



Aviation Investigation Preliminary Report

Location:	Siler City, NC	Accident Number:	ERA24FA261
Date & Time:	June 14, 2024, 12:48 Local	Registration:	N515DH
Aircraft:	Piper PA28	Injuries:	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Instructional		

On June 14, 2024, at 1248 eastern daylight time, a Piper PA-28-140, N515DH, was destroyed when it was involved in an accident near Siler City, North Carolina. The flight instructor and student pilot were fatally injured. The airplane was operated by Executive Flight Training and Services LLC as a Title 14 *Code of Federal Regulations* Part 91 instructional flight.

Another flight instructor for the same operator was flying in the traffic pattern at Siler City Municipal Airport (SCR), at the time of the accident. Both he and his student provided written statements, and their versions of events were consistent throughout.

The accident airplane entered the downwind leg of the traffic pattern for runway 22, as the flight instructor and his student climbed on the upwind leg after performing a touch-and-go landing. The flight instructor said he adjusted the subsequent traffic pattern for “spacing” and that his airplane was about midfield on the downwind leg as he watched the accident airplane perform a touch-and-go landing.

The flight instructor stated that, as his airplane approached the left base leg of the traffic pattern, the accident airplane asked their position then requested, “Can you extend, we’re having an issue.”

The student pilot’s recollection of the transmission was, “We are having issues, can we land?”

Both the flight instructor and the student pilot said there were no further transmissions from the accident airplane. They heard “hot mic[rophone]” and “background” noises over the radio, but no discernable voices or sounds. According to the student pilot, the time elapsed between the request for a position report and the background noises from the accident airplane was 30 to 45 seconds.

According to the flight instructor, he watched the altitude readout for the accident airplane on his automatic dependent surveillance – broadcast (ADS-B display) “get lower and lower,” and

when he banked his airplane for a “more clear view,” he and his student saw smoke rising from the trees in the area surrounding the accident site.

A witness who was performing hay baling of the grass area surrounding the runway stated that he saw the accident airplane taking off. He reported that the airplane “looked different” like it was “flying sideways.” As it climbed east of the runway, the airplane “almost rolled over on its side and went into a nosedive;” until ground impact, which was followed by rising black smoke.

Preliminary ADS-B track data depicted the accident airplane’s traffic pattern entry, and its flight on the downwind leg about 1,100 ft mean sea level (msl) around 90 knots (kts) groundspeed. The airplane turned and slowed on the left base leg to the low 80-kt range, and then entered the final approach leg, slowing into the low 70-kt range before the ADS-B track data was lost.

About 1 minute later, the track data resumed in the vicinity of the runway’s departure end at 625 ft msl and 66 kts ground speed. Over the next 25 seconds, a 90° left turn was depicted. The final two targets displayed 700 ft and 65 knots, and 800 ft and 71 knots; respectively, before track data ended. (see figure 1.)

Field elevation at SCR was 615 ft msl.

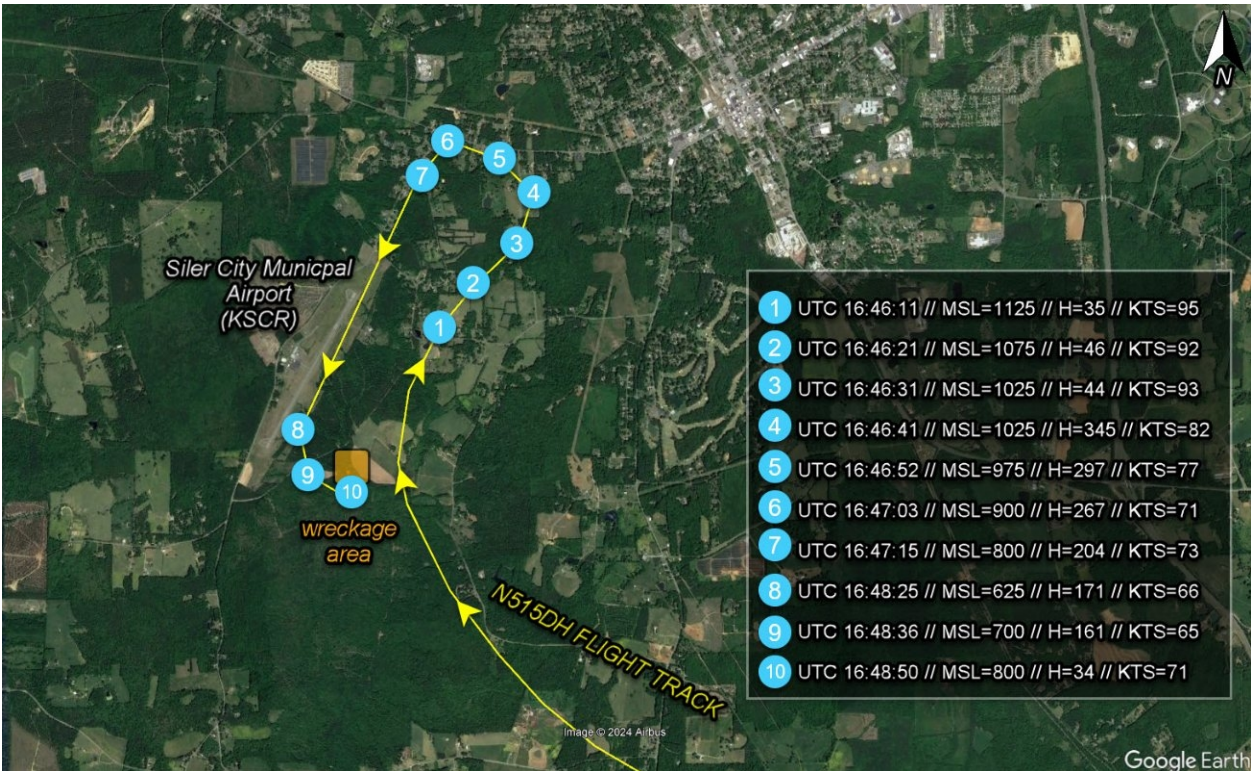


Figure 1: Preliminary ADS-B Flight Track Data. Times are reported as coordinated universal time (UTC) (NTSB)

The flight instructor held a commercial pilot certificate with ratings for airplane single-engine land, multiengine land, and instrument airplane. He held a flight instructor certificate with a rating for airplane single engine. His Federal Aviation Administration (FAA) first class medical

certificate was issued May 13, 2022. The operator used the pilot's logbook and company records to estimate 682 total hours of flight experience, of which 297 hours were in the accident airplane make and model. The flight instructor's father estimated his son had accrued 850 to 900 hours of flight experience.

The student pilot was issued an FAA first class medical certificate on December 18, 2023. Paperwork provided by the operator indicated that the student had accrued about 25 total hours of flight experience.

The airplane was manufactured in 1969 and was powered by a Lycoming O-320-E2D, 150-horsepower engine. Its most recent annual inspection was completed June 6, 2024, at 5,882.6 total aircraft hours.

Examination of the wreckage revealed that the airplane came to rest in its initial impact crater at 562 ft elevation, oriented 330° magnetic, and was consumed by a postcrash fire that extended to the empennage. The leading edges of both wings displayed uniform crushing across their entire spans. The engine was exposed, and the propeller, while buried, remained attached. The engine accessories were destroyed by fire.

Flight control cable continuity was confirmed from the cockpit to each of the respective flight control surfaces. The flap selector handle was impact and thermally damaged. The flap drive cable remained attached to the ratchet arm, but the handle position could not be determined. The stabilator trim jackscrew was extended above the drum with approximately 5 threads exposed, which corresponded to a neutral trim setting.

The fuel primer plunger was stowed and locked. The fuel strainer bowl was covered in soot and the surrounding structure was impact damaged. No liquid was observed in the strainer bowl and the fuel strainer screen was free of blockage. The electric fuel pump was thermally damaged and could not be tested. The fuel selector handle was consumed by fire. The fuel selector valve was impact and thermally damaged, which allowed the valve shaft to rotate freely in the valve housing. The fuel selector valve and handle positions at the time of impact could not be determined.

Examination of the engine revealed that the rear-mounted accessories were destroyed by fire. The carburetor was fire damaged and partially separated from the engine. The starter and alternator were impact damaged and partially separated from the engine. The intake tubes, exhaust tubes, and the exhaust muffler were partially crushed. The propeller was attached to the engine crankshaft flange. The crankshaft flange was bent and the starter ring gear support fragmented. The propeller spinner was impact crushed.

The engine was suspended from a lift and partially disassembled to facilitate examination. The exhaust tubes were cut and the muffler removed. The propeller and starter ring gear support were removed, and the bent portion of the crankshaft flange cut away to allow the crankshaft to be rotated through 360°.

The engine crankshaft was rotated using a tool inserted in the engine accessory case vacuum pump drive pad. Continuity of the crankshaft to the rear gears and to the valve train components was confirmed. Compression and suction were attained from all 4 cylinders. The interiors of the cylinders were observed with a lighted borescope and no anomalies were noted.

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N515DH
Model/Series:	PA28 140	Aircraft Category:	Airplane
Amateur Built:			
Operator:	On file	Operating Certificate(s) Held:	None
Operator Designator Code:			

Meteorological Information and Flight Plan

Conditions at Accident Site:	VMC	Condition of Light:	Day
Observation Facility, Elevation:	KSCR, 673 ft msl	Observation Time:	12:45 Local
Distance from Accident Site:	19 Nautical Miles	Temperature/Dew Point:	29°C / 20°C
Lowest Cloud Condition:	Clear	Wind Speed/Gusts, Direction:	
Lowest Ceiling:	None	Visibility:	10 miles
Altimeter Setting:	29.96 inches Hg	Type of Flight Plan Filed:	NONE
Departure Point:	Sanford, NC (TTA)	Destination:	Siler City, NC

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:	35.696578,-79.501358 (est)

Administrative Information

Investigator In Charge (IIC):	Rayner, Brian
Additional Participating Persons:	Shane Graham; FAA/FSDO; Greensboro, NC Jon Hirsch; Piper; Vero Beach, FL Mike Childers; Lycoming Engines; Williamsport, PA
Investigation Class:	Class 3
Note:	

