



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

# Aviation Investigation Final Report

<b>Location:</b>	Vienna Center, Ohio	<b>Accident Number:</b>	ERA24FA308
<b>Date &amp; Time:</b>	July 19, 2024, 19:04 Local	<b>Registration:</b>	N23553
<b>Aircraft:</b>	Beech B-60	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>	Loss of control in flight	<b>Injuries:</b>	3 Fatal
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

During the cruise portion of the cross-country flight, the pilot/owner informed air traffic control that the airplane's left engine had lost power and he could not maintain altitude. The controller offered information on a nearby airport; however, the pilot requested, and then proceeded to, an airport farther away with a 9,003-ft-long runway. After twice circling the approach end of the runway to the left while descending, the pilot proceeded down the runway well above a normal glidepath. A witness reported that the airplane never touched down, and track data showed that the airplane's ground speed increased while over the runway. Airport surveillance video showed the airplane pitch up and to the left at the departure end of the runway. It continued into a left, descending turn until it impacted the ground about ¼ mile west of the departure end of the runway.

Given this information, it is most likely that the pilot was unsuccessful in achieving an appropriate altitude and airspeed, which likely resulted in the pilot performing a single-engine go-around. During the subsequent climb and maneuvering, he lost control of the airplane, which resulted in an uncontrolled descent and impact with terrain.

The wreckage was destroyed by impact forces and a postimpact fire. The left engine's propeller blades were feathered and showed no indications of powered rotation at impact, while the right engine's propeller blades showed damage signatures consistent with powered rotation at impact. A postaccident examination of the left engine revealed severe detonation damage of the No. 4 cylinder piston. Further examination of the left engine fuel servo revealed a significant amount of sand-like contamination in the servo inlet filter, which matched the properties of polyethylene terephthalate (PET), which is a thermoplastic polymer of the polyester family commonly found in fuel system components. The examination of the right engine fuel servo revealed that it was also contaminated with the same substance. The right

engine’s spark plugs and one of its cylinders also displayed signatures consistent with a lean fuel to air ratio. Given this evidence, it is likely that the engines were operating with unpredictable fuel to air ratios due to the fuel system contamination, which likely contributed to the detonation in the left engine and pilot’s description that the engine lost power. The investigation was unable to determine how or when the PET was introduced into the fuel system due to the postimpact fire damage.

## Probable Cause and Findings

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

The pilot’s loss of airplane control during a single-engine go-around. Also contributing to the accident was fuel system contamination, which resulted in detonation and a total loss of left engine power.

Findings	
Personnel issues	Aircraft control - Pilot
Aircraft	(general) - Not attained/maintained
Aircraft	Fuel filter-strainer - Not serviced/maintained
Aircraft	Fuel - Fluid condition

# Factual Information

## History of Flight

Enroute	Fuel contamination
Enroute	Loss of engine power (total)
Approach-VFR go-around	Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

On July 19, 2024, about 1904 eastern daylight time, a Beech B-60 airplane, N23553, was destroyed when it was involved in an accident near Vienna Center, Ohio. The private pilot and two passengers were fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

ADS-B track data obtained from the FAA revealed that the flight departed runway 17 at Plattsburgh International Airport (PBG), Plattsburgh, New York, at 1651, destined for John Glenn Columbus International Airport (CMH), Columbus, Ohio. After departure, the airplane proceeded to the southwest and climbed to 16,500 ft.

About 1835, when the airplane was about 75 miles northeast of Youngstown/Warren Regional Airport (YNG), Vienna Center, Ohio, the pilot informed air traffic control that he was experiencing a problem with the airplane and requested a deviation to YNG. The controller offered information on a closer airport; however, the pilot requested YNG and its longer, 9,003-ft-long runway. At 1851, the pilot stated that the left engine was “dead.”

The airplane proceeded to YNG from the south and arrived overhead the approach end of runway 32 at 3,200 ft mean sea level, or about 2,000 ft above ground level (agl), at 114 kts ground speed. While descending, the airplane twice circled to the left near the approach end of runway 32, eventually lining up on final approach over the approach end of the runway, about 500 feet agl at 123 kts ground speed. The airplane then proceeded down the centerline of runway 32 while continuing to descend. About 3,500 ft from the departure end of the runway, the ADS-B data indicated that the airplane was close to the airport elevation at a ground speed of 131 kts. At the end of the runway, the airplane’s ground speed slowed to 95 kts. Airport surveillance video showed the airplane pitch up and to the left at the departure end of the runway; it continued into a left, descending turn until it impacted terrain about ¼ mile west of the departure end of the runway (see figure).

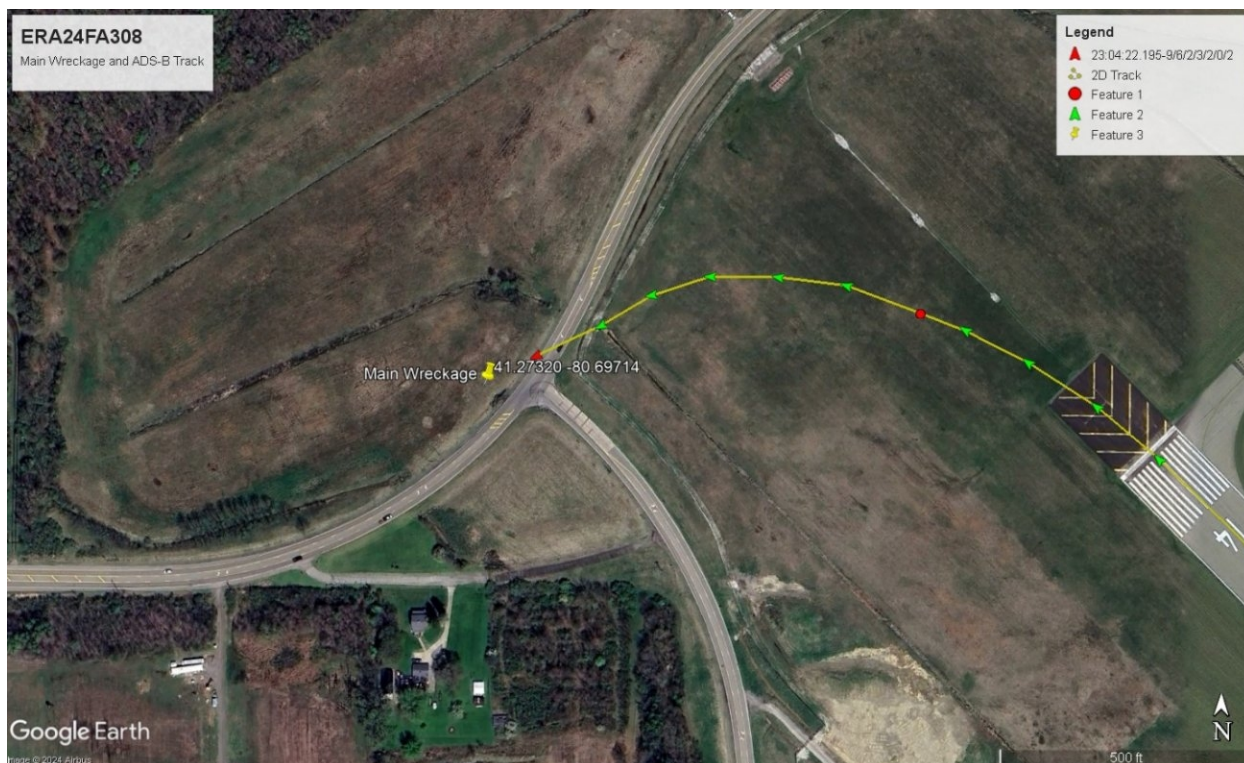


Figure. Final flight track and main wreckage site.

A witness on YNG taxiway D observed the airplane in flight before the accident. He stated that the airplane circled near the approach end of runway 32, then proceeded with the approach down runway 32. The airplane was higher than normal when beginning the approach. As the airplane proceeded down the runway, it descended; however, it did not touch down. At the end of runway 32, the airplane pitched up rapidly to the left and began to “flip.” The airplane then descended below his field of view.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	54,Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 3 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	1123 hours (Total, all aircraft), 46 hours (Total, this make and model)		

The pilot, who owned and operated the airplane, possessed both Canadian and US FAA private pilot certificates with airplane single-engine land and airplane multi-engine land ratings.

The pilot’s personal logbook was not located after the accident. His hours of flight experience were estimated from an insurance application dated June 26, 2024. On the application, he stated that his most recent flight review was completed in October 2023 in a Beech B-60.

According to Transport Canada, the pilot held a valid category 3 medical certificate, issued on October 26, 2023, and valid until November 1, 2025.

**Aircraft and Owner/Operator Information**

<b>Aircraft Make:</b>	Beech	<b>Registration:</b>	N23553
<b>Model/Series:</b>	B-60	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1977	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	P-453
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	August 28, 2023 Annual	<b>Certified Max Gross Wt.:</b>	6775 lbs
<b>Time Since Last Inspection:</b>	32 Hrs	<b>Engines:</b>	2 Reciprocating
<b>Airframe Total Time:</b>	4579 Hrs at time of accident	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed	<b>Engine Model/Series:</b>	TI0-541 SER
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	310 Horsepower
<b>Operator:</b>	On file	<b>Operating Certificate(s) Held:</b>	None

The pilot purchased the airplane on September 1, 2023, four days after the most recent annual inspection of the airframe and engines. The tachometer time at the inspection was 1,138.1 hours.

The last maintenance was recorded on July 17, 2024, at 1,168.1 hours. The service included application of sealer to the left and right wing deice boots near the fuel filler caps, and an oil and filter change on both engines. The mechanic who changed the oil reported that it was “black and nasty” when he first changed it, and the filter was installed more than two years prior. He changed the oil two more times before it finally cleared up and he signed off the maintenance in the logbooks.

An examination of the engine logbook entries for the 2023 annual inspection showed no entry for oil or filter changes for either engine.

A personal acquaintance of the pilot, who was familiar with the airplane, reported that the pilot asked him to fly the airplane, but he refused, citing airworthiness issues. He added that the airplane was parked outside in Plattsburgh, New York, for months without moving, and in the winter it was covered in snow. The airworthiness issues that he was aware of included damage from a hard landing, water in the fuel tanks, hydraulic issues (no fluid in the reservoir), and dry rot of the tires. He stated that the pilot reported problems with the left engine backfiring. He also stated that the pilot seemed to be in a rush to get the airplane flying again, and he warned the pilot to address these issues before the pilot flew it.

### Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	YNG, 1186 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	18:51 Local	<b>Direction from Accident Site:</b>	144°
<b>Lowest Cloud Condition:</b>	Few / 5500 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>		<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	5 knots / None	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	50°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	30.13 inches Hg	<b>Temperature/Dew Point:</b>	25°C / 11°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Plattsburgh, NY (PBG)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Columbus, OH (CMH)	<b>Type of Clearance:</b>	VFR flight following
<b>Departure Time:</b>	16:51 Local	<b>Type of Airspace:</b>	

### Airport Information

<b>Airport:</b>	YOUNGSTOWN/WARREN RGNL YNG	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	1191 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	32	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	9003 ft / 150 ft	<b>VFR Approach/Landing:</b>	Forced landing



## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Destroyed
<b>Passenger Injuries:</b>	2 Fatal	<b>Aircraft Fire:</b>	On-ground
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	3 Fatal	<b>Latitude, Longitude:</b>	41.2732,-80.69714(est)

The wreckage was located on airport property, outside the perimeter fence. The wreckage was found upright in a grassy field, oriented on a 310° heading. A postaccident fire consumed a majority of the wreckage. All structural components of the airplane were found within the wreckage debris path. All three landing gear actuators were found in the extended (down) positions. The landing gear selector was in the extended position. The left and right wing flap actuators were found in the fully extended positions. The rudder trim actuator was found near the neutral position.

All primary flight control surfaces (ailerons, elevator, and rudder), with their appropriate trim tabs and flaps, were accounted for at the wreckage site. Continuity of all primary flight control cables was confirmed from the cockpit to their respective flight control surfaces.

The wing fuel tanks were destroyed by the postaccident fire. The left and right fuel selector valves consisted of three positions: Off, Main, and Crossfeed. Both valves were found in the Main tank position.

The left engine propeller assembly remained attached to the engine at the crankshaft flange. All three blades appeared to be at the feathered position. Although the blades exhibited varying degrees of impact and heat damage, there were no indications of rotational damage consistent with engine operation at the time of impact.

The right engine propeller assembly remained attached to the engine at the crankshaft flange. All three blades appeared to be angled toward a feathered position. The outboard half of one blade was fractured midspan and was not located. The tips of the other two blades were broken off and were not located. All three blades exhibited varying degrees of blade twisting, chordwise scratching, and surface polishing.

The engines were examined after recovery of the wreckage to a salvage facility.

The left engine exhibited impact and thermal damage. The engine's crankshaft was rotated manually, and compression and suction were observed on all cylinders except cylinder No. 4. An internal borescope examination of that cylinder revealed evidence of detonation damage to the piston. The piston face showed signs of detonation with about a 1-inch-diameter material deformation and a missing section along the edge at the 8 o'clock position, where material

was eroded or melted away. The spark plugs for the No. 4 cylinder showed melted material on the electrodes.

An examination of the left-engine fuel servo revealed it was securely installed to the top of the engine with all lines tight and secure. Fuel was present upon removal of various lines to the servo and injectors. The fuel inlet screen was present within the servo; contamination with a sand-like substance was found both in the screen and within the screen port of the servo body. Light from a high-lumen flashlight did not pass through the filter screen mesh after the debris was removed. The diaphragms were removed and found to be free of any tears or damage. The fuel-side diaphragm and servo body were found to have a small amount of the same sand-like substance that was found within the fuel inlet screen.

The right engine exhibited impact and thermal damage. A lighted borescope was used to examine the interior of the cylinders. Each cylinder was unremarkable with the exception of cylinder No. 2; its exhaust valve showed a coloration consistent with high heat and lean engine operation. Engine compression and suction were noted on all cylinders when the right engine's crankshaft was rotated manually. All spark plugs showed normal wear with a light coloration consistent with lean engine operation.

The right engine fuel servo was found securely installed to the top of the engine with all lines tight and secure. Fuel was present upon removal of various lines to the servo and injectors. The fuel inlet screen was present within the servo and was found compacted with a sand-like substance in the screen and the fitting inlet. A small hole through the hard substance was present within the screen. The diaphragms were removed and found to be free of any tears, damage, or debris.

The sand-like debris that was found in the left and right engine fuel servos was sent to the NTSB Materials Laboratory for analysis. A spectral library search was performed on the unknown spectrum. The spectral search found a strong match for PET, a thermoplastic polymer of the polyester family that is commonly found in fuel system components.

## **Medical and Pathological Information**

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An autopsy of the pilot was performed by the Trumbull County Coroner's Office. According to the autopsy report, the cause of death was multiple blunt force trauma and the manner of death was accident.



Postmortem toxicological testing by the FAA Forensic Sciences Laboratory detected minoxidil in the urine and desacetyl bisacodyl in the cavity blood and urine. Both medications are generally not impairing.

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Hicks, Ralph
<b>Additional Participating Persons:</b>	Ernest Hall; Textron Aviation; Wichita, KS Ken Shauman; FAA/FSDO; Cleveland, OH
<b>Original Publish Date:</b>	August 20, 2025
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class 3</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=194723">https://data.nts.gov/Docket?ProjectID=194723</a>

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