection was performed. No evidence of uncorrected discrepancies was found in the maintenance records.

WRECKAGE AND IMPACT INFORMATION

The GPS location (26.4 nautical miles on the Abilene VORTAC 122 degree radial) of the accident site was 32 degrees 54.58 minutes North; 099 degrees 30.33 minutes West (0.4 nautical miles on a measured magnetic heading of 316 degrees from an oil drilling rig). The main wreckage came to rest upright, on a measured magnetic heading of 070 degrees, in a rocky creek bed bordered on the north by a 74-foot ravine. Deformation of the airplane and the physical evidence at the accident site was consistent with a near vertical, left wing low attitude, at the time of ground impact. Fragments of plexiglass and pieces of airplane skin continuing along the wreckage distribution path for 83 feet. The left wing leading edge was crushed aft approximately 11 inches, and approximately 5 1/2 feet of the outboard leading edge was bent upward 10 degrees and aft 5 degrees. The right wing leading edge was crushed aft approximately 11 inches.

The vertical stabilizer and elevators remained attached to the airframe. The integrity of the fuel system was compromised, and physical evidence of fuel and oil was found on the foliage located forward and to the left of the wreckage distribution path. The fuel selector handle and the cockpit indicator were found destroyed. The fuel valve was removed from the airplane, and a bench flow test revealed that the reserve tank was selected.

Flight control continuity was confirmed. The hand grip for the front cockpit flight control stick was found separated from the upper portion of the metal stick. Physical evidence found during an examination of the hand grip, the bolt holes, and the metal stick revealed that the deformation of the holes, scrapes on the metal stick, and shearing of the bolt was consistent with overload.

Impact deformation (compression) of the forward and aft cockpit precluded a determination of the cockpit settings for the throttle, mixture, propeller controls, flaps, landing gear, flight instruments, hydraulic, and electrical systems. The main landing gear were found in the wheel

wells, and physical scrapes found on the tires, wheel hubs, and gear struts were consistent with the main landing gear being in the retracted position. A visual examination found the flaps in the extended position; however, deformation of the hydraulic flap system precluded a determination of the flap position prior to the impact. The aft fuselage was bent forward and upward.

The engine and propeller were found resting in the initial impact crater (measuring 64 inches by 21 inches and 17 inches deep). Two pieces from the outboard portion of one propeller blade, fragments of the engine cylinders, several push rod covers, sections of the exhaust pipes, and engine accessory components were found in the ground scar. The two pieces of the propeller blade, found in the ground scar, exhibited leading edge gouges and chordwise striations. Gouges were found on both surfaces of the two pieces and the separated surfaces exhibited deformation consistent with overload. The propeller remained attached to the engine and the spinner was compressed around the hub. Both propeller blades exhibited torsional rotation, leading edge gouges, and chordwise striations. No debris was found in the engine oil screen, fuel system screen, or the carburetor fuel screen. Examination of the engine and engine accessories did not reveal any discrepancies that would have precluded operation of the engine prior to the accident.

MEDICAL AND PATHOLOGICAL INFORMATION

The autopsy was performed by the Tarrant County Medical Examiner, Fort Worth, Texas, on July 20, 2002. Specimens for toxicological test were taken from the pilot by the medical examiner.

The Federal Aviation Administration's (FAA) Civil Aeromedical Institute's (CAMI) Forensic and Accident research Center examined the specimens taken by the medical examiner. The pilot's toxicology showed no indication of performance impairing drugs at the time of the accident. According to CAMI, the toxicological tests were positive for postmortem alcohol and its metabolites.

ADDITIONAL INFORMATION

The emergency locator transmitter (ELT) was found in the "OFF" position with the unit connected to the external antenna. During a bench test, the ELT did not operate in the "ON" or "ARMED" position.

The airplane was released to the owner's representative.

Pilot Information

Certificate:	Private	Age:	52,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	April 12, 2002
Occupational Pilot:	No	Last Flight Review or Equivalent:	February 22, 2002
Flight Time:	3861 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	North American	Registration:	N42BA
Model/Series:	AT-6A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Experimental (Special)	Serial Number:	88-9723
Landing Gear Type:	Retractable - Tailwheel	Seats:	2
Date/Type of Last Inspection:	July 2, 2001 Condition	Certified Max Gross Wt.:	4189 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	6608.5 Hrs as of last inspection	Engine Manufacturer:	Pratt & Whitney
ELT:	Installed	Engine Model/Series:	R-1340-AN1
Registered Owner:	Robert E. Snyder	Rated Power:	600 Horsepower
Operator:	Robert E. Snyder	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	ABI, 1791 ft msl	Distance from Accident Site:	26 Nautical Miles
Observation Time:	09:52 Local	Direction from Accident Site:	122°
Lowest Cloud Condition:	Scattered / 2000 ft AGL	Visibility	10 miles
Lowest Ceiling:	Broken / 2600 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	13 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.11 inches Hg	Temperature/Dew Point:	26°C / 22°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Albany, TX (T23)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	08:30 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	32.91611,-99.509162

Administrative Information

Investigator In Charge (IIC): Roach, Joyce

Additional Participating Persons: Mark Wilborn; FAA FSDO; Fort Worth, TX

Original Publish Date: July 25, 2007

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=55253>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).