Aviation Investigation Final Report

Location:	Green Bay, Wisconsin	**Accident Number:**	CHI01LA138
Date & Time:	May 16, 2001, 11:05 Local	**Registration:**	N1490
Aircraft:	Brault Glasair SH2F	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The experimental Glasair was destroyed when it impacted the ground during a 360 degree turn for spacing on short final for landing. While on the right downwind, the Glasair pilot was informed by ATC that he was number two for landing behind a Cessna 172 that was on a left downwind for landing on runway 24. The Glasair was on a right base when the pilot reported that he had the Cessna on short final in sight. The ATC controller reported that while the Glasair was on final, the Cessna was still on the runway. The ATC controller instructed the Glasair to "execute a go-around and make a left traffic." The Glasair pilot responded, "Okay you want me to just do a quick left here and come back in?" The controller stated, "Affirmative." Ten seconds later an ELT transmission could be heard. The controller reported, "[The Glasair] executed a climbing left turn and I observed the aircraft's entire underside (wings and belly), he then continued to roll further to his left and then started an abrupt decent toward the ground. I observed [the Glasair] impact the ground and immediately notified crash personnel." Another witness reported seeing the airplane flying toward the airport. He reported, "The airplane was approaching the runway and it wobbled a little bit. The plane then banked hard to its left as if the wind was caught under the right wing. The plane then went straight up, looped to the left, then came straight down and hit the ground nose first." The inspection of the airplane revealed no pre-impact anomalies.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot allowed the airspeed to get too low and inadvertently stalled the airplane.

Findings

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

Findings
1. (C) AIRSPEED - LOW - PILOT IN COMMAND
2. (C) STALL - INADVERTENT - PILOT IN COMMAND

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

Factual Information

HISTORY OF FLIGHT

On May 16, 2001, at 1105 central daylight time, an experimental Brault Glasair SH2F, N1490, was destroyed when it impacted the ground during a 360 degree turn for spacing on short final for landing. The pilot was fatally injured. The 14 Part 91 personal flight had departed the Austin Strauble Airport (GRB), Green Bay, Wisconsin, at 1100 on a local flight. The airplane had turned base to final for runway 24 (7,699 feet by 150 feet) when the pilot was given instructions to do a go-around. The pilot requested a 360 degree turn instead which was subsequently authorized by ATC. The airplane impacted the ground in a nose down attitude. Visual meteorological conditions prevailed and no flight plan was filed.

The Federal Aviation Administration (FAA) Air Traffic Controller (ATC) transcript indicated N1490 was cleared for takeoff from runway 24 at 1100. Initially, N1490 was issued instructions to fly a left downwind, but before turning downwind it was instructed to fly a right downwind due to an aircraft departing runway 36. While on the right downwind, N1490 was informed that it was number two for landing behind a Cessna 172 that was on a left downwind for landing on runway 24. N1490 was on a right base when he reported that he had the Cessna on short final in sight.

The ATC controller reported that while N1490 was on final for landing, the Cessna was still on the runway. The ATC controller instructed N1490 to "execute a go-around and make a left traffic… ."

At 1604:54, the controller stated, "And ah renega or correction ah glasair fourteen ninety tell you what sir if you would just execute a ah go around and make left traffic you're you're high performance over that Cessna."

At 1605:06, N1490 stated, "Okay you want me to just do a quick left here and come back in?"

At 1605:10, the controller stated, "Affirmative."

At 1605:20, the transcript indicated, "(sound of elt [emergency locator transmitter])."

The controller stated the following:

"N1490 executed a climbing left turn and I observed the aircraft's entire underside (wings and belly), he then continued to roll further to his left and then started an abrupt decent toward the ground. I observed N1490 impact the ground and immediately notified crash personnel."

Another witness reported seeing the airplane flying toward the airport. He reported, "The airplane was approaching the runway and it wobbled a little bit. The plane then banked hard to its left as if the wind was caught under the right wing. The plane then went straight up, looped to the left, then came straight down and hit the ground nose first."

The aircraft impacted the ground within the airport boundaries.

PERSONNEL INFORMATION

The pilot held a private pilot's certificate with a single engine land rating. He held a Third Class Medical Certificate that was issued on August 31, 1999. He had a total of approximately 912 flight hours.

AIRCRAFT INFORMATION

The airplane was a single engine experimental amateur-built Brault Glasair SH2F, serial number 610, made of composite materials. The airplane seated two and had a maximum gross weight of 2,200 pounds. The engine was Lycoming 200 horsepower IO-360-B1E engine. The last annual inspection was conducted on April 14, 2000. The airplane had a total time of approximately 721 hours.

METEOROLOGICAL INFORMATION

At 1056, the GRB observed weather was: winds 310 at 11 knots, sky clear, visibility 7, temperature 22 degrees C, dew point 17 degrees C, altimeter 29.63.

WRECKAGE AND IMPACT INFORMATION

The airplane impacted the terrain near the approach end of runway 24 and on the left side of the centerline. The wreckage path was confined to the point of impact. The engine and propeller were partially buried in the ground. The left wing leading edge exhibited aft compression, and the wing was found in an approximately 50 degree nose down attitude. The fuselage and empannage remained attached to the cabin, but had fallen back to the ground. The empennage remained intact with no damage to the horizontal and vertical stabilizer. Flight control continuity was established from the flight controls back to the cockpit.

The engine examination revealed the engine rotated and continuity was confirmed to the aft gears. Thumb compression and suction were observed on all cylinders. Both magnetos exhibited spark from all leads when rotated. Fuel was found in the fuel lines, fuel servo, and fuel flow divider.

The propeller remained attached to the engine. Both propeller blades were bent aft, twisted, and were loose in the hub.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy of the pilot was conducted at the St. Vincent Hospital, Green Bay, Wisconsin.

A Forensic Toxicology Fatal Accident Report was prepared by the FAA Civil Aeromedical Institute. The report indicated the following results:

No carbon monoxide detected in the blood.

No cyanide detected in the blood.

No ethanol detected in the blood.

Metoprolol , Quinine, Verapamil, and Norverapamil (heart medications) present in blood and urine.

Metoprolol is a blood pressure medication that is also used to control excessive heart rate and reduce the risk of a second heart attack. Verapamil is a blood pressure medication, and norverapamil is a metabolite. Quinine is a substance found in tonic water and used to treat severe malaria.

ADDITIONAL INFORMATION

The parties to the investigation included the FAA and Textron Lycoming.

Pilot Information

Certificate:	Private	**Age:**	69,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Front
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 Unknown	**Last FAA Medical Exam:**	August 31, 1999
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	November 15, 2000
Flight Time:	912 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Brault	**Registration:**	N1490
Model/Series:	Glasair SH2F	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	610
Landing Gear Type:	Retractable - Tricycle	**Seats:**	2
Date/Type of Last Inspection:	April 14, 2000 Annual	**Certified Max Gross Wt.:**	2200 lbs
Time Since Last Inspection:	50 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	721 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	IO-360-B1E
Registered Owner:	Robert G. Brault	**Rated Power:**	200 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:	GRB,695 ft msl	**Distance from Accident Site:**	0 Nautical Miles
Observation Time:	10:56 Local	**Direction from Accident Site:**	0°
Lowest Cloud Condition:	Clear	**Visibility**	7 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	11 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	310°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.62 inches Hg	**Temperature/Dew Point:**	22°C / 17°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Green Bay, WI (GRB)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	VFR
Departure Time:	11:00 Local	**Type of Airspace:**	Class D

Airport Information

Airport:	Austin Strauble Airport GRB	**Runway Surface Type:**	Concrete
Airport Elevation:	695 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	24	**IFR Approach:**	None
Runway Length/Width:	7699 ft / 150 ft	**VFR Approach/Landing:**	Touch and go

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	44.480201,-87.890403(est)

Administrative Information

Investigator In Charge (IIC):	Silliman, Jim
Additional Participating Persons:	Cathy Vuksanovic; FAA; Milwaukee, WI Greg Erikson; Textron Lycoming; Wayne, IL
Original Publish Date:	August 26, 2002
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=52276