Aviation Investigation Final Report

Location:	WAYTON, Arkansas	**Accident Number:**	FTW99LA219
Date & Time:	August 12, 1999, 15:00 Local	**Registration:**	N9775U
Aircraft:	Grumman American AA-5A	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane contacted trees after encountering a wind gust during a go-around. The pilot stated the approach to the 1,900 foot turf runway was very turbulent, so he added approximately 8 knots to his approach speed. During the landing flare, he said the airplane began to float, and he initiated a go-around. The pilot stated the engine response was 'normal.' Subsequently, a strong gust of wind hit the airplane, and the airplane contacted trees and terrain. Seven minutes before the accident, a weather observation facility located 45 miles northwest of the accident site, reported winds from 210 degrees at 10 knots, temperature 102 degrees Fahrenheit, and altimeter setting 29.82 inches of mercury. The density altitude at the accident site was calculated to be 4,529 feet.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadequate compensation for wind conditions, and his failure to maintain clearance with trees during a go-around. Factors were the gusty wind condition, and the high density altitude. Factors associated with the accident were gusty winds, and a high density altitude.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings

1. (F) WEATHER CONDITION - GUSTS
2. (F) WEATHER CONDITION - HIGH DENSITY ALTITUDE
3. (C) COMPENSATION FOR WIND CONDITIONS - INADEQUATE - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: GO-AROUND (VFR)

Findings
4. OBJECT - TREE(S)
5. (C) CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND

Factual Information

On August 12, 1999, at 1500 central daylight time, a Grumman American AA-5A airplane, N9775U, was substantially damaged during a go-around at Taylor's Airstrip, near Wayton, Arkansas. The instrument rated commercial pilot, registered owner and sole occupant of the airplane, sustained serious injuries. Visual meteorological conditions prevailed for the 14 Code of Federal Regulations Part 91 personal flight and no flight plan was filed. The local flight originated from the Boone County Airport, Harrison, Arkansas, at 1330.

According to the 7,500-hour pilot, he set up to land on runway 9. He noted that the wind was a direct cross-wind from 180 degrees. He stated that the approach was "very turbulent," so he added "approximately 8 knots to his approach speed." During the landing flare on the 1,900 foot turf runway, the airplane began to float and he initiated a go-around. While passing over a road at the departure end of the runway, "a strong gust of wind hit the plane from the south and moved the [air]plane approximately 25 feet left (north) and about 10 feet down." The pilot then observed the tree tops nearing the airplane and "applied some elevator, but the airplane continued in a level flight plane." Subsequently, the airplane contacted the trees and came to rest 500 feet east of the departure end of the runway, on a measured magnetic heading of 220 degrees, upright, in a wooded area. The pilot initially reported that the engine response during the go-around was "less than what it should have been," and subsequently, reported that the "engine responded normal."

At 1453, the weather observation facility at the Northwest Arkansas Regional Airport (located 45 miles northwest of the accident site) reported winds from 210 degrees at 10 knots, temperature 102 degrees Fahrenheit, and altimeter setting 29.82 inches of mercury. The investigator-in-charge calculated the density altitude at 4,529 feet.

An FAA inspector examined the airplane at the accident site and reported that the outboard 1/3 of each wing was bent upwards and the left elevator was structurally damaged. The engine mount was damaged and the firewall was displaced. The left wing fuel tank was compromised, and fuel was present in the right wing fuel tank. He added that fuel was observed at the site and the "engine rotated freely."

The carburetor (m/n MA-4SPA) was examined at Precision Airmotive Corporation, Everett, Washington, under the supervision of an NTSB investigator. The carburetor was placed on a test bench and a flow check was performed. The examination and flow check revealed no anomalies that would have prevented normal operation of the carburetor at the time of the accident.

Pilot Information

Certificate:	Commercial	**Age:**	67,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	May 5, 1999
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	7500 hours (Total, all aircraft), 91 hours (Total, this make and model), 3590 hours (Pilot In Command, all aircraft), 20 hours (Last 90 days, all aircraft), 12 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Grumman American	**Registration:**	N9775U
Model/Series:	AA-5A AA-5A	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	AA5A0175
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	August 12, 1999 Annual	**Certified Max Gross Wt.:**	2200 lbs
Time Since Last Inspection:	2 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	1894 Hrs	**Engine Manufacturer:**	Lycoming
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	O-320-E2G
Registered Owner:	JIMMY C. KATES	**Rated Power:**	150 Horsepower
Operator:		**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:	XNA ,1287 ft msl	**Distance from Accident Site:**	45 Nautical Miles
Observation Time:	14:53 Local	**Direction from Accident Site:**	315°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	10 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	210°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	39°C / 17°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	HARRISON , AR (HRO)	**Type of Flight Plan Filed:**	None
Destination:	(0AR3)	**Type of Clearance:**	
Departure Time:	13:15 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	TAYLORS AIRSTRIP 0AR3	**Runway Surface Type:**	Grass/turf
Airport Elevation:	2160 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	9	**IFR Approach:**	None
Runway Length/Width:	1900 ft / 50 ft	**VFR Approach/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:**	36.00056,-93.179244(est)

Administrative Information

Investigator In Charge (IIC):	Snyder, Georgia
Additional Participating Persons:	CURTIS L WEEDMAN; LITTLE ROCK , AR
Original Publish Date:	June 22, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=47042