



National Transportation Safety Board Aviation Accident Final Report

Location:	Centre Hall, PA	Accident Number:	NYC07LA155
Date & Time:	07/01/2007, 1600 EDT	Registration:	N176SS
Aircraft:	Burkhart Grob Flugzeugbau Speed Astir II	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The accident glider was under tow for takeoff when the accident occurred. The glider lifted off before the tow airplane and then ascended to between 20 and 50 feet above the ground very quickly, and at a "high" angle of attack. The glider then yawed to the left and the left wing dropped before it began a slow roll to the right. The glider continued to roll right until it reached an attitude where the wings were perpendicular to the ground. It then sank down until the right wing impacted the ground. The glider "cart wheeled" onto its nose before coming to rest inverted. Examination of the glider revealed no evidence of any preimpact mechanical anomalies, and that the tow rope disconnected at the glider end at some point during the accident sequence. Toxicological testing of the pilot revealed the presence of a prescription antidepressant. The extent to which the drug may have affected the pilot, if at all, could not be determined.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inability to maintain control of the glider for undetermined reasons.

Findings

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

Findings

1. REASON FOR OCCURRENCE UNDETERMINED
 2. AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
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Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings

3. TERRAIN CONDITION - GROUND

Factual Information

On July 1, 2007, about 1600 eastern daylight time, a Burkhart Grob Flugzeugbau Speed Astir II glider, N176SS, was substantially damaged when it impacted the runway while under tow for takeoff from Centre Airpark (N16), Centre Hall, Pennsylvania. The certificated private pilot was fatally injured. Visual meteorological conditions prevailed, and no flight plan was filed for the flight, destined for Mifflin County Airport (RVL), Reedsville, Pennsylvania. The personal flight was conducted under 14 Code of Federal Regulations Part 91.

According to the pilot of the tow airplane, the purpose of the accident flight was to tow the glider aloft so that the glider pilot could return to RVL. The tow pilot conducted a preflight briefing with the glider pilot on tow procedures prior to the takeoff, and the glider was connected to the tow airplane without any difficulties.

After establishing radio contact, the glider pilot and the tow pilot agreed to start the takeoff from runway 6. The tow pilot watched the glider in his mirror, and initially it appeared to be in a wings level attitude and directly behind the tow airplane, during the takeoff roll. After raising the tow airplane's tailwheel off the ground, the tow pilot felt a slight yaw, but did not feel this was unusual given the wind conditions. He then felt a distinct loss of drag, which he felt was consistent with a disconnect or breakage of the tow rope. The airplane's main wheels remained on the ground during these events. As he could no longer see the glider in the mirror with the tailwheel raised, he elected to continue the takeoff in order to clear the runway. Upon returning to the airport, he observed that the glider was lying inverted on the runway.

Two members of a radio control aircraft club were at the airport when they witnessed the accident flight. They both recounted a similar series of events during a telephone interview. According to the witnesses, the glider was connected to the tow airplane during the takeoff roll. The glider lifted off before the tow airplane and then ascended to between 20 and 50 feet above the ground very quickly, and at a "high" angle of attack. The glider then yawed to the left and the left wing dropped before it began a slow roll to the right. The glider continued to roll right until it reached an attitude where the wings were perpendicular to the ground. It then sank down until the right wing impacted the ground. The glider "cart wheeled" onto its nose before coming to rest inverted.

Both witnesses reported that there was a direct crosswind present at the time of the accident, and estimated that the velocity was around 10 knots. One of the witnesses added that there were routinely crosswinds at the airport, and that it was not uncommon to see gliders being towed in crosswinds up to 17 knots.

Following the accident, the tow airplane pilot and one of the witnesses inspected the tow cable and attach fittings and found that they were intact and undamaged.

A Federal Aviation Administration (FAA) inspector examined the wreckage following the accident. According to the inspector, the glider came to rest inverted, with the right wing separated from the fuselage. All structural components of the glider were accounted for, and were located at the accident scene.

Flight control continuity was established from the cockpit controls to the elevators, rudder, and left aileron. Continuity to the right aileron could not be established from the fuselage to the flight control surface due to impact damage. The right wing attachments and aileron control mechanism exhibited signatures consistent with overload at impact. The pitch trim control was

found in the extreme nose up position, but pitch trim continuity could not be established due to impact damage. The wing flaps were set to the "-3" degree position. The speed brake, and its respective cockpit control, were found in the retracted position.

The tow cable attachment mechanism and controls were in working order. There was no evidence of damage to the tow hook or release mechanism.

The pilot and aircraft logbooks were not recovered.

The glider pilot held a private pilot certificate with ratings for glider and airplane single engine land. Her most recent application for an FAA third-class medical certificate was dated February 7, 2005, and on that date she reported 130 total hours of flight experience.

The FAA's Bioaeronautical Sciences Research Laboratory, Oklahoma City, Oklahoma, performed toxicological testing on the pilot. The testing revealed the presence of the following drugs: Desmethylvenlafaxine in the blood and urine; Venlafaxine in the urine, liver, and gastric; and 2.754 ug/ml, ug/g of Venlafaxine in the blood.

An autopsy was performed on the pilot by the Centre County Coroner, Bellefonte, Pennsylvania. The "Final Summary Note" of the report indicated, in part: "...The patient's postmortem Venlafaxine blood level is 1600 ng/mL (1.6 mg/L)...although the o-Desmethylvenlafaxine level of 270 ng/mL is within the therapeutic range, the Venlafaxine level is clearly above the therapeutic range...clearly not at the level which could cause death...not in the toxic or overdose range....The patient landed her glider and was clearly well enough to contact a pilot to be towed back up into the air. The pilot did not relate any visible symptoms of nausea, vomiting, dizziness, nervousness, anxiety, tremor, or reported blurred vision."

Review of the pilot's most recent application for an FAA third-class medical certificate revealed that she answered "No" to the question "Do You Currently Use any Medication."

The weather conditions reported at University Park Airport (UNV), State College, Pennsylvania, about 8 nautical miles west of the accident site, at 1600, included winds from 330 degrees at 5 knots, 10 statute miles visibility, scattered clouds at 8,000 feet, temperature 23 degrees Celsius, dew point 10 degrees Celsius, and an altimeter setting of 30.12 inches of mercury.

Pilot Information

Certificate:	Private	Age:	39, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Single
Other Aircraft Rating(s):	Glider	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3 Without Waivers/Limitations	Last FAA Medical Exam:	02/01/2005
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	130 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Burkhart Grob Flugzeugbau	Registration:	N176SS
Model/Series:	Speed Astir II	Aircraft Category:	Glider
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	4014
Landing Gear Type:	Tandem	Seats:	1
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	1135 lbs
Time Since Last Inspection:		Engines:	0
Airframe Total Time:		Engine Manufacturer:	
ELT:		Engine Model/Series:	
Registered Owner:	PS Soaring Inc	Rated Power:	
Operator:	PS Soaring Inc	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	UNV, 1239 ft msl	Distance from Accident Site:	8 Nautical Miles
Observation Time:	1600 EDT	Direction from Accident Site:	270°
Lowest Cloud Condition:	Scattered / 8000 ft agl	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	330°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.12 inches Hg	Temperature/Dew Point:	23° C / 10° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Centre Hall, PA (N16)	Type of Flight Plan Filed:	None
Destination:	Reedsville, PA (RVL)	Type of Clearance:	None
Departure Time:	1600 EDT	Type of Airspace:	

Airport Information

Airport:	Centre Airpark (N16)	Runway Surface Type:	Grass/turf
Airport Elevation:	1307 ft	Runway Surface Condition:	Dry
Runway Used:	6	IFR Approach:	None
Runway Length/Width:	3100 ft / 210 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	40.811667, -77.656944

Administrative Information

Investigator In Charge (IIC):	David S Muzio	Report Date:	06/30/2008
Additional Participating Persons:	James Pool; FAA/FSDO; Harrisburg, PA		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).