Aviation Investigation Final Report

Location:	MCCALLA, Alabama	**Accident Number:**	MIA98FA162
Date & Time:	May 14, 1998, 12:15 Local	**Registration:**	N96750
Aircraft:	Taylorcraft BC-12D	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Fatal, 1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot was doing a go-around when the airplane suddenly nosed down from an altitude of about 100 feet above the ground, and impacted the terrain in a nearly vertical attitude. The surviving right seat passenger stated he remembers little about the incident, but felt the loss of control was not a malfunction of the airplane. Post crash examination of the engine, airframe, and flight controls confirmed this. Postmortem examination and toxicology testing of specimens from the pilot showed no findings that could be considered causal to the accident.

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 airspeed, which resulted in a stall.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: GO-AROUND (VFR)

Findings
1. (C) AIRSPEED - NOT MAINTAINED - PILOT IN COMMAND
2. STALL - INADVERTENT - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings
3. TERRAIN CONDITION - GRASS

Factual Information

HISTORY OF FLIGHT

On May 14, 1998, about 1215 central daylight time, a 1947 Taylorcraft BC12-D, N96750, registered to a private individual, operating as a 14 CFR Part 91 personal flight, crashed while attempting a go-around from a balked landing at a private airstrip near McCalla, Alabama. Visual meteorological conditions prevailed and no flight plan was filed. The private-rated pilot sustained fatal injuries, and a private-rated passenger sustained serious injuries. The airplane received substantial damage. The flight departed the same fly-in community airstrip 30 to 45 minutes before the accident.

The survivor, occupying the right seat, stated that during landing flare the right wing lifted, causing a left drift toward the higher grass bordering the runway. The survivor didn't become concerned until he heard the pilot say, "We got a problem, little brother". Additionally, the pilot muttered, "what's the matter with this thing", added power, and commenced a climbing left turn. The survivor said he remembered seeing indicated airspeed between 55 and 60 mph. He did not think the pilot's mutterings were a result of problems with engine power or aircraft control. He stated that from his right seat view, during the go-around, looking straight ahead through the windshield, he saw nothing but blue sky followed suddenly by seeing only ground. At no time did he consider taking the controls because the departure from what he perceived to be a routine go-around happened in such quick succession.

The pilot's brother-in-law, also a pilot/builder and his next door neighbor on the airstrip, happened to be watching the approach and landing. He said the approach looked normal until the airplane was 5 to 10 feet above the grass runway. At that time he saw the airplane drift "wobbly" left of runway centerline, heard power being applied as in a go-around maneuver, saw the airplane barely clear some trees left of the runway, and then saw the nose pitch up, then straight down into a vertical dive until impact. He was careful to add that the transition from a climbing go-around to a nose-down attitude appeared not to have been an abrupt maneuver as in a stall or snap-roll, but a zero "g" or push-over type of maneuver.

According to the brother-in-law, the pilot had a habit of "slipping" the airplane on final approach to a landing because he liked to stay high until the last possible instant due to the proximity of a golf course fairway to the runway threshold. The brother-in-law stated the pilot was particularly artful at slipping the airplane to good landings, and had never seen the pilot make a go-around.

PERSONNEL INFORMATION

The pilot's yard abutted the runway involved as part of a fly-in community known as

Coyote Aerodrome, and he'd lived adjacent to and flown off the runway since 1987. The pilot's son-in-law, a practicing oncologist in Dothan, Alabama, was consulted about the potential for some type of physical incapacitation. The son-in-law, as well as the medical examiner for the accident, had no reason to consider any type of physical impairment as causal. The pilot's personal physician was also consulted and could not provide any medical information that could be considered causal to the accident. The pilot's personal logbook was not recovered. On his application form for his airman's medical on January 11, 1996, he stated his total flight time as 550 hours. The pilot owned another airplane, a Piper PA-12, also hangared on the field for 5 to 6 years.

AIRCRAFT INFORMATION

The airplane had recently undergone an annual inspection on May 12, 1998, in anticipation of a sale. The pilot had owned the airplane since he had recovered the fabric, about 4 years previous. Additional information is contained in this report under "Aircraft Information".

METEOROLOGICAL INFORMATION

Visual meteorological conditions prevailed during the time of the accident. The eyewitness stated there were no unusual local wind conditions at the time of the accident. Additional meteorological information is contained in this report under "Weather Information".

WRECKAGE AND IMPACT INFORMATION

The point of impact was about 750 feet left of the runway centerline and about midspan of the 1500-foot runway in a grassy area adjacent to a residential driveway. It's orientation was so close to a stand of residential trees, that the angle of dive had to be almost vertical. The airplane impacted slightly right wing first, and both occupants were displaced forward and to the right. A full 360-degree propeller signature had been scalped in the grass. The crush line extended rearward to the wing leading edge, and the right wing leading edge had been hammered flat. The engine and propeller had displaced rearward such that the propeller was in the same plane as the wing leading edges. Impact striations on the metal propeller indicate the engine was developing less than full power at impact. One blade of the propeller was relatively straight, and the other was bent uniformly aft about 30 degrees. The propeller spinner was uniformly crushed, showed rotational scarring, and had sod packed in the crush folds. The left control yoke was deformed, but attached and the right had been broken from its mounting shaft. The fuselage, aft of the wing trailing edges, was intact and received little damage. The wing fuel tank was empty, and the fuselage tank, the one being used at the time, had been compromised. The brother-in-law, first on the scene, estimated 5 to 6 gallons leaked out. No postcrash fire ensued.

Control path integrity for ailerons was confirmed by movement of cockpit controls. Because emergency medical personnel had cut through the cockpit floor, including cables and

tubing in their rescue work, control path continuity for rudder and elevator had to be accomplished by matching symmetrical halves of severed cable, and manually exercising the flight control. The engine/cowl/propeller assembly was cut away from the mounts and taken to an adjacent hangar for examination. The engine was rotated by the propeller, and drive train integrity was established. The spark plugs were removed and showed normal coloring. Compression checked satisfactorily for the four cylinders. The magnetos were removed, and showed good sparking on rotation. The carburetor had been torn from its mount at impact, but examination revealed fuel in the bowl and a very small amount of water was detected. The induction and exhaust systems were unobstructed.

MEDICAL AND PATHOLOGICAL INFORMATION

Postmortem examination of the pilot was performed by Kenneth E. Warner, M.D., State Medical Examiner, Alabama Department of Forensic Sciences, Tuscaloosa, Alabama. The cause of death was reported as multiple blunt trauma injuries. Severe atherosclerosis of left and right coronary arteries and aorta were noted, as well as moderate-to-severe anthracosis. Toxicological tests were conducted at the Federal Aviation Administration Research Laboratory, Oklahoma City, Oklahoma. The tests were negative for ethanol, carbon monoxide, basic, acidic, and neutral drugs.

ADDITIONAL INFORMATION

The aircraft wreckage, less those items listed on the Release of Aircraft Wreckage, NTSB Form 6120.15, was released to the pilot's estate on May 15, 1998, and signed for by Mr. H. C. Leydecker, brother-in-law. Those items retained by the NTSB and FAA for further examination were returned to the pilot's family by FAA personnel on May 20, 1998. A receipt for those returned items was signed by the pilot's family.

Pilot Information

Certificate:	Private	**Age:**	71,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 3 Expired	**Last FAA Medical Exam:**	January 11, 1996
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	650 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Taylorcraft	**Registration:**	N96750
Model/Series:	BC-12D BC-12D	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	9050
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	May 12, 1998 Annual	**Certified Max Gross Wt.:**	1200 lbs
Time Since Last Inspection:	2 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	1524 Hrs	**Engine Manufacturer:**	Continental
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	A-65-8
Registered Owner:	MANLEY T. TUBBS	**Rated Power:**	65 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:	BHM ,644 ft msl	**Distance from Accident Site:**	22 Nautical Miles
Observation Time:	12:50 Local	**Direction from Accident Site:**	44°
Lowest Cloud Condition:	Scattered / 6000 ft AGL	**Visibility**	9 miles
Lowest Ceiling:	Broken / 30000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	200°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	34°C / 18°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	11:30 Local	**Type of Airspace:**	Class E

Airport Information

Airport:	COYOTE AIRDROME	**Runway Surface Type:**	Grass/turf
Airport Elevation:	675 ft msl	**Runway Surface Condition:**	Dry;Soft
Runway Used:	22	**IFR Approach:**	None
Runway Length/Width:	1500 ft / 75 ft	**VFR Approach/Landing:**	Go around

Wreckage and Impact Information

Crew Injuries:	1 Fatal, 1 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal, 1 Serious	**Latitude, Longitude:**	33.280952,-87.11985(est)

Administrative Information

Investigator In Charge (IIC):	Stone, Alan
Additional Participating Persons:	TOM F MULLIN; BIRMINGHAM , AL
Original Publish Date:	February 15, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=38398