

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



ERA22FA243

WRECKAGE EXAMINATION SUMMARY

August 29, 2022

TABLE OF CONTENTS

A. ACCIDENT.....	3
B. WRECKAGE EXAMINATION SUMMARY.....	3
C. SUMMARY.....	3
D. DETAILS OF THE INVESTIGATION	3
1.0 Accident Site	3
2.0 Airframe Examination.....	3
3.0 Engine Examination.....	5

A. ACCIDENT

Location: Myrtle Beach, SC
Date: May 28, 2022
Time: 1414 EDT
1814 UTC
Airplane: Piper PA12

B. WRECKAGE EXAMINATION SUMMARY

IIC Daniel Boggs
National Transportation Safety Board
Daytona Beach, FL

Party Coordinator Mike Childers
Lycoming Engines
Atlanta, GA

C. SUMMARY

On May 28, 2022, at 1414 eastern daylight time, a Piper PA-12, N4421M, was destroyed when it was involved in an accident near North Myrtle Beach, South Carolina. The pilot was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 banner tow flight.

Witnesses that were standing on the flight line at Grand Strand Airport (CRE), North Myrtle Beach, South Carolina, all seen the accident and stated the same occurrences. The airplane came in to pick up the banner, pitched up at a steep angle of attack, and the airplane never “nosed over” and kept the steep angle of attack until the airplane stalled. The left wing dropped down, and airplane made a near vertical dive and impacted the ground nose first.

D. DETAILS OF THE INVESTIGATION

1.0 Accident Site

The accident site was located 126 ft to the right side of runway 23, midfield, and about 300 ft away from the banner pick up zone.

2.0 Airframe Examination

The airplane impacted in a nose down attitude and both wings exhibited accordion crushing. The propeller was fractured off at the engine shaft and was located about 2 ft underground. One propeller blade exhibited chordwise paint abrasion, “S” bending and longitudinal twisting toward the blade face. The other propeller blade exhibited chordwise paint abrasion. Both fuel tanks were breached. Flight control continuity was established to all flight controls. The instrument panel was located under the engine and all instruments were damaged with no useful information able to be used.



Figure 1: Main Wreckage



Figure 2: Banner pick up spot with wreckage in the background

3.0 Engine Examination

The engine was disassembled and it was noted that there were no accessory drive splines installed in the engine accessory case, so the engine crankshaft could not be rotated by hand. The right side cylinders #1 and #3 were removed to provide visual access to the engine internal components. Continuity of the crankshaft camshaft and valve train were confirmed by visual observation. The interiors of cylinders #1 and #3 were observed after they were removed and no anomalies noted. The interiors of cylinders #2 and #4 were observed using a lighted borescope and no anomalies noted.

There was no starter, alternator, vacuum pump or engine driven fuel pump installed. The carburetor remained attached to the engine. The induction air box was partially crushed. The induction air filter was unobstructed. The throttle and mixture cables had been cut. The throttle cable rod end remained attached to the carburetor throttle arm and the arm remained attached to the carburetor. The throttle stop area of the carburetor was impact separated and not observed. The mixture control cable remained attached to the carburetor mixture control arm and the arm remained attached to the carburetor.

The carburetor was partially disassembled and no damage to the composite floats or other internal components.

Both magnetos remained attached to the engine. The left magneto was impact damaged. Both magnetos produced spark from all ignition leads when rotated using an electric drill.

The spark plugs electrodes exhibited gray coloration and worn normal condition.

Oil was observed in the engine. The oil suction screen was absent of debris. The oil pressure screen housing was impact separated from the engine and the screen separated from the housing. The screen was found among the recovered wreckage and was unobstructed.

Submitted by:

Daniel Boggs
Air Safety Investigator