



Aviation Investigation Preliminary Report

Location:	Coatesville, PA	Accident Number:	ERA24FA103
Date & Time:	February 1, 2024, 13:30 Local	Registration:	N887CC
Aircraft:	GRUMMAN AMERICAN AVN. CORP. GA-7	Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Positioning		

On February 1, 2024, about 1330 eastern standard time, a Grumman American Aviation Corporation GA-7, N887CC, was substantially damaged when it was involved in an accident near Coatesville, Pennsylvania. The private pilot was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 positioning flight.

The airplane was the subject of a restoration project, which was documented in a series of online videos, for the purpose of returning the airplane to service and reselling it. The purpose of the flight was to deliver the airplane to its new owner.

According to company and airport employees at Chester County G. O. Carlson Airport (MQS), the pilot arrived around 1230 and made it clear that he was “in a hurry,” as he had a return flight from Knoxville, Tennessee, booked for 1800 that evening. He called the fuel truck multiple times and indicated to the linesmen that he was in a hurry and was not pleased with their delayed response to his fuel request. The airplane’s 116-gallon fuel system was serviced with 80 gallons of fuel, which reached “to the tabs” in each fuel tank.

According to witnesses and surveillance video the pilot did not obtain fuel samples from the airplane’s fuel tanks prior to takeoff.

Witnesses described the engine start, taxi, ground run, and subsequent takeoff from runway 29. Some witnesses reported that the pilot did not perform a pre-takeoff engine run-up, but a review of surveillance video showed a delay, which would have allowed for those checks.

The witnesses described the engine sounds as smooth and continuous until just after takeoff, when a loud pop was heard followed by sputtering. The airplane made an “aggressive” right turn, then turned left and continued on an approximate runway heading about parallel to the runway before it was lost from view.

Automatic dependent surveillance – broadcast (ADS-B) track data depicted a ground track consistent with that described by witnesses. The airplane's climb shallowed, its groundspeed slowed, and the track depicted a sharp, tightening, descending right turn before the track ended in the immediate vicinity of the accident site.

Witnesses on the ground described the airplane in a steep turn before ground contact. One witness said she "could see the whole top of the airplane...the tops of both wings" before the airplane contacted the ground.

The pilot, who also owned a Grumman GA-7, held a private pilot certificate with ratings for airplane single-engine land, multiengine land, and instrument airplane. His most recent Federal Aviation Administration (FAA) third-class medical certificate was issued on November 1, 2007. He reported 1,800 total hours of flight experience on that date. FAA pilot records revealed that the pilot completed the requirements for operation under BasicMed on July 12, 2023.

According to FAA and maintenance records, the airplane was manufactured in 1978 and was powered by two Lycoming O-320-D1P, 160-horsepower engines. The airplane's most recent annual inspection was completed on December 14, 2023, at 4,269.3 total aircraft hours. After completion of the annual inspection, the airplane was flown from Michigan where the work was performed, to MQS. There, an avionics installation was performed as well as mechanical troubleshooting and repairs conducted during the week before the accident flight. The work included, but was not limited to, propeller governor rigging (both sides), the left side fuel quantity indicating system, alternator, alternator switch, and the left magneto on the right engine. The work was completed on the day of the accident.

The airplane came to rest upright on flat terrain in semi-rural private property northwest of MQS. The airplane rested in its initial impact crater on a 135° heading. All major components were accounted for at the scene. There was no evidence of fire.

The leading edge of the right wing was uniformly crushed along its span and showed damage consistent with crush and hydraulic deformation. A corresponding ground scar of similar dimension to the leading edge was noted in the soft ground. The airplane's nose, instrument panel, and cockpit area were destroyed by impact. The left wing was separated and rested upright adjacent to the fuselage. The leading edge outboard of the engine nacelle was undamaged. The main wing spar was fractured about mid-cabin, and all control cables were separated by impact forces. Flight control continuity was established from the control quadrants in the cockpit area through several breaks to their respective flight control surfaces or points of separation. All breaks featured signatures consistent with impact or overload failures.

The pre-impact positions of the fuel selectors and their corresponding valves could not be determined due to multiple fractures in the control rods and the forces of wing separation at impact.

The empennage and tail surfaces were significantly deformed by impact and bent upward approximately 90°. The rudder and elevator control surfaces remained attached to their control cables.

The engines were removed from their nacelles, and their respective propellers were removed. Each two-bladed propeller system displayed one of two blades bent aft approximately mid-span. The carburetor mount/induction plenums were each fractured by impact and were removed with their respective carburetors.

A cursory examination was performed on each engine. They were rotated by hand at the propeller flange and continuity was established on each through the powertrain and valvetrain to the accessory section. All magnetos were secure in the mounts and the impulse couplings produced an audible "snap" during rotation. The top spark plugs were removed from each engine, were intact, showed normal wear, and were light tan and gray in color. Compression was confirmed on all cylinders using the thumb method, and borescope examination revealed signatures consistent with normal wear and combustion deposits.

The left engine carburetor was disassembled and revealed an intact float. The mixture arm remained attached to the carburetor. The mixture cable and the throttle arm were separated by impact. Fuel drained from the bowl was blue in color and contained no visible water or debris contamination. The fuel was tested with water-detecting paste, which detected no water.

The right engine carburetor was disassembled and revealed an intact float. The mixture arm, mixture cable, and throttle arm were all secured to the carburetor. Fuel drained from the bowl was blue in color and contained visible water and debris. The fuel was tested with water-detecting paste, which detected water.

Both the left and right-side fuel boost pumps, one in the root of each wing, were energized with a battery, and both pumped fuel from their respective sump tanks immediately adjacent. Both fuel samples contained water and debris.

Samples taken from the sump tank, engine-driven fuel pump, and the carburetor bowl on the airplane's right side all contained water and debris.

The rubber gasket on the right-wing fuel cap was not installed.

The engines were retained for further examination.

Aircraft and Owner/Operator Information

Aircraft Make:	GRUMMAN AMERICAN AVN. CORP.	Registration:	N887CC
Model/Series:	GA-7	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:	KMQS,660 ft msl	Observation Time:	13:35 Local
Distance from Accident Site:	2 Nautical Miles	Temperature/Dew Point:	7°C /2°C
Lowest Cloud Condition:	Clear	Wind Speed/Gusts, Direction:	10 knots / , 290°
Lowest Ceiling:	Broken / 2700 ft AGL	Visibility:	10 miles
Altimeter Setting:	29.97 inches Hg	Type of Flight Plan Filed:	None
Departure Point:	Coatseville, PA (PN34)	Destination:	Knoxville, TN (TYS)

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	39.993333,-75.900833 (est)

Administrative Information

Investigator In Charge (IIC):	Rayner, Brian
Additional Participating Persons:	Sven Ostrowski; FAA/FSDO; Philadelphia, PA
Investigation Class:	Class 3
Note:	