Aviation Investigation Final Report

Location:	ELBERTA, Alabama	**Accident Number:**	ATL95FA090
Date & Time:	April 26, 1995, 17:49 Local	**Registration:**	N86XL
Aircraft:	AXELL, CHARLES GLASAIR RG-2	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

SEVERAL MINUTES INTO THE FLIGHT, THE AIRPLANE WAS SEEN BY WITNESSES IN WHAT THEY DESCRIBED AS A SPIRAL. THE AIRPLANE COLLIDED WITH THE GROUND AND BURNED. EXAMINATION OF THE ACCIDENT SITE REVEALED THAT THE AIRPLANE WAS SCATTERED OVER AN AREA 40 FEET WIDE AND 75 FEET LONG. THE AIRPLANE SAT IN AN UPRIGHT POSITION, AND THE GROUND AROUND IT SHOWED NO EVIDENCE OF FORWARD OR LATERAL POST IMPACT AIRCRAFT MOVEMENT. THE ENGINE EXAMINATION REVEALED THAT THE NUMBER ONE FUEL INJECTOR NOZZLE WAS BLOCKED. NO OTHER SYSTEM PROBLEMS WERE NOTED DURING THE WRECKAGE EXAMINATION.

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 FLYING SPEED WHICH RESULTED IN A STALL. A FACTOR WAS THE LOSS OF ENGINE POWER DUE TO A BLOCKED FUEL INJECTOR NOZZLE.

Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - MECH FAILURE/MALF
Phase of Operation: MANEUVERING

Findings
1. (F) FUEL SYSTEM,NOZZLE - BLOCKED(TOTAL)

Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: DESCENT - EMERGENCY

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

Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

HISTORY OF FLIGHT

On April 26, 1995, at 1749 central daylight time, a Charles Axell Glasair RG-2 experimental aircraft, N86XL, collided with the ground while maneuvering near Elberta, Alabama. The personal flight operated under the provisions of 14 CFR Part 91 with no flight plan filed. Visual weather conditions prevailed at the time of the accident. The airplane was destroyed by impact forces, and a post-impact fire; the private pilot and his pilot rated passenger were fatally injured.

According to the co-owner of N86XL, he estimated that the flight departed Ferguson Field at 1730, after the pilot refueled the airplane with ten gallons of aviation fuel. The co-owner was not aware of the pilot's flight intentions, but stated this was the passenger's first flight in N86XL.

Several minutes into the flight witnesses, in the vicinity of the accident site, reported hearing the aircraft engine sputter several times. Another witness observed the airplane in a spiral like maneuver prior to the impact with the ground. One witness also heard a thud, and noticed black smoke northeast of his position, in the vicinity of the accident site.

PERSONNEL INFORMATION

Information on the pilot is included in this report at the data field labeled "First Pilot Information". The private pilot's flight logs were not recovered.

AIRCRAFT INFORMATION

Information on the aircraft is contained in this report at the data field labeled "Aircraft Information". The aircraft maintenance logs review revealed that during the last annual inspection, metal shavings were detected on the engine oil screen.

METEOROLOGICAL INFORMATION

Visual weather conditions prevailed at the time of the accident. Weather information is contained in this report at the data field labeled "Weather Information".

WRECKAGE AND IMPACT INFORMATION

Examination of the accident site revealed that wreckage debris was scattered over an area 40 feet wide and 75 feet long. The airplane collided with the ground in a near flat attitude and

showed no signs of additional movement after the initial impact. All debris from the aircraft was located in the immediate vicinity of the main wreckage. Fire destroyed the airframe cockpit and center sections. The fire damage extended outboard the entire length of the wing assembly, and fore and aft from the nose section through the empennage. The engine accessary section also sustained fire damage which resulted in the destruction of all installed components.

Examination of the airframe and flight control systems failed to disclose a mechanical problem. Steel and composite material flight control components were located at the accident site in the vicinity of their normally installed positions.

The engine and propeller assemblies were attached to the airframe. The engine examination revealed that the number one fuel injector nozzle was blocked; the other fuel injector nozzles were clear. The remainder of the engine examination failed to reveal an additional malfunction or component failure. The propeller assembly was attached at its normally installed position. The propeller blades were not damaged.

MEDICAL AND PATHOLOGICAL INFORMATION

The postmortem examination of the private pilot was performed by Dr. James C. Downs on April 27, 1995, at the Alabama Department of Forensic Science in Mobile, Alabama. The cause of death was multiple trauma. During the toxicological examinations, 20.400 (ug/ml,ug/g) of salicylate was detected in the blood sample.

ADDITIONAL INFORMATION

The aircraft wreckage was released to: Mr. A Frank Shields (Co-owner N86XL) 33525 Sunset Ave Lillan, Alabama

Pilot Information

Certificate:	Private	**Age:**	49,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 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	January 30, 1995
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	587 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	AXELL, CHARLES	**Registration:**	N86XL
Model/Series:	GLASAIR RG-2 GLASAIR R	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	1086
Landing Gear Type:	Retractable - Tricycle	**Seats:**	2
Date/Type of Last Inspection:	June 26, 1994 Annual	**Certified Max Gross Wt.:**	1900 lbs
Time Since Last Inspection:	48 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	246 Hrs	**Engine Manufacturer:**	LYCOMING
ELT:	Installed, not activated	**Engine Model/Series:**	IO-360-B
Registered Owner:	A.FRANK SHIELDS & T. L. BISHOP	**Rated Power:**	180 Horsepower
Operator:	BISHOP, TERRY L.	**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:	NPA	**Distance from Accident Site:**	
Observation Time:	17:55 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Scattered / 25000 ft AGL	**Visibility**	7 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	9 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	110°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	22°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(PVT)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	17:30 Local	**Type of Airspace:**	Class G

Airport Information

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

Wreckage and Impact Information

Crew Injuries:	2 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	30.410043,-87.599807(est)

Administrative Information

Investigator In Charge (IIC):	Powell, Phillip
Additional Participating Persons:	TOM MULLINS; BIRMINGHAM , AL
Original Publish Date:	December 4, 1995
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=3479