Aviation Investigation Final Report

Location:	Sequim, Washington	**Accident Number:**	SEA08FA013
Date & Time:	October 28, 2007, 13:40 Local	**Registration:**	N27175
Aircraft:	Grumman American AA-5A	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

After landing short of the runway threshold and proceeding off the left side of the runway into the grass median during the landing roll, the pilot initiated an aborted landing by adding full power. The airplane was observed about 10 feet above the ground in a steep nose up attitude prior to impacting a tree with its left wing. The airplane subsequently struck two more trees with its left wing before entering a spin to the left, descending uncontrolled, and partially impacting a private residence before coming to rest in the property's backyard. A post crash fire consumed the airplane. No preimpact anomalies were noted with the airplane, which would have precluded normal operation.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's misjudged distance and altitude that led to an undershoot; his failure to maintain directional control during the landing roll; and his failure to maintain clearance from trees during an attempted aborted landing.

Findings

Occurrence #1: UNDERSHOOT
Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings
1. (C) DISTANCE/ALTITUDE - MISJUDGED - PILOT IN COMMAND

2. (C) PROPER TOUCHDOWN POINT - NOT ATTAINED - PILOT IN COMMAND

Occurrence #2: LOSS OF CONTROL - ON GROUND/WATER
Phase of Operation: LANDING - ROLL

Findings
3. (C) DIRECTIONAL CONTROL - NOT MAINTAINED - PILOT IN COMMAND
4. (C) GROUND LOOP/SWERVE - NOT CORRECTED - PILOT IN COMMAND
5. ABORTED LANDING - INITIATED - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: LANDING - ABORTED

Findings
6. OBJECT - TREE(S)
7. (C) CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND

Factual Information

HISTORY OF FLIGHT

On October 28, 2007, approximately 1340 Pacific daylight time, a Grumman American AA-5A airplane, N27175, was destroyed after impacting terrain following a loss of control during an aborted landing near the Diamond Point Airstrip (2AW1), Sequim, Washington. The pilot, who was also the registered owner of the airplane, was killed. Visual meteorological conditions prevailed for the personal flight, which was conducted in accordance with 14 Code of Federal Regulations Part 91, and a flight plan was not filed. The flight had departed the Port Townsend Airport (0S9), Port Townsend, Washington, about 1315, with its destination being 2WA1.

Three witnesses to the accident submitted statements to the NTSB investigator-in-charge (IIC). Witness #1, who was located about 700 feet east of the approach end of Runway 11, the runway of intended landing, observed the accident airplane enter a left downwind, then turn from base leg to final. The witness stated that his attention was diverted for a moment, then observed the airplane rolling out about 500 feet on the grassy area north of the runway. The witness revealed that during the rollout "...he [the pilot] added power and climbed back into the air, in what appeared to be a touch-and-go." The witness further revealed that moments later the airplane impacted a tree about 10 to 20 feet above ground level (agl), but continued to fly with an increased pitch. The witness reported he then observed the airplane turn to the left as its nose continued to rise with its wings "wobbling" as it "struggled" to fly. The witness further reported observing the airplane in a shallow left turn to the north, when the left wing struck the top of a second tree before descending behind trees and houses. The witness reported that after observing a column of smoke, he responded to the accident site where he observed the airplane engulfed in flames.

Witness #2, an ex-Naval Aviation Safety Officer who was located inside his airport residence at the time of the accident, reported hearing the transmission from an airplane coming in from the east to enter the [traffic] pattern for Runway 11. The witness stated that several minutes later he heard an engine going to maximum rpm. "I looked out my window and saw a red and white Grumman aircraft several feet (about 10 feet) in the air on an easterly course at a very high angle of attack. The aircraft drifted further to its left and struck a willow tree with the left wing." The witness reported observing the airplane then roll back to its right, followed by the nose pitching up further to about 30 degrees, at an altitude which he estimated to be about 35 feet agl; the airplane then departed controlled flight to the left. The witness stated that he then observed the airplane strike the top of a small fir tree with its left wing about 4 feet from the top, followed by the airplane's nose pitching down and its roll rate increasing. The witness estimated that at this time the airplane was in a 45-degree, left wing down attitude, with maximum power. The witness reported, "At the point the aircraft had passed through the trees, it appeared to enter into a spin to the left. The nose pitched down abruptly as the airplane

passed from my view behind [a house]. The nose appeared to be approximately 60 to 70 degrees nose-low as it passed from sight."

Witness #3 reported seeing the accident airplane approach from the west, landing to the east in a "normal" approach profile. The witness stated that after the airplane landed it proceeded on the grass about 500 feet, then "...the engine power came up and lifted off the grass." The witness reported that the airplane "...was flying real close to the trees, [and] sounded like it hit a tree across from my hangar. Then it proceeded at a steep angle of attack [before] rolling over to a 90-degree bank," after which the witness lost site of the airplane.

A family member reported to the IIC that earlier in the day the pilot had flown from 2WA1 to the Renton Municipal Airport (RNT), Renton, Washington, for a luncheon date with family members. At the conclusion of the luncheon a family member drove the pilot back to RNT, where the pilot departed for OS9 to fuel the airplane prior to flying to 2WA1. The family member revealed that this was to be the pilot's last flight before departing for overseas for a one-year employment contract.

The airplane wreckage was subsequently recovered to a secure location where a detailed examination of the airframe and engine was conducted under the supervision of the IIC.

PERSONNEL INFORMATION

The pilot, age 47, held a private pilot certificate with a single engine land rating that was issued May 11, 1994. The pilot possessed a third-class medical certificate that was issued on January 6, 2006, with the restriction that he possess glasses for near vision. The pilot also possessed aircraft maintenance certification for airframe and powerplant. Personal flight records indicated that the pilot had accumulated 900 total flight hours, with 581 hours in make and model. The pilot had flown 20 hours in the last 90 days, 15 hours in the last 30 days, and 8 hours in the preceding 30 days prior to the accident. The pilot's most recent flight review was completed on October 5, 2006.

AIRCRAFT INFORMATION

The airplane was a 1979-model Grumman AA-5A, serial number AA5A0898. The airplane was powered by a Textron Lycoming O-320-A4K engine, serial number L-28007-36A. Aircraft and engine maintenance logbooks were not located, although maintenance records completed by the pilot indicated a total airframe time of 323.22 hours, as of September 13, 2007.

Maintenance records provided by a local aviation maintenance facility revealed that an annual inspection was completed on April 24, 2007. Maintenance records generated as a result of the annual inspection revealed an engine total time of 3,263.9 hours.

METEOROLOGICAL INFORMATION

At 1353, the weather reporting facility at the William R. Fairchild International Airport (CLM), Port Angeles, Washington, located 17 nautical miles west of the accident site, reported wind calm, visibility 10 miles, sky clear, temperature 11 degrees C, dew point 6 degrees C, with an altimeter setting of 30.21 inches of Mercury.

WRECKAGE AND IMPACT INFORMATION

An examination of the accident site, as well as the runway environment and peripheral areas, revealed that the airplane's initial touchdown point was 15 feet short and slightly left of the approach end of Runway 11. The airplane subsequently traveled 210 feet before exiting the runway at an angle of about 20 degrees. After exiting the runway the airplane proceeded another 560 feet, at which point the airplane became airborne. After becoming airborne the airplane traveled another 227 feet before impacting a tree about 12 feet high with its left wing, then proceeded airborne for another 48 feet before striking a second tree about 30 feet high, again with its left wing. The airplane continued on an easterly heading for another 102 feet prior to striking a third tree about 60 feet high with its left wing. The airplane subsequently descended into and partially impacted the east side of the roof of a private residence before impacting the ground in a steep, nose low attitude on the east side of the home. The airplane then slid down the property's side yard for about 51 feet, coming to rest inverted in the northeast corner of the home's backyard on a magnetic heading of 015 degrees. A postcrash fire consumed the airplane.

Both wings, the empennage and the aft fuselage had been separated from the main cabin/cockpit area; the cabin and cockpit sections of the airplane were destroyed. The airplane's engine remained partially attached to the airframe and was found resting in an upright position. With the exception of the outboard section of each wing, the airplane had been consumed by fire. Extensive thermal damage precluded control continuity from being established; all control torque tubes were missing and presumed to have melted.

MEDICAL AND PATHOLOGICAL INFORMATION

The Clallam County Coroner's office of Port Angeles, Washington, performed an autopsy on the pilot on October 31, 2007. The cause of death was attributed to "blunt trauma to the trunk."

The FAA's Civil Aeromedical Institute (CAMI) in Oklahoma City, Oklahoma, performed toxicology tests on the pilot. According to CAMI's report, carbon monoxide, cyanide, volatiles, and drugs were tested, and the results were negative.

TESTS AND RESEARCH

A subsequent examination of the airframe and engine failed to reveal any pre-impact anomalies, which would have precluded normal operation.

Pilot Information

Certificate:	Private	**Age:**	57,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:**	Yes
Medical Certification:	Class 3 With waivers/limitations	**Last FAA Medical Exam:**	January 1, 2006
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	October 1, 2006
Flight Time:	900 hours (Total, all aircraft), 581 hours (Total, this make and model), 822 hours (Pilot In Command, all aircraft), 20 hours (Last 90 days, all aircraft), 8 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Grumman American	**Registration:**	N27175
Model/Series:	AA-5A	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal; Utility	**Serial Number:**	AA5A0898
Landing Gear Type:	Tricycle	**Seats:**	2
Date/Type of Last Inspection:	April 1, 2007 Annual	**Certified Max Gross Wt.:**	2400 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	334 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	O-360
Registered Owner:	Samuel T. Evans	**Rated Power:**	180 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	CLM,291 ft msl	**Distance from Accident Site:**	17 Nautical Miles
Observation Time:	13:53 Local	**Direction from Accident Site:**	270°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.2 inches Hg	**Temperature/Dew Point:**	11°C / 6°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Port Townsend, WA (0S9)	**Type of Flight Plan Filed:**	None
Destination:	Sequim, WA (2WA1)	**Type of Clearance:**	None
Departure Time:	13:15 Local	**Type of Airspace:**	

Airport Information

Airport:	Diamond Point Airstrip 2WA1	**Runway Surface Type:**	Asphalt
Airport Elevation:	262 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	11	**IFR Approach:**	None
Runway Length/Width:	2335 ft / 24 ft	**VFR Approach/Landing:**	Go around;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	N/A	**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	48.093055,-122.926391

Administrative Information

Investigator In Charge (IIC):	Little, Thomas
Additional Participating Persons:	Patrick Paden; Federal Aviation Administration; Seattle, WA Troy Helgeson; Lycoming; Williamsport, PA
Original Publish Date:	November 10, 2008
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=66968