



Aviation Investigation Preliminary Report

Location:	Hollywood, FL	Accident Number:	ERA23FA234
Date & Time:	May 17, 2023, 12:35 Local	Registration:	N430AB
Aircraft:	Piper PA-25-235	Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Banner tow		

On May 17, 2023, about 1235 eastern daylight time, a Piper PA-25-235, N430AB, was destroyed when it was involved in an accident near Hollywood, Florida. The commercial pilot was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 banner tow flight.

According to the operator's director of ground operations, who supervised the flight from the banner pickup point and monitored communications with a handheld radio, the airplane departed around 1225 from runway 28R at North Perry Airport (HWO), Hollywood, Florida, to fly a banner for 1.5 hours along the beach in Fort Lauderdale. He reported that the airplane "picked" the banner at 1229, after a first pass for hook deployment and verification. The airplane then performed a right climbing turn (per airport procedure), and continued on the downwind leg of the airport traffic pattern at an altitude about 600 ft mean sea level heading eastbound and communicating with the HWO tower controller. The ground operations director stated that everything appeared to be normal, and that he was watching the airplane when he heard the tower controller ask the pilot if he was "ok," because the airplane was not climbing. The ground operations director tried to contact the pilot via radio when he saw that the airplane was not climbing but did not receive a response from the pilot. He further stated that the airplane had a high nose-up pitch attitude that was "more than needed" and, in his opinion, was preventing the airplane from climbing. He also stated that he did not hear any engine roughness during the flight.

Preliminary review of communications between the pilot and the HWO tower controller revealed that, a few minutes after departure, the controller stated, "Banner 430AB, everything okay? You are descending rapidly." The pilot replied, "I'm trying to uh...keep climbing."

Less than 2 minutes later, the controller stated, "Banner zero alpha bravo, you okay sir? I'm showing you at 600 feet now." The pilot replied, "I'm good now, zero alpha bravo... starting to

climb.” The controller then issued a frequency change to the Ft. Lauderdale (FLL) tower controller. The pilot established communications with the FLL tower controller and did not mention any concerns nor did he declare an emergency. Later in the flight, the pilot transmitted on the FLL frequency, “I might have to drop this banner. I’m not climbing. Zero alpha bravo.” The controller asked if the pilot would like to return to HWO to which he replied, “I’m at 400 [feet]. I gotta drop this banner over a lake... I’m going to be over these oil tanks with like a lake next to it.”

There were no further communications from the pilot.

Commercially-available flight tracking data revealed that the pilot departed HWO about 1225 and completed two passes over the airport before proceeding east-northeast about 1229. The airplane reached a maximum altitude about 900 ft about 1230 before descending to 700 ft about 1 minute later. Over the next approximately 3 minutes, the airplane's altitude varied between 700 and 800 ft. About 1233, the airplane entered a descent that continued until the end of the recorded data. After 1229, through the remainder of the flight, the airplane's groundspeed averaged about 55 knots (kts), with a minimum speed about 48 kts and a maximum speed about 62 kts. Wind conditions recorded at HWO about the time of the accident were from 270° at 11 kts.

Open-source news video depicted the final seconds of the flight and showed the airplane in level flight at low altitude, near rooftop height, in a nose-high pitch attitude. At the moment the banner was released, the airplane rolled and yawed right, before the wings leveled and it descended vertically in a nose-up attitude briefly. The airplane then rolled left and entered a steep, nose-down, left spiraling descent out of the camera’s view. Low resolution surveillance video captured the banner release, the right and left rolls, and then the spiraled, vertical, nose-down collision with the street, where the airplane came to rest and subsequently caught fire.

The pilot held a commercial pilot certificate with ratings for airplane single-engine land and sea, multiengine land and sea, and instrument airplane. His most recent Federal Aviation Administration (FAA) first-class medical certificate was issued on November 14, 2022. According to the operator, the pilot had accrued 324 total hours of flight experience, of which 15 hours were in the accident airplane make and model.

Company records revealed the pilot was hired 5 weeks before the accident. In an interview, the company’s chief pilot said the new-hire training included 40 to 80 hours of classroom, ground, and flight training. The pilot’s training records revealed that he had completed several written and practical examinations.

According to FAA and maintenance records, the airplane was manufactured in 1966 and was powered by a Lycoming IO-540-B2B5, 260-horsepower engine. The airplane’s most recent 100-hour inspection was completed April 4, 2023, at 6,325.6 total aircraft hours.

The airplane was examined at the accident site, and all major components were accounted for at the scene. The airplane came to rest upright facing approximately south. The entire tube and fabric airplane was consumed by fire. The engine was separated from its mounts but remained attached by wires and cables. The propeller was separated at the flange and rested behind the right aileron. The cockpit and instrument panel were consumed by fire. The single seat frame was dislodged from its mounts and distorted by impact and fire.

Control continuity was confirmed from the flight controls to all flight control surfaces.

The banner retention/release system revealed continuity of the numbers 1, 2, and 3 cables to their respective retention/release locks. The cabling was fused by heat, and the system could not be tested from the cockpit. The airframe tail section to which the system was mounted, along with about 24 inches of each cable, was sectioned from the airplane and tested. All three retention/release mechanisms functioned as designed when each individual cable was actuated.

Examination of the engine revealed significant damage by impact and fire. The crankcase was fractured at its front behind the propeller flange. The crankshaft would not rotate due to impact damage to the crankcase. The engine accessories (magnetos, fuel control) were damaged by impact and fire and could not be tested. Examination of the cylinders with a lighted borescope revealed normal operating signatures and no anomalies. There was no evidence of foreign object ingestion or detonation. The valvetrain was rotated through the camshaft and revealed continuity and normal lift action throughout.

The fixed-pitch propeller with the attached crankshaft flange was separated from the engine's crankshaft. The fracture surface signatures were consistent with torsional overload. Both blades showed similar twisting, bending, leading-edge gouging, and chordwise scratching.

The fuel manifold was secure, and disassembly revealed that the inner diaphragm was intact and pliable. The fuel lines were secure, and the nozzles were unobstructed. The number 1 fuel injection nozzle was installed, but not fully seated and it displayed evidence of worn threads.

The engine examination revealed no pre-impact mechanical anomalies that would have prevented normal operation.

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N430AB
Model/Series:	PA-25-235	Aircraft Category:	Airplane
Amateur Built:			
Operator:	AERIAL BANNERS INC	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:	KHWO,6 ft msl	Observation Time:	12:53 Local
Distance from Accident Site:	4 Nautical Miles	Temperature/Dew Point:	32°C /19°C
Lowest Cloud Condition:	Few / 4400 ft AGL	Wind Speed/Gusts, Direction:	11 knots / , 270°
Lowest Ceiling:		Visibility:	10 miles
Altimeter Setting:	29.9 inches Hg	Type of Flight Plan Filed:	Company VFR
Departure Point:	Hollywood , FL (HWO)	Destination:	Hollywood , FL (HWO)

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	26.0045,-80.175278

Administrative Information

Investigator In Charge (IIC):	Rayner, Brian
Additional Participating Persons:	Juan Garcia; FAA/FSDO; Miramar, FL Mark Platt; Lycoming Engines; Williamsport, PA
Investigation Class:	Class 3
Note:	