

**Wreckage Examination
NTSB Accident Number
ERA22FA315**

ACCIDENT

Location:	Middle Twp., NJ
Date:	July 16, 2022
Time:	0935 EDT
Aircraft:	Piper PA-12
Registration	N3703M

PARTICIPANTS (On Scene)

Robert J Gretz
Sr. Air Safety Investigator
National Transportation Safety Board
Eastern Region Aviation

Dennis Petry
FAA PHL FSDO

Brett Hinderer
FAA PHL FSDO

HISTORY OF FLIGHT

On July 16, 2022, about 0935 eastern daylight time, a Piper PA-12, N3703M, was substantially damaged when it was involved in an accident near Middle Twp., New Jersey. 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, the pilot was hired in late May 2022. The airplane was completely fueled prior to the accident flight. On the accident flight, the pilot departed runway 32 and flew a left traffic pattern to approach runway 14 and pick up the banner at the approach end of runway 14, which was normal procedure. The airplane descended toward the banner but missed during the pickup attempt. The airplane then climbed nose-high, appeared to stall and spin right, colliding with the runway. Engine noise was consistent throughout the accident sequence.

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PERSONNEL INFORMATION

Pilot information provided to NTSB IIC by FAA. A request for a copy of the pilot's logbook was made to his family.

AIRCRAFT INFORMATION

The airplane was manufactured in 1947 and powered by a Lycoming O-320-A2B, 150-hp engine equipped with a two-blade Sensenich fixed pitch propeller. Maintenance logbook copies were provided by the operator. The most recent annual inspection was completed on May 29, 2022, at a tachometer time of 4,650.66. The tachometer displayed 4737.61 at the accident site.

METEOROLOGICAL INFORMATION

KWWD 161330Z AUTO 00000KT 10SM BKN 016 26/22 A3013

COMMUNICATIONS

N/A

FLIGHT RECORDERS

N/A

WRECKAGE AND IMPACT INFORMATION

The wreckage came to rest nose-down, oriented about a 320° magnetic heading, and no debris path was observed. The wreckage remained intact. Both wings exhibited leading edge damage and buckling with the left wing exhibiting more damage than the right. The ailerons remained attached to their respective

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wing. The empennage remained intact and canted right. Flight control continuity was confirmed from all flight control surfaces to the cockpit. Measurement of the horizontal stabilizer trim jackscrew corresponded to a nose down trim position. Specifically, 14 threads were observed with 17 threads being full-nose down and 1 thread being full nose up. The cockpit area was crushed, but the pilot's 4-pt harness remained latched and was cut by rescue personnel.

The engine remained attached to the airframe and the propeller remained attached to the engine. One propeller blade remained undamaged while the other exhibited s-bending and leading edge gouging.

The engine was further examined at a recovery facility with a representative from the engine manufacturer. The top spark plugs were removed from the engine. Their electrodes were intact and gray in color, except for the No. 4 spark plug, which was oil soaked. The rocker covers were removed and oil was observed throughout the engine. Both magnetos were removed from the engine and sparked at all leads when rotated by hand. When the propeller was rotated by hand, crankshaft, camshaft, and valve train continuity were confirmed to the rear accessory section of the engine and thumb compression was attained on all cylinders. The carburetor butterfly valve was in the open position. The carburetor was then disassembled. Its floats and needle remained intact, and the fuel screen was absent of debris.

MEDICAL AND PATHOLOGICAL INFORMATION

TBD.

WITNESS STATEMENTS AND CONTACT INFORMATION

Witness Statements were obtained by the Middle Twp Police Department.

ADDITIONAL INFORMATION

Wreckage Recovery: Anglin Aircraft Recovery, Clayton, DE.