



Aviation Investigation Final Report

Location:	HOUGHTON, Michigan	Accident Number:	CHI93FA247
Date & Time:	July 8, 1993, 21:10 Local	Registration:	N6279A
Aircraft:	PIPER PA-38-112	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal, 1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE SINGLE-ENGINE AIRPLANE WAS OBSERVED FLYING LOW OVER THE PILOT'S FAMILY HOME. DURING THE SECOND LOW ALTITUDE FLY-BY, A WITNESS HEARD THE ENGINE SPUTTER, FOLLOWED BY A HIGH RPM INCREASE AND THEN WHAT HE DESCRIBED AS AN ENGINE STALL. THE WITNESS STATED THE AIRPLANE BEGAN A DESCENT TOWARD THE GROUND SIMILAR TO ONE THAT A CROP DUSTER WOULD PERFORM. HE OBSERVED THE AIRPLANE'S LEFT WING STRIKE THE GROUND. THE ON-SCENE INVESTIGATION REVEALED AIRPLANE SYSTEM AND ENGINE MECHANICAL CONTINUITY.

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 SUFFICIENT AIRSPEED WHILE MANEUVERING WHICH RESULTED IN A STALL/MUSH. INTENTIONAL BUZZING WAS A FACTOR.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: MANEUVERING

Findings

1. (F) BUZZING - INTENTIONAL - PILOT IN COMMAND
2. (C) AIRSPEED - NOT MAINTAINED - PILOT IN COMMAND
3. STALL/MUSH - INADVERTENT - PILOT IN COMMAND

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

Factual Information

HISTORY OF FLIGHT

On July 8, 1993, at 2110 eastern daylight time (EDT), a Piper PA-38-112, N6279A, registered to Charles H. Ohtonen of Fairbanks, Alaska, and piloted by an airline transport certificated pilot, was destroyed during a collision with the ground. Visual meteorological conditions prevailed at the time of the accident. The 14 CFR Part 91 flight had not filed a flight plan. The pilot was fatally injured and the passenger received serious injuries. The flight departed Houghton, Michigan, at 1915 EDT.

There was one witness to the accident. The witnesses location at the time of the accident was next to the accident pilot's family home. He stated he observed N6279A perform one circle near the home followed by a lower approach to the home during the second fly-by. He reported the accident airplane approached his location from the southwest and turned to the northwest during its descent.

The witness stated he heard the engine sputter followed by a high RPM increase sound and then an engine stall. He said the airplane began a descent, "My first thoughts were that he was trying to make a low level approach to the field, similar to ones made by crop dusters." He stated the airplane did not level out, and observed the airplane's left wing strike the ground.

PERSONNEL INFORMATION

The registered owner of the airplane was observed sitting in the left seat at the accident scene. According to his logbooks, he had accumulated 763 hours of total flight time in a Piper PA-38-112 (PA-38). Of the total time in the airplane, 758 hours were as pilot-in-command (solo). The pilot's number three logbook showed his last flight in a PA-38, prior to the accident flight, was December 30, 1992, with a duration of 2.1 hours.

Logbook number three showed that he had flown a PA-38 on 4 other flights in October, 1992, which totaled 10.3 hours of flight time. Prior to the October, 1992 flights in the PA-38, the logbook showed he had flown the airplane on September 23, 1991 for 2.6 hours.

The pilot's first flight in a PA-38 was logged as May 5, 1989. The logbook entry remark's section for this flight had the following statement: "Afc familiarization, ok solo". This entry was followed by twenty one others up to an entry which shows the pilot successfully passed his private pilot flight test in the PA-38. Of the twenty one entries four are listed as dual instruction. Three of the four dual entries have the remark's section completed. In each of the three filled out sections the same entry is made: "PVT pilot prep". The remainder of the logbook entries associated with the PA-38 do not have the remark's section filled out relative

to any specific flight maneuvers having been performed in the airplane.

The second occupant in N6279A was a pilot. According to Federal Aviation Administration (FAA) records, this pilot reported a total flight time of 264 hours on his second class medical certificate application. The medical certificate was issued on March 29, 1993. The FAA records stated the pilot possessed a private pilot certificate, single-engine land with an instrument rating. The pilot's certificate was issued on August 3, 1992.

WRECKAGE AND IMPACT INFORMATION

N6279A had struck a tree on the south edge of the field it was found in. The tree had freshly separated branches approximately 30 feet above the ground. The first scar northwest of the tree was located approximately 45 feet from it. The scar was about five inches deep and twenty inches in diameter. Pieces of red glass fragments were found in and around the ground scar. The magnetic direction between the tree and first ground scar was 320 degrees.

The airplane was located 79 feet from the first ground scar on an approximate magnetic heading of 335 degrees. Two additional ground scars were located between the tree and N6279A's final resting place.

The second ground scar was approximately ten feet from the first scar. It was about five feet in length, varying in width from six to ten inches, and approximately three inches deep. The third ground scar was approximately 25 feet from the second scar.

It was six feet long by five feet in width, varying in depth between four to six inches in depth. The nose gear assembly was found in the middle scar. A portion of the left wing tip and propeller and spinner were located approximately 25 feet west of this scar.

The left wing was bent upward approximately 20 degrees at the mid-span location. The empennage and tailcone assembly it was attached to had rotated toward the left side of the airplane approximately 45 degrees from the vertical and about 20 degrees forward of its normal position. The nose and left main landing gear had separated from the airframe. The right main landing gear leg was collapsed underneath the right wing. The forward fuselage, adjacent to the cockpit's left side and firewall, was collapsed aft and upward. The cockpit floor was crushed upward and was approximately 20 inches below the top of the instrument panel glare shield.

Flight control continuity was established. The aileron control yoke sprocket chain was attached between the two sprockets on the yoke shafts. The aileron drive shaft was separated from the control yoke and the yoke mount was separated in tension from its mount in the fuselage/wing center section. The elevator bungy springs were attached to the elevator and stabilizer mount. The elevator stops were intact and were devoid of deformation.

The throttle was observed one inch aft of the "Full" in position. The mixture control was 1/2

inch aft of the "Full" rich position. The carburetor heat handle was in the "HOT" position (full-out). Power plant control continuity was observed. The magnetos were switched off at the scene. The flap handle was found in the retracted position. The left and right flaps were in the extended position and were able to be moved into the retracted position without resistance.

The gascolator bowl was separated from its mount and did not have debris on its inner surface. The electric fuel pump was removed from the airframe, a substance similar in smell and feel to 100 low lead avgas exited the outlet. The carburetor was removed and disassembled. A fluid similar to that found in the fuel pump was observed in the float bowl. Oil color was brownish green in color and did not have reflective particles in the sample removed from the filter and rocker arm shaft mount well.

Bluish colored sparks were observed from the magneto spark leads when the magnetos were rotated. The magnetos drives rotated when the crankshaft was turned. Compression was established on all four cylinders through the use of a finger compression test. The top spark plugs were examined and all were grey in color, the electrodes were not contaminated with debris. The heat muff and muffler were crushed against the oil pump. The air filter was observed to be clean.

The propeller had one blade bent forward approximately 15 degrees at the mid-span location. The face of one propeller blade had spanwise scratching. The second blade had spanwise scratches on the face's tip area only. The front of both propeller blades had spanwise scratching on them. One propeller blade had leading edge gouges in it. The deepest gouge was approximately 3/4 inch in depth and length. The propeller had separated from the starter ring and crankshaft flange. Propeller bolts and bolt sleeves were still affixed to the propeller. Holes in the crankshaft flange and starter ring were elongated opposite the engine's rotational direction.

MEDICAL AND PATHOLOGICAL INFORMATION

The autopsy of the left seat occupant was conducted at the Portage View Hospital, Hancock, Michigan. According to the pathologist's report, the fatal injuries of the left seat occupant were due to multiple blunt trauma associated with rapid deceleration and torsion. Results of the toxicology examination by the FAA's Civil Aeromedical Institute were negative for the blood and urine samples.

The right seat passenger was reported to have received serious injuries. The extent of the injuries have not been released by his family.

ADDITIONAL INFORMATION

The wreckage was released to Deputy Sheriff Keith W. Raffaelli of the Houghton County Sheriff's department.

Pilot Information

Certificate:	Airline transport; Commercial	Age:	32, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Airplane; Helicopter	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	May 19, 1993
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	6290 hours (Total, all aircraft), 763 hours (Total, this make and model), 4777 hours (Pilot In Command, all aircraft), 127 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N6279A
Model/Series:	PA-38-112 PA-38-112	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	38-78A0362
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	June 11, 1993 Annual	Certified Max Gross Wt.:	1680 lbs
Time Since Last Inspection:	10 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	1257 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	O-235-L2C
Registered Owner:	CHARLES H. OHTONEN	Rated Power:	112 Horsepower
Operator:	CHARLES H. OHTONEN	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:	CMX ,1095 ft msl	Distance from Accident Site:	8 Nautical Miles
Observation Time:	18:51 Local	Direction from Accident Site:	10°
Lowest Cloud Condition:	Scattered / 8000 ft AGL	Visibility	15 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	120°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	21°C / 16°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	00:00 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	

Wreckage and Impact Information

Crew Injuries:	1 Fatal, 1 Serious	Aircraft Damage:	Destroyed
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal, 1 Serious	Latitude, Longitude:	47.109165,-88.560226(est)

Administrative Information

Investigator In Charge (IIC):	Gattolin, Frank
Additional Participating Persons:	BRUCE BOWERMAN; GRAND RAPIDS , MI FRANK CALABRESE; GRAND RAPIDIS , MI
Original Publish Date:	August 17, 1994
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=9172

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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](#).