



National Transportation Safety Board Aviation Accident Preliminary Report

Location:	New Washoe City, NV	Accident Number:	WPR18FA247
Date & Time:	09/02/2018, 1335 PDT	Registration:	N22XC
Aircraft:	Schempp Hirth DUO DISCUS T	Injuries:	2 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

On September 2, 2018, about 1335 Pacific daylight time, a Schempp-Hirth Duo Discus T motorized glider, N22XC (callsign XC), experienced an in-flight breakup while maneuvering near New Washoe City, Nevada. The two private pilots sustained fatal injuries, and the glider was destroyed. The glider was registered to one of the pilots, and operated under the provisions of Title 14 *Code of Federal Regulations* Part 91 as a personal flight. The glider departed Truckee-Tahoe Airport (TRK), Truckee, California at 1258. Visual meteorological conditions prevailed, and no flight plan had been filed for the cross-country soaring flight.

The flight was part of an informal competition that was organized by the pilot/owner of XC. The goal of the competition was to obtain the shortest flight time between two predetermined locations. Each competitor's flight time would start when his/her glider flew over TRK runway 2/20, and end when they reached a predefined radius around Marine Corps Mountain War Training Center Heliport (7CL4), Bridgeport, California. There was no specific start time, and the gliders departed at staggered intervals throughout the day.

XC was primarily constructed of composite materials. The engine was referred to as a "sustainer" engine and was insufficient for takeoff use. The engine/propeller combination was mounted on a pylon behind the cockpit, and the entire assembly retracted into the fuselage when not in use.

The tow pilot stated that the takeoff and climbout with XC was uneventful, and that XC released after reaching an altitude of 8,000 ft mean sea level (msl), about 3 miles east of TRK, over an area known locally as "The Rocks". TRK was situated at an elevation of 5,901 ft feet msl.

Both XC and several other gliders flying in the vicinity were equipped with "FLARM" traffic awareness and collision avoidance systems. The FLARM system is capable of recording positional data from other nearby FLARM-equipped aircraft, and it was determined that one glider had recorded a series of intermittent track positions of XC. This data revealed that after release, XC began a series of climbing turns over The Rocks, reaching an altitude of about 10,500 ft. It then proceeded east on a meandering track while performing another series of climbing turns. The last position was recorded at 1333. The data indicated that by then, XC had

reached an altitude of about 14,500 ft, 12 miles east of TRK, and 1 mile west of the 9,698 ft peak of Slide Mountain.

About that time, a group of paraglider pilots were preparing to launch from an 8,700-ft-high bluff on the eastern face of Slide Mountain. Their attention was drawn to a glider traveling north to south near the face of the slope directly to the east, and about 500 to 2,000 ft above their position. The pilot-witnesses all provided similar reports of their observations. One witness stated that as he looked up, he saw a glider performing a series of aggressive looping maneuvers, such that he initially thought it was a remote-controlled aircraft. He watched as the glider performed another loop. During that loop he started to hear a high-pitch whistling/vibrating sound, and the wings flexed upwards such that the tips almost touched each other. One of the wings then broke off, followed by a large "cracking" sound, and the sky was filled with confetti-like pieces of white debris.

Another pilot-witness stated that when he first saw the glider, it was passing from left to right and performed 2 or 3 full loops that lasted about 2 to 3 seconds each. He stated that the wings of the glider were flexing upwards aggressively throughout the maneuvers, and as it rolled out of the final loop, the left wing broke away and struck the tail.

A third pilot-witness stated that he looked up and saw the glider perform a series of loops, which had a radius of about two wingspans. He described the loops as "smooth and progressive", and as the glider rolled out for the final time, the wings appeared to flex up like "rubber" and form a "U" shape when viewed from the front. The left wing then broke away mid-span, followed by a very loud snapping sound, similar to cracking timber. The witness also heard a buzzing sound just prior to the wing separation. The glider then immediately entered into a flat spin, and white shards of debris filled the sky surrounding the glider. After the first spin rotation, the glider appeared to level off, and the witness considered the possibility that the pilot had regained control. The glider then rolled over, and the right wing failed.

All of the witnesses stated that they did not see any indications that the engine/propeller had been extended.

The wreckage was located on the lower eastern flank of Slide Mountain, at an elevation of 6,630 ft, about 2.5 miles east-southeast of the last FLARM-recorded position. The glider ignited a fire upon impact, which eventually burned a 58-acre swath of brush uphill to the west. The main wreckage consisted of the cockpit, engine assembly, wing and vertical stabilizer fragments, all of which were consumed by fire. A secondary 1,500-ft-long debris field emanated northwest from the main wreckage, outside of the burn area, and contained a headrest and a left wing section, along with canopy and control surface fragments.



Photo 1 - Main Wreckage (foreground), with Left Wing Section Circled

Aircraft and Owner/Operator Information

Aircraft Make:	Schempp Hirth	Registration:	N22XC
Model/Series:	DUO DISCUS T No Series	Aircraft Category:	Glider
Amateur Built:	No		
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:	KCXP, 4699 ft msl	Observation Time:	2035 UTC
Distance from Accident Site:	9 Nautical Miles	Temperature/Dew Point:	30° C / -5° C
Lowest Cloud Condition:	Clear	Wind Speed/Gusts, Direction:	7 knots / , 70°
Lowest Ceiling:	None	Visibility:	10 Miles
Altimeter Setting:	30.03 inches Hg	Type of Flight Plan Filed:	None
Departure Point:	Truckee, CA (TRK)	Destination:	Truckee, CA (TRK)

Wreckage and Impact Information

Crew Injuries:	2 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Fatal	Latitude, Longitude:	39.304444, -119.860833

Administrative Information

Investigator In Charge (IIC):	Eliott Simpson
Additional Participating Persons:	Aaron Southerland; Federal Aviation Administration FSDO; Reno, NV
Note:	The NTSB traveled to the scene of this accident.