



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

October 13, 2011

On-Scene Exam

WPR12FA010

This document contains 9 embedded photos.

A. ACCIDENT

Location: Cle Elum, WA
Date: October 13, 2011
Aircraft: Flugzeugbau DG-1000S; Registration #: N7760A, Serial #: 10-34 S-33
NTSB IIC: Dennis Hogenson

B. EXAMINATION PARTICIPANTS:

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C. SUMMARY

On October 13, 2011, about 1558 Pacific daylight time, a Flugzeugbau DG 1000 S glider, N7760A, impacted terrain while being ground launched from a tow vehicle at Cle Elum Municipal Airport (S93), Cle Elum, Washington. The commercial pilot, the sole occupant, was fatally injured and the 2-seat glider sustained substantial damage. The glider was registered to Northwest Eagle Soaring LLC, and operated under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed and no flight plan had been filed.

The NTSB investigator-in-charge and law enforcement officials interviewed multiple witnesses located adjacent to the departure runway. The witnesses reported that the first stage of auto-tow launch appeared normal, and the glider became airborne within the first one-third of the runway. Shortly thereafter, about three-quarters of the way down the asphalt runway, the glider pitched to a steep nose-high attitude. As the glider ascended through about 100 – 125 feet above the ground, the rope slackened. The glider continued to ascend, and then leveled off about 200 feet above the end of the runway. Shortly after, the glider entered a steep right bank and descended into the ground. As it descended, the glider turned approximately 300 degrees from its initial departure heading before it impacted terrain.

A full-size sport utility vehicle was towing the glider. The nylon tow rope measured approximately 234 feet and was 5/16-inch in diameter.

Runway 07/25 is 2,552 feet in length and 40 feet wide. The runway is bordered to the north by large conifer trees.

D. Exam

The glider was mostly intact and came to rest in high grass adjacent to the departure of runway 7 at the Cle Elum Municipal Airport. The first identified point of contact was an approximate 10 inch deep crater, which contained debris from the glider's nose, about two feet directly in front of the main wreckage. No other ground scars, or tree damage was noted; the debris was concentrated to the area of the main wreckage with the exception of the rope used to tow the glider.

The tow rope was found near the departure end (north side) of the runway. The glider end of the tow rope was intact and no damage was noted. The tow vehicle end of the rope (found secured to the tow vehicle trailer hitch attachment point) separated just below the tow ring connection loop knot. The rope separation points were frayed and unraveled; however, there was no indication of preexisting damage to the rope. The overall length of the tow rope, to include the separated section, was about 234 feet in length.

Glider:

The cockpit and forward section of the glider was heavily fragmented. A crater, approximately 10 inches deep, was noted about 1-foot in front of where the main wreckage came to rest. The crater contained debris identified as the pieces of the forward fuselage. The crater was considered the initial point of impact.

The forward seat in the cockpit area was deformed and extensive rearward crushing was noted; the rear seat was in place and mostly intact. The cockpit instruments were damaged, but some legible. The altimeter read 267 feet, vertical speed indicator read 0, and the turn and bank indicator indicated no bank and full ball right. An event recorder was located in the cockpit and was removed for further examination at the NTSB recorders laboratory.

The right wing sustained extensive damage. The wing contained chordwise cracks to the composite skin material near the wing root and about midspan. The composite material was also cracked horizontally across the entire leading edge of the right wing. Pre accident damage and subsequent repair was noted to the outboard section of the wing. The repair contained about 3 feet of "200 mph" tape running along the leading edge of the wing. About midway through the repair the tape extended aft along the wing in an approximate one foot by one foot square on both the top and on bottom of the wing. Control continuity to the right aileron and right speed break was established from the bulkhead through the wing root and to the control surfaces.

A large full thickness crack around the entire circumference of the aft fuselage, just aft of the aft bulkhead, was noted.

The tail section of the glider, to include the horizontal and vertical stabilizer, sustained negligible impact damage. The N number on both sides of the vertical stabilizer was taped over with white tape. No weights were observed in the ballast located on the vertical stabilizer. The elevator

was removed to access and disconnect a battery located inside of the vertical stabilizer. Control continuity was established from the aft bulkhead to the rudder and the elevator attachment assembly.

The left wing sustained little impact related damage. Chordwise cracks, about midspan, that started at the leading edge and extended fully aft were noted. Control continuity to the left aileron and left speed brake was established from the bulkhead through the wing root and to their respective control surfaces.

E. Tow Vehicle

The tow vehicle was a 2012 Cadillac Escalade, equipped with a tow rope receiver style hitch and manual tow rope release mechanism.

F. PHOTOGRAPHS



Figure 1: Overall Accident Scene



Figure 2: Tow Rope - Glider Attachment Side



Figure 3: Tow Rope – Tow Vehicle Attachment Side



Figure 4: Weight Ballast located in Vertical Stabilizer



Figure 5: Aft Fuselage Cracking



Figure 6: Left Wing Mid-span Chordwise Cracking



Figure 7: Tail Section of Glider



Figure 8: Bottom of Outboard Right Wing Repair



Figure 9: Top of Outboard Right Wing Repair