Aviation Investigation Final Report

Location:	SOMERSET, Pennsylvania	**Accident Number:**	IAD00LA072
Date & Time:	August 10, 2000, 15:00 Local	**Registration:**	N6101T
Aircraft:	Aero Commander 114-B	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane had been airborne for about 40 minutes when the engine stopped producing power while on final approach. The airplane landed short of the airport, and collided with the airport's perimeter fence. Examination of the airplane's fuel system revealed there was no fuel in the wing fuel tanks, the fuel pump, fuel flow divider or fuel filter, and there was no evidence of fuel spillage or leakage at the accident sight. When the fuel system was drained, about 1-quart of fuel was available in the airplane. Examination of the airplane flight log, pilot's logbook, and fuel history revealed that between August 2, 2000, and August 10, 2000, the airplane had been flown about 4.7 hours. The airplane was last serviced on August 4, 2000, with 7.63 gallons of fuel. No mechanical malfunctions were found.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Pilot's improper pre-flight planning, which resulted in a loss of engine power due to fuel exhaustion.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: APPROACH

Findings
1. (C) FLUID,FUEL - EXHAUSTION

2. (C) PREFLIGHT PLANNING/PREPARATION - IMPROPER - PILOT IN COMMAND

Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Factual Information

On August 10, 2000, at 1500 Eastern Daylight Time, an Aero Commander 114-B, N6101T, was substantially damaged during a forced landing while on the Localizer 24 approach into Somerset County Airport (2G9), Somerset, Pennsylvania. The certificated private pilot/owner sustained serious injuries. Visual meteorological conditions prevailed and no flight plan was filed for the flight conducted under 14 CFR Part 91.

The flight originated at 2G9 at 1410 with an unknown quantity of fuel. The purpose of the flight was for instrument approach training.

The pilot dictated a statement that was prepared by his son. According to the statement, he said:

"After approximately 40 minutes of flight the aircraft was on a 5 mile final on the 24 Localizer at the Stoystown NDB. [He] changed the fuel selector valve from the right tank to both, the engine started to shut down, turning the fuel selector valve, started the engine to fire. On approximately one mile final, engine shut off completely. Aircraft landed near ball field on top of airport fence."

In a written statement, a witness said:

"I was sitting in kitchen doing paperwork and heard a louder than normal engine then the engine cut off. I ran out of the house and saw the aircraft at an altitude normal to most airplanes landing at the airport. I then heard the engine sputter, then a loud pop, then the engine stopped. I lost sight of the airplane behind the building. There were a couple of backfires through the carburetor."

In a written statement, a second witness said:

"I saw the plane just clear the power line. Once it cleared the power line it almost just fell out of the air and hit the ground and bounced and it snapped part of the landing gear off and it skidded across the driveway and slammed into the fence and stopped."

On August 11, 2000, an inspector with the Federal Aviation Administration (FAA) interviewed the pilot. According to the inspector's record of conversation:

"On August 10, 2000, at approximately 1400 hours, [the pilot], departed the Somerset County Airport (2G9), Somerset, PA, on a local IFR training flight in visual meteorological conditions. After a preflight of his aircraft, he took off from the airport and started his flight training. He accomplished one localizer approach and was beginning a second localizer approach when at

approximately five miles from the airport, over Stoystown radio beacon; he stated the engine began to run rough. At this point in time, the pilot said he had been airborne for approximately 40 minutes. He said he switched the tanks but could not keep the engine running. The engine stopped and aircraft descended until it impacted the ground in a schoolyard adjacent to the airport property at 1450 hours."

Two (FAA) inspectors performed an on-scene examination on August 11, 2000. According to an inspector, the airplane contacted the ground and slid about 65 feet before impacting the airport perimeter fence.

Examination of the airplane revealed that the aircraft came to rest upright, tangled in the airport perimeter fence. The right main gear had sheared off the airplane, and the left main and nose gear had collapsed. A large area of damage was noted on the leading edge of the left wing about 8-feet from the wing root. The fuel cell was penetrated. However, there was no evidence of fuel leakage from the wing or fuel present in the wing. The right wing, lower tail area, and fuselage were also damaged. The propeller blades were bent aft. Control continuity was established for all flight control surfaces.

Examination of the fuel system on-site revealed there was no fuel in the fuel filter, fuel pump, or the flow divider. Visual examination of the fuel tanks revealed there was no fuel inside either tank.

The airplane was moved to a hanger where further examination of the airplane's fuel system was conducted. The examination revealed there was about one quart of fuel available in the airplane.

The pilot reported that during his pre-flight inspection, the left fuel tank was about 1-inch below the tab, and 1/2-inch below the tab on the right fuel tank. The pilot estimated there was thirty gallons of fuel onboard the airplane prior to take-off.

The airplane had a total fuel capacity of 70 gallons, of which 68 gallons were useable.

The pilot and his son purchased the airplane on July 31, 2000.

The pilot kept an airplane flight log. Examination of the flight log and fueling history of the airplane revealed that between August 2, 2000, and August 10, 2000, the airplane had flown about 4.7 hours.

The airplane was last serviced with fuel on August 4, 2000, with 7.63 gallons of 100 LL fuel.

Examination of the pilot's logbook revealed that he had 280 total flight hours, of which 11 hours were in the accident airplane. Between July 31, 2000, and August 2, 2000, the pilot received 6 hours of flight training in the airplane by an FAA certified flight instructor. The pilot received an endorsement for pilot-in-command in high performance aircraft on August 2, 2000.

Examination of the airplane revealed there were no mechanical malfunctions.

Pilot Information

Certificate:	Private	**Age:**	60,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	November 24, 1998
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	280 hours (Total, all aircraft), 11 hours (Total, this make and model), 170 hours (Pilot In Command, all aircraft), 58 hours (Last 90 days, all aircraft), 31 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Aero Commander	**Registration:**	N6101T
Model/Series:	114-B 114-B	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	14631
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	July 29, 2000 Annual	**Certified Max Gross Wt.:**	3260 lbs
Time Since Last Inspection:	20 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	666 Hrs	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	IO-540-THB5
Registered Owner:	JON AIR, INC	**Rated Power:**	260 Horsepower
Operator:	JOHN W. BENEFORD	**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	JST	**Distance from Accident Site:**	
Observation Time:	14:48 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Unknown	**Visibility**	12 miles
Lowest Ceiling:	Broken / 3500 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	8 knots / None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	270°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	23°C / 14°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(2G9)	**Type of Flight Plan Filed:**	None
Destination:	(2G9)	**Type of Clearance:**	IFR
Departure Time:	14:10 Local	**Type of Airspace:**	Class D

Airport Information

Airport:	SOMERSET COUNTY 2G9	**Runway Surface Type:**	Asphalt
Airport Elevation:	2200 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	24	**IFR Approach:**	Localizer only
Runway Length/Width:	4697 ft / 75 ft	**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Serious	**Latitude, Longitude:**	40.000614,-79.070106(est)

Administrative Information

Investigator In Charge (IIC):	Yeager, Leah
Additional Participating Persons:	FRED REEB; ALLEGHENY , PA
Original Publish Date:	December 18, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=51176