



National Transportation Safety Board Aviation Accident Final Report

Location:	Ephrata, WA	Accident Number:	WPR17FA107
Date & Time:	05/26/2017, 1523 PDT	Registration:	N63KR
Aircraft:	SCHLEICHER ASW 28 18E	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The private pilot of the glider received a tow to 3,000 ft above ground level. Recorded data from an onboard GPS device showed that the glider proceeded in a general westerly direction until it was about 15 nautical miles from the departure airport. It then turned and tracked eastward for the remainder of the flight. The data ended about 9 miles west-northwest of the departure airport. During the 43 minutes of recorded data, the glider reached a peak altitude of about 8,500 ft, slowly descended to about 3,900 ft, then entered another gradual descent that continued until ground contact. During the last 8 minutes of recorded data, the glider's speed was recorded slowly decreasing from about 76 to 40 knots. The glider came to rest in a dry, plowed field slightly northwest of the last GPS target. The engine was stowed and secure, and examination revealed no mechanical malfunctions or anomalies of the glider that would have precluded normal operation.

The pilot received his private pilot certificate about one year before the accident and purchased the accident glider a few days later. The pilot's first flight in the glider occurred about 3 weeks before the accident from the accident airport. The accident flight was the pilot's second flight in the accident glider. It could not be determined whether the pilot obtained training specific to the accident glider or in motorglider operations.

The flight track data was consistent with normal glider operations and a slow descent to land. However, the on scene impact marks, the contained debris field, and the damage to the wreckage were all consistent with a stall. Therefore, it appeared that the pilot was attempting to make an off-field landing when the glider stalled and impacted the ground. It is unknown why the pilot did not use the airplane's engine; however, it was noted that very little fuel was removed from the glider at the accident site.

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 glider control while attempting to conduct an off-airport landing, which resulted in an aerodynamic stall and impact with terrain.

Findings

Aircraft	Airspeed - Not attained/maintained (Cause)
Personnel issues	Aircraft control - Pilot (Cause)

Factual Information

HISTORY OF FLIGHT

On May 26, 2017, about 1523 Pacific daylight time, a Schleicher ASW 28-18E motorglider, N63KR, impacted terrain about 9 miles west-northwest of Ephrata Municipal Airport (EPH), Ephrata, Washington. The pilot was fatally injured, and the glider sustained substantial damage. The glider was registered to and operated by the pilot under the provisions of Title 14 *Code of Federal Regulations* Part 91. Visual meteorological conditions prevailed at the time of the accident, and no flight plan was filed for the local personal flight, which originated from EPH about 1420.

The pilot obtained a tow to altitude from an airplane operated by a soaring club at EPH. The pilot's towcard indicated that he released from tow at an altitude of 3,000 ft above ground level (agl).

The glider was equipped with a PowerFLARM portable GPS device/transponder, which documented its flight track, speed, and altitude. Data retrieved from the device showed a flight track that began northwest of EPH about 1436. The glider made several 360° turns and flew in a generally westward direction until it was about 15 nautical miles from the airport. The glider then established a generally eastward route of flight, again making several 360° turns as it tracked east. The data ended about 9 miles west-northwest of EPH about 1523. The glider reached its highest altitude of the flight, about 8,500 ft GPS altitude, about 1447; after that, the glider slowly descended until it leveled off temporarily about 3,900 ft before it continued to slowly descend until the end of the data. Throughout the flight, the glider's speed varied between 40 and 108 knots. During the last 8 minutes of recorded data, the glider's speed was gradually decreasing from about 76 knots to about 40 knots. There were no witnesses to the accident.

PERSONNEL INFORMATION

The pilot held a private pilot certificate with a glider rating, issued July 24, 2016. He did not hold a Federal Aviation Administration medical certificate, nor was he required to for glider operations. The pilot started glider training in August 2015 in Deer Park, Washington, and took an extended break before he finished training in Moriarty, New Mexico. The pilot's wife mentioned that his flight training was in two-seated gliders; she recalled him training in a Lark, DG505, and a Grob 103. The accident flight was the pilot's second flight in both the accident glider and in a single-seat glider.

AIRCRAFT INFORMATION

The pilot purchased the glider on July 26, 2016; his first flight in it occurred on May 7, 2017 from EPH. The glider was equipped with a SOLO 2350, 2-stroke engine; and it has a stall speed of about 38 knots.

AIRPORT INFORMATION

EPH is a non-tower-controlled facility located on an open plateau at an elevation of 1,276 ft mean sea level. The airport had three hard surfaced runways, one of which is for glider use only between April 1 and November 1. The accident flight was the pilot's second flight from EPH.

WRECKAGE AND IMPACT INFORMATION

The glider came to rest in a dry, newly-plowed field that was sloped downward toward a patch of tall vegetation. The main wreckage came to rest about 75 ft from the vegetation, with the nose of the glider pointed toward the vegetation at a magnetic heading of about 324°. About 10 ft in front, and slightly to the right of, the nose of glider was a small impact crater and a long narrow trench that extended from near the crater. The glider's forward fuselage sustained heavy crush damage; the cabin area was slightly crushed and widened. The wings remained intact and attached to the fuselage. The right wing exhibited a dusting of dirt along the outboard leading edge of the wing, and the inboard trailing edge exhibited delamination. The left wing was shifted forward at the fuselage attachment point. Both airbrakes were found in the retracted position. The engine was found stowed and secured in place with no damage noted to the engine or engine compartment area; only a small amount of fuel was removed from the fuel tank. One of the propeller blades exhibited a line of dirt consistent with the crack of the engine compartment doors. The propeller was manipulated by hand and moved side to side with no binding or grinding. No fuel was observed in the fuel tank; however, a small amount of fuel leaked from the tank during the wreckage recovery. The aft fuselage was almost completely fracture-separated slightly forward of the empennage. The empennage was bent to the right and came to rest in the opposite direction. Control continuity was established throughout the airframe.

MEDICAL AND PATHOLOGICAL INFORMATION

The Grant County Coroner, Moses Lake, Washington, performed an autopsy on the pilot. The cause of death was listed as blunt impact of the trunk and extremities.

The FAA Bioaeronautical Sciences Research Laboratory, Oklahoma City, Oklahoma, performed forensic toxicology on specimens from the pilot with negative results for carbon monoxide, cyanide, and volatiles. Positive results were specified for atorvastatin, bupropion, losartan, and metoprolol in the liver and blood (cavity).

Atorvastatin (often called Lipitor) is a cholesterol-lowering agent. Losartan and metoprolol are used to treat hypertension; other common names are Cozaar and Lopressor, respectively. These three drugs are not considered impairing. Bupropion is an antidepressant also used to treat nicotine addiction and available as Wellbutrin and Zyban. Warnings for this drug include a dose-dependent risk of seizures, and a warning that it may impair mental and physical functioning. Further medical information, such as the reason for his use of bupropion or the status of any underlying depression, could not be obtained during the investigation.

History of Flight

Maneuvering	Loss of lift Off-field or emergency landing
Landing	Loss of control in flight (Defining event)

Pilot Information

Certificate:	Private	Age:	64, Male
Airplane Rating(s):	None	Seat Occupied:	Single
Other Aircraft Rating(s):	Glider	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	None	Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	(Estimated) 52 hours (Total, all aircraft), 3 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	SCHLEICHER	Registration:	N63KR
Model/Series:	ASW 28 18E NO SERIES	Aircraft Category:	Glider
Year of Manufacture:	2004	Amateur Built:	No
Airworthiness Certificate:	Experimental	Serial Number:	28721
Landing Gear Type:	Retractable - Tandem	Seats:	1
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	760 Hours	Engine Manufacturer:	Solo
ELT:	Not installed	Engine Model/Series:	2350
Registered Owner:	On file	Rated Power:	
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	KEPH, 1276 ft msl	Distance from Accident Site:	8 Nautical Miles
Observation Time:	1553 PDT	Direction from Accident Site:	97°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	20°	Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	29.91 inches Hg	Temperature/Dew Point:	27° C / -2° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Ephrata, WA (EPH)	Type of Flight Plan Filed:	None
Destination:	Ephrata, WA (EPH)	Type of Clearance:	None
Departure Time:	1420 PDT	Type of Airspace:	

Airport Information

Airport:	Ephrata Municipal Airport (EPH)	Runway Surface Type:	Dirt
Airport Elevation:	1276 ft	Runway Surface Condition:	Dry; Soft
Runway Used:	N/A	IFR Approach:	None
Runway Length/Width:		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:	47.329167, -119.709722 (est)

Administrative Information

Investigator In Charge (IIC):	Samantha A Link	Report Date:	02/26/2019
Additional Participating Persons:	William Crittenden; Federal Aviation Administration; Spokane, WA		
Publish Date:	02/26/2019		
Note:	The NTSB traveled to the scene of this accident.		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=95240		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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](#).