



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	River Falls, Wisconsin	Accident Number:	CEN22LA220
Date & Time:	June 1, 2022, 12:15 Local	Registration:	N6298L
Aircraft:	GRUMMAN AMERICAN AVN. CORP. AA-1B	Aircraft Damage:	Substantial
Defining Event:	Fuel exhaustion	Injuries:	1 Serious, 1 Minor
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The flight instructor and student pilot reported problems with the airplane's engine shortly after takeoff. The flight instructor stated that the engine "quit abruptly" and "seized," and the student pilot stated that the engine "locked up" and lost total power. The flight instructor assumed control of the airplane and made a forced landing in a field, which resulted in substantial damage to the airplane's left wing.

Postaccident examination of the airplane revealed no fuel remaining in the wing tanks and no evidence of a fuel spill. The fuel system was not compromised. According to the accident report submitted by the flight instructor they departed with 8 gallons of fuel and were flying for about 1 hour and 15 minutes.

Postaccident examination revealed that the engine rotated freely, and compression was verified on all cylinders. Both magnetos produced spark when rotated. Thus, the engine likely lost power due to fuel exhaustion.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The student pilot's and flight instructor's inadequate preflight fuel planning, which resulted in a total loss of engine power due to fuel exhaustion.

Findings

Personnel issues	Fuel planning - Student/instructed pilot
Personnel issues	Fuel planning - Instructor/check pilot
Aircraft	Fuel - Fluid level

Factual Information

History of Flight

Approach-VFR pattern base	Fuel exhaustion (Defining event)
Approach-VFR pattern base	Loss of engine power (total)

On June 1, 2022, about 1215 central daylight time, a Grumman AA-1B airplane, N6298L, was substantially damaged when it was involved in an accident near St. Croix Riviera Airport (6W12), River Falls, Wisconsin. The student pilot sustained minor injuries, and the flight instructor sustained serious injuries. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 instructional flight.

The flight instructor reported that, during the accident flight, he and the student pilot performed two takeoffs and landings and that, on the third takeoff, the engine “quit abruptly” at an altitude of about 150 ft. The flight instructor stated that the engine appeared to have “seized instantly.” The student pilot reported that, during the initial climb after takeoff and when the airplane was about 150 to 200 ft above ground level, the engine “locked up” and lost total power. At that time, the flight instructor assumed control of the airplane and made a forced landing to a vacant field south of the airport, which was straight ahead of the departure runway. The airplane came to rest upright in the field, which resulted in substantial damage to the left outboard wing panel.

Examination of the airplane at the accident scene found no fuel in the wing fuel tanks. A subsequent examination revealed that the fuel tanks were not breached and that the other fuel system components had no discrepancies. According to the accident report submitted by the flight instructor they departed with 8 gallons of fuel and were flying for about 1 hour and 15 minutes.

The engine rotated freely, and compression was verified on all cylinders. Both magnetos produced spark when rotated.

Flight instructor Information

Certificate:	Airline transport; Commercial; Flight instructor	Age:	60,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine	Toxicology Performed:	
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	April 13, 2022
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	14500 hours (Total, all aircraft), 10 hours (Total, this make and model)		

Student pilot Information

Certificate:	Student	Age:	39,Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	January 18, 2022
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	38 hours (Total, all aircraft), 38 hours (Total, this make and model), 5 hours (Pilot In Command, all aircraft), 29 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	GRUMMAN AMERICAN AVN. CORP.	Registration:	N6298L
Model/Series:	AA-1B	Aircraft Category:	Airplane
Year of Manufacture:	1972	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	AA1B0098
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	November 19, 2021 Annual	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	2986 Hrs as of last inspection	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	O-320
Registered Owner:	JFT LLC	Rated Power:	150
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KSTP, 700 ft msl	Distance from Accident Site:	14 Nautical Miles
Observation Time:	11:53 Local	Direction from Accident Site:	293°
Lowest Cloud Condition:	Scattered / 5000 ft AGL	Visibility	10 miles
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.06 inches Hg	Temperature/Dew Point:	19°C / 7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	River Falls, WI (6WI2)	Type of Flight Plan Filed:	None
Destination:	River Falls, WI (6WI2)	Type of Clearance:	None
Departure Time:	11:00 Local	Type of Airspace:	Class G

Airport Information

Airport:	ST CROIX RIVIERA 6WI2	Runway Surface Type:	Grass/turf
Airport Elevation:	895 ft msl	Runway Surface Condition:	
Runway Used:	13	IFR Approach:	None
Runway Length/Width:	1700 ft / 100 ft	VFR Approach/Landing:	Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 Serious, 1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 Serious, 1 Minor	Latitude, Longitude:	44.839775,-92.75065

Administrative Information

Investigator In Charge (IIC):	Brannen, John
Additional Participating Persons:	Greg Thurston; FAA FSDO; Minneapolis, MN
Original Publish Date:	November 8, 2023
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=105171

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).