Aviation Investigation Final Report

Location:	Pocahontas, Illinois	**Accident Number:**	CEN10LA368
Date & Time:	July 4, 2010, 13:50 Local	**Registration:**	N82BK
Aircraft:	Schleicher ASW-20	**Aircraft Damage:**	Substantial
Defining Event:	Dragged wing/rotor/float/other	**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The glider was towed to an altitude of 1,800 feet by an airplane and then released for a local flight. Radio communication with the glider was attempted about an hour later; however, it was not reestablished. Three airplanes went to look for the glider and located it about six hours after departure, in a field of high vegetation. The glider was equipped with a datalogger that indicated the glider was in a left turn about 250 feet north of the accident site prior to impact. The left wing's leading edge was torn and its tear contained vegetation. The landing gear was extended. An on-scene examination of the wreckage revealed no preimpact anomalies that would have precluded normal operations. While the pilot was taking medication for the treatment of diabetes, attention deficit disorder, and anxiety, the investigation could not determine what role, if any, the pilot’s medications or medical conditions may have played in the accident. The pilot did not have a current Federal Aviation Administration medical certificate, nor was one required for the glider operations in which he was engaged.

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 a wings-level attitude prior to impacting high vegetation and terrain during the off-field landing.

Findings

Aircraft	Lateral/bank control - Not attained/maintained
Personnel issues	Aircraft control - Pilot
Environmental issues	(general) - Contributed to outcome

Factual Information

History of Flight

Landing	Off-field or emergency landing
Landing	Dragged wing/rotor/float/other (Defining event)
Landing	Collision with terr/obj (non-CFIT)

HISTORY OF FLIGHT

On July 4, 2010, about 1350 central daylight time, an experimental exhibition/air racing Schleicher ASW-20 glider, N82BK, operated by a private pilot, was substantially damaged upon impact with high vegetation and terrain near Pocahontas, Illinois. Visual meteorological conditions prevailed and no flight plan was filed for the 14 Code of Federal Regulations Part 91 personal flight. The pilot was fatally injured. The local flight originated from the Highland-Winet Airport, near Highland, Illinois, about 1300.

According to a tow pilot, the glider was towed to an altitude of between 1,300 and 1,800 feet above ground level about 1300. The pilot radioed “thanks for the tow” upon release. Radio communications with the glider was attempted about 1400 and it was not reestablished. Around 1730, three airplanes went to look for the glider and it was found about 2000, in a field of high vegetation.

PERSONNEL INFORMATION

The 62-year-old pilot held a private pilot certificate with a glider rating. Records obtained from the Federal Aviation Administration (FAA) showed that pilot's most recent application for a third-class medical was dated April 2, 2003. The pilot reported that he had accumulated 354 hours of total flight time on that application.

The pilot's family provided a copy of excerpts from the pilot's flight logbook. Based on the logbook excerpts, the pilot recorded 659 flights with a total flight time of 865:51 hours. An endorsement showed that the pilot completed a flight review on June 28, 2009.

AIRCRAFT INFORMATION

N82BK, was a Schleicher ASW-20 glider constructed from glass-reinforced plastic. The last condition inspection was completed October 24, 2009, at a total airframe time of 1,784 hours.

METEOROLOGICAL INFORMATION

At 1355, the Scott Air Force Base/MidAmerica Airport (BLV), near Belleville, Illinois, recorded

weather was: Wind 180 degrees at 10 knots; visibility 10 statute miles; sky condition few clouds 19,000 feet; temperature 33 degrees C; dew point 22 degrees C; altimeter 29.98 inches of mercury.

At 1455, the BLV recorded weather was: Wind 180 degrees at 13 knots gusting to 19 knots; visibility 10 statute miles; sky condition clear; temperature 34 degrees C; dew point 22 degrees C; altimeter 29.96 inches of mercury.

FLIGHT RECORDERS

The glider was equipped with a Cambridge Aero Instruments Model 302 Direct Digital Variometer. The unit is a flight instrument and datalogger containing sensors that detected and recorded parameters including date, time, longitude, latitude, pressure altitude, global positioning system (GPS) altitude, fix validity, fix accuracy, and number of satellites. The unit included an integral GPS receiver that generates International Gliding Commission (IGC)-approved secure flight logs, which are stored in non-volatile flash memory.

WRECKAGE AND IMPACT INFORMATION

A Federal Aviation Administration inspector examined the glider wreckage on-scene. The left wing's leading edge was torn about midspan. Vegetation consistent with corn tassels was present in that tear. The cockpit was found separated from the fuselage and the cockpit exhibited rearward crushing. The landing gear was extended. The examination of the wreckage revealed no pre-impact anomalies that would have precluded normal operations.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot by the Bond County Coroner's Office. The medical examiner ruled the manner of death as a result of craniocerebral and thoracic blunt trauma. The autopsy noted that the stomach contained “a large amount of food” and an unidentified pill.

Information from a family member and a physician treating the pilot indicated that the pilot was under treatment with glyburide 500 mg 2 tabs twice per day and exenatide injections for diabetes, mixed amphetamine salts 20 mg once per day for attention deficit disorder, and clonazepam 0.5 mg twice a day for anxiety. He was also reported to have been prescribed a continuous positive airway pressure (CPAP) device for the treatment of obstructive sleep apnea. The pilot was reported to have been using the CPAP device nightly and to have used it the night before the accident. He was reported to have taken his medications, including the exenatide, the morning of the accident.

The FAA Civil Aerospace Medical Institute prepared a Final Forensic Toxicology Accident Report. The report, in part, stated:

28 (mg/dL, mg/hg) ETHANOL detected in Blood (Cavity)
12 (mg/dL, mg/hg) ETHANOL detected in Muscle
NO ETHANOL detected in Brain
2 (mg/dL, mg/hg) METHANOL detected in Muscle
2 (mg/dL, mg/hg) METHANOL detected in Brain
1 (mg/dL, mg/hg) N-PROPANOL detected in Muscle
3.947 (ug/ml, ug/g) Acetaminophen detected in Blood (Cavity)
0.424 (ug/ml, ug/g) Amphetamine detected in Liver
0.287 (ug/ml, ug/g) Amphetamine detected in Blood (Cavity)

TESTS AND RESEARCH

The accident Cambridge Aero Instruments Model 302 unit had sustained damage from impact forces. Due to the damage to the unit, the FLASH chip containing the logged data was removed from the unit's main PC board. The FLASH chip was then reinstalled into a surrogate Model 302 and recorded track data was successfully downloaded.

Recovered tracklog data dated July 4, 2010 was stored in filename 074C4L11.IGC. Tabular data derived from the records within the file were overlaid on charts of the area revealing the unit's tracklog history.

The unit's data showed that the glider reached its highest point about 1313 where it's recorded peak pressure altitude was about 3,881 feet. The data showed that the glider subsequently did not gain altitude while it circled consistent with maneuvers to climb in areas of lift. The final recorded portion of the unit's data showed that the glider was in a left bank turn ending with the last recorded time of 1349:41. The accident site was about 250 feet north of that last recorded data point.

Pilot Information

Certificate:	Private	**Age:**	62,Male
Airplane Rating(s):	None	**Seat Occupied:**	Single
Other Aircraft Rating(s):	Glider	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 3 None	**Last FAA Medical Exam:**	April 2, 2003
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	June 28, 2009
Flight Time:	866 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Schleicher	**Registration:**	N82BK
Model/Series:	ASW-20	**Aircraft Category:**	Glider
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	20580
Landing Gear Type:	Retractable - N/A	**Seats:**	1
Date/Type of Last Inspection:	October 24, 2009 Annual	**Certified Max Gross Wt.:**	
Time Since Last Inspection:		**Engines:**	0
Airframe Total Time:	1784 Hrs as of last inspection	**Engine Manufacturer:**	
ELT:		**Engine Model/Series:**	
Registered Owner:	On file	**Rated Power:**	
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	BLV,459 ft msl	**Distance from Accident Site:**	20 Nautical Miles
Observation Time:	20:55 Local	**Direction from Accident Site:**	220°
Lowest Cloud Condition:	Few / 6000 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	150°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.94 inches Hg	**Temperature/Dew Point:**	27°C / 22°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Highland, IL (H07)	**Type of Flight Plan Filed:**	None
Destination:	Highland, IL (H07)	**Type of Clearance:**	None
Departure Time:	13:00 Local	**Type of Airspace:**	

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:**	38.802776,-89.561386(est)

Administrative Information

Investigator In Charge (IIC):	Malinowski, Edward
Additional Participating Persons:	Stephanie V Williams; Federal Aviation Administration; Springfield, IL Jens Eisenreich; Federal Bureau of Aircraft Accident Investigation; Braunschweig Germany
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Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=76521