National Transportation Safety Board
Aviation Accident Final Report

Location:	Madeira, Ohio	**Accident Number:**	ERA19FA124
Date & Time:	March 12, 2019, 15:16 Local	**Registration:**	N400JM
Aircraft:	Piper PA31	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control in flight	**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Aerial observation		

Analysis

The commercial pilot was conducting an aerial observation (surveying) flight in a piston engine-equipped multiengine airplane. Several hours into the flight, the pilot advised air traffic control (ATC) that the airplane had a fuel problem and that he needed to return to the departure airport. When the airplane was 8 miles from the airport, and after passing several other airports, the pilot informed ATC that he was unsure if the airplane could reach the airport. The final minutes of radar data depicted the airplane in a descent and tracking toward a golf fairway as the airplane's groundspeed decreased to a speed near the single engine minimum control airspeed.

According to witnesses, they heard an engine sputter before making two loud "back-fire" sounds. One witness reported that, after the engine sputtered, the airplane "was on its left side flying crooked." Additional witnesses reported that the airplane turned to the left before it "nose-dived" into a neighborhood, impacting a tree and private residence before coming to rest in the backyard of the residence. A witness approached the wreckage immediately after the accident and observed a small flame rising from the area of the left engine. Video recorded on the witness' mobile phone several minutes later showed the airplane engulfed in flames.

Examination of the wreckage revealed no evidence of any preimpact mechanical malfunctions or failures of either engine. The fuel systems feeding both engines were damaged by impact forces but the examined components generally displayed that only trace amounts of fuel remained; with the exception of the left engine nacelle fuel tank. Given the extent of the fire damage to this area of the wreckage, and the witness report that the post impact fire originated in this area, it is likely that this tank contained fuel. By design, this fuel in this tank was not able to supply fuel directly to either engine, but instead relied on an electric pump to transfer fuel into the left main fuel tank. Fire damage precluded a detailed postaccident examination or functional testing of the left nacelle fuel transfer pump. Other pilots who flew similar airplanes for the operator, along with a review of maintenance records for those airplanes, revealed at least three instances of these pumps failing in the months surrounding the accident. The other pilots also reported varying methods of utilizing fuel and monitoring fuel transfers of fuel from the nacelle fuel tanks, since there was no direct indication of the quantity of fuel available in the tank. These methods were not standardized between pilots within the company and relied on their monitoring the

quantity of fuel in the main fuel tanks in order to ensure that the fuel transfer was occurring. Had the pilot not activated this pump, or had this pump failed during the flight, it would have rendered the fuel in the tank inaccessible.

Given this information it is likely that the fuel supply available to the airplane's left engine was exhausted, and that the engine subsequently lost power due to fuel starvation.

The accident pilot, along with another company pilot, identified fuel leaking from the airplane's left wing, about a week before the accident. Maintenance records showed no actions had been completed to the address the fuel leak. Due to damage sustained during the accident, the origin of the fuel leak could not be determined, nor could it be determined whether the fuel leak contributed to the fuel starvation and eventual inflight loss of power to the left engine.

Because the left engine stopped producing power, the pilot would have needed to configure the airplane for single-engine flight; however, examination of the left engine's propeller found that it was not feathered. With the propeller in this state, the pilot's ability to maintain control the airplane would have been reduced, and it is likely that the pilot allowed the airplane's airspeed to decrease below the single-engine minimum controllable airspeed, which resulted in a loss of control and led to the airplane's roll to the left and rapid descent toward the terrain.

Toxicology results revealed that the pilot had taken doxylamine, an over-the-counter antihistamine that can decrease alertness and impair performance of potentially hazardous tasks. Although the toxicology results indicated that the amount of doxylamine in the pilot's cavity blood was within the lower therapeutic range, review of ATC records revealed that the pilot was alert and that he was making necessary decisions and following instructions. Thus, the pilot's use of doxylamine was not likely a factor in the accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Fuel starvation to the left engine and the resulting loss of engine power to that engine, and a loss of airplane control due to the pilot's failure to maintain the minimum controllable airspeed.

Findings

Aircraft	Fuel - Fluid management
Aircraft	Configuration - Not attained/maintained
Personnel issues	Aircraft control - Pilot
Personnel issues	Use of equip/system - Pilot
Aircraft	Airspeed - Not attained/maintained

Factual Information

HISTORY OF FLIGHT

On March 12, 2019, at 1516 eastern daylight time, a Piper PA-31-350, N400JM, was substantially damaged when it impacted terrain in Madeira, Ohio. The commercial pilot was fatally injured. The airplane was operated by Marc, Inc. under the provisions of Title 14 Code of Federal Regulations Part 91 as a commercial aerial observation flight. Visual meteorological conditions prevailed, and no flight plan was filed for the local flight that originated from Cincinnati Municipal Airport-Lunken Field (LUK), Cincinnati, Ohio, at 1051.

Federal Aviation Administration (FAA) radar data revealed that, after departure LUK, the airplane flew several survey tracks near Cincinnati, Ohio, before proceeding north to fly survey tracks near Dayton, Ohio. According to air traffic control (ATC) voice communications, the pilot contacted ATC at 1503 to request direct routing to LUK due to a fuel problem. The air traffic controller advised the pilot to proceed as requested and offered Dayton-Wright Brothers Airport (MGY), which was 8 miles ahead, as a landing alternative. The pilot responded that he had MGY in sight but wanted to continue to LUK, which was 30 miles away. The controller then asked the pilot if he wanted to declare an emergency, and the pilot responded "negative."

About 1505, when the airplane was at 5,000 ft mean sea level (msl), the controller asked the pilot if he required any assistance with the fuel issue, and the pilot responded that he should be "okay." The controller then advised the pilot that "multiple airports" were available between his location and LUK, and the pilot informed the controller that he would advise if the fuel issue developed again.

About 1513, the pilot established radio contact with the LUK ATC tower and advised the controller that the airplane had a fuel problem and that he was hoping to reach the airport. At that time, the airplane was at an altitude of 1,850 ft msl and was about 8 miles north of LUK. Shortly thereafter, the pilot advised the controller that he was unsure if the airplane would reach the airport. No further communications were received from the pilot. Radar data showed that, between 1513 and 1516, the ground track of the airplane was about 200°, the airplane descended to an altitude of 1,275 ft msl, and its estimated groundspeed decreased from about 140 to 98 knots. At 1516, the radar data depicted a right turn to a heading of about 250° and a ground track that aligned with a golf course fairway (which had an elevation of 865 ft msl). At 1516:27, radar data indicated that the airplane was about 180 ft from the fairway at an altitude of 1,050 ft msl and an estimated groundspeed of about 82 knots. The airplane's last radar-recorded position was located about 550 feet from the accident site. No additional radar data were recorded.

According to witnesses, the airplane engine sputtered before making two loud "pop" or "back-fire" sounds. One witness reported that, after sputtering, the airplane "was on its left side flying crooked." Another witness reported that the "unusual banking" made the airplane appear to be flying "like a 'stunt' in an air show."

Two additional witnesses reported that the airplane was flying low when it turned to the left and "nose-dived" into their neighborhood. The airplane then impacted a tree and the backyard of a residence.

A witness from an adjacent residence heard the impact, approached the wreckage immediately after the accident, and noted a "whitish gray smoke coming from the left engine." He reported that "a small flame began rising from that same area." Video recorded on the witness' mobile phone about 1522 showed the area around the left engine engulfed in flames. The witness stated that the airplane was fully engulfed in flames about 3 minutes later.

PERSONNEL INFORMATION

According to FAA records, the pilot held a commercial pilot certificate with ratings for airplane single-engine land, airplane multi-engine land, and instrument airplane. He also held a flight instructor certificate with ratings for airplane single-engine, and instrument airplane, and a ground instructor certificate. His most recent FAA first-class medical certificate was issued November 8, 2018.

According to the operator (Marc, Inc.), the pilot was contracted to work for them about 1 month before the accident. Examination of the pilot's logbook revealed that as of February 19, 2019, he had accrued 6,392 total hours of flight experience. The logbook included seven entries for Marc, Inc., all of which were in the Cessna 310. The pilot had logged 1,364 hours of flight time in the accident airplane make and model, all of which had been accumulated prior to 2010. The logbook also showed no piston multiengine airplane flight time between that time and his employment with the operator; all of the pilot's logged flights during that time were in turbine and/or single-engine airplanes. The available evidence did not indicate if the pilot received any training or a flight check in the PA-31-350. Review of daily flight logs submitted to the company showed that the pilot flew the accident airplane for 2.5 hours the day prior to the accident.

AIRCRAFT INFORMATION

A review of the airplane's maintenance logs revealed that the airplane's most recent annual inspection was completed on July 1, 2018, at 19,094 total hours of operation. The left engine had accumulated 453.5 hours of operation since its most recent inspection and 2,991.5 hours of operation since overhaul. The right engine had accumulated 448.5 hours since its last inspection. The time since overhaul for the right engine could not be determined based on the information contained within the logs. Additionally, several entries logging maintenance had been added to the records as loose, unbound sheets; several entries within the logs documented maintenance that had been performed to other airplanes; and the right propeller logbook documented maintenance to a propeller whose serial number did not match the propeller installed on the accident airplane's right engine.

A company pilot reported that the accident airplane had a fuel leak in the left wing and provided a photograph of the fuel on the hangar floor, taken about a week before the accident. The company pilot also reported that the accident airplane was due to be exchanged with another company PA-31-350 the week before the accident so that the fuel leak could be isolated and repaired but that the airplane remained parked for a few days and was not exchanged. The accident pilot was then assigned to fly the airplane. One of the pilot's relatives reported that the pilot told him that the accident airplane had airplane fuel leak about 1 week before the accident. Review of the maintenance records revealed no entries in the 2 weeks preceding the accident.

The accident airplane was flown by another company pilot about 1 month before the accident, and he had to perform an unscheduled single-engine landing at Smyrna Airport (MQY), Smyrna, Tennessee,

The pilot stated that he secured the right engine after an indication of low oil pressure and that maintenance work to address "external oil leaks" was performed at a fixed-base operator at MQY. Review of the airplane's maintenance records revealed no entries associated any repairs following this event. The company owner/manager stated that he knew "of no single engine landings" involving the accident airplane.

Fuel System

Each wing contained an inboard (main) and an outboard (auxiliary) fuel tank, which were standard components. Fuel for each engine was routed from either the main or auxiliary fuel tank to the selector valve, fuel filter, fuel boost pump, emergency fuel pump, firewall shutoff, engine-driven fuel pump, and fuel injectors. The engine-driven fuel pumps ran continuously and were not controllable by the pilot. Two electric fuel quantity gauges indicated the fuel quantity in the respective (left or right wing) selected fuel system tank (main or auxiliary). During normal operation, each engine was supplied with fuel from its respective fuel system. In an emergency, fuel from one system could supply the other engine through a crossfeed.

Each wing also had a nacelle fuel tank that was located aft of the respective engine. According to the airplane's maintenance records, the nacelle fuel tanks were installed in the airplane in accordance with a supplemental type certificate in June 2017. The airplane flight manual supplement for PA-31-350 airplanes equipped with nacelle fuel tanks included the following operating limitation: "Do not transfer fuel until main tanks are at least one-half full or less." The manual also included the following normal operating procedure: "Approximately 55 minutes are required to transfer all the fuel out of the nacelle tanks."

Postaccident interviews with company pilots revealed that there was no way to directly monitor the quantity of fuel in the nacelle tanks during flight, nor was there any direct indication that the fuel pumps were operating. Company pilots reported using various methods of managing fuel in airplanes equipped with nacelle fuel tanks. Some pilots used fuel from the main tanks until they were empty, whereas others used fuel from the main tanks for 1.5 to 2 hours and then switched to the auxiliary tanks. After switching to the auxiliary tanks, these pilots turned on the nacelle fuel transfer pumps and used the auxiliary tanks until they were empty to allow time for fuel to transfer from the nacelle tanks to the main tanks. One of the pilots used the auxiliary fuel tanks and switched to the main tanks every 30 minutes so that he could check the fuel gauges and ensure that the fuel was transferring from the nacelle to the main tanks. After all of the fuel from the auxiliary tanks was used, the pilot would switch back to the main tanks, which then contained the fuel from the nacelle tanks, to complete the flight. The available evidence showed no standardized procedure or published guidance issued by the operator to company pilots flying the PA-31-350.

Postaccident interviews and review of company maintenance records revealed that at least three of the company's PA-31-350 airplanes had nacelle fuel pumps replaced in the months before and after the accident. A company pilot reported that he checked the fuel quantity gauge after 30 minutes of flying with the auxiliary tanks and that the gauge indicated the same amount of fuel as when he started the fuel transfer from the nacelle tanks. Two company pilots indicated that they discussed the fuel transfer pump failures with the company owner/manager and the director of maintenance.

METEOROLOGICAL INFORMATION

The 1453 recorded weather observation at LUK included wind from 350° at 3 knots, 10 miles visibility, clear skies, temperature 9°C, dew point -7°C, and an altimeter setting of 30.37 inches of mercury.

WRECKAGE AND IMPACT INFORMATION

Examination of the accident site and wreckage revealed that the airplane came to rest upright with its nose oriented on a magnetic heading of about 335°. The airplane initially impacted a tree, spun 180°, and came to rest in the backyard of a residence. Multiple tree limbs with propeller cuts were observed in the backyard and on the roof of the residence. All major portions of the airplane were located at the site. The wreckage displayed evidence of a postcrash fire.

The fuselage was substantially damaged. The instrument panel was fragmented and destroyed. The engine control levers were fire damaged, and all levers were in the full forward position. Fire damage precluded a determination of the configuration of the fuel selector panel. Control continuity was established from the flight controls to the flight control surfaces; one elevator cable attachment exhibited a tensile overload fracture, so continuity was established from the flight control to the fractured elevator cable attachment and then from the fractured elevator cable attachment to the elevator.

The left wing remained attached to the fuselage. The outboard leading edge of the left wing was crushed upward and aft, and the inboard section displayed thermal and impact damage. The fuel selector valve was positioned to the auxiliary tank and revealed no blockages. The firewall fuel shutoff valve was open, and the crossfeed valve was closed. Fuel caps for all three left wing fuel tanks remained in place. No fuel or fuel odor was noted. The inboard fuel bladder was consumed by fire and only charred debris remained. The outboard fuel bladder was intact with no holes or openings and no residual fuel present. The nacelle fuel tank was both heat and impact damaged and no residual fuel was present. The tank exterior was soot stained and no pre-impact damage was noted to the tank. The tank outlet line was impact and fire damaged. The nacelle transfer pump remained mounted near the tank outlet and was removed for further inspection. The pump was fire damaged, and the fuel inlet and outlet nipples were absent. The fuel pump end cap was removed to facilitate inspection of the pump the interior. The interior of the pump was melted, which prevented further examination or functional testing.

The right wing outboard of the right nacelle was separated by impact, and a section of the right wing came to rest on the roof of the residence. The leading edge of the right wing section displayed a semicircular crush area about 1 ft in diameter that was consistent with tree impact. The fuel selector valve was positioned to the auxiliary tank and revealed no blockages. Fuel system components in the wing root appeared free from damage. The gascolator contained some cloudy water and no fuel or fuel smell was noted. No blockage to the gascolator screen was noted. The left horizontal stabilizer and elevator were dented. The right horizontal stabilizer and elevator were bent upward at the tip. Measurement of the rudder trim barrel revealed a nose-right trim setting.

Left Engine and Propeller Examination

The left engine remained attached to its mount, which was bent and fractured in multiple locations. The engine was angled upward about 75°. The left propeller was located at the initial ground impact point, which was about 13 ft from the left engine, and all but 4 inches of the propeller was buried.

The left engine crankshaft did not rotate upon initial examination. The ignition harness leads on both sides of the engine were damaged by impact. Both magnetos remained secured and produced sparks at

all leads when tested. Less than 2 ounces of fuel remained within the inlet of the fuel servo; a sample tested negative for water. The fuel servo was disassembled, and both diaphragms were present and free of damage. The fuel inlet screen was found unobstructed. Rotation of the engine crankshaft was achieved through the vacuum pump drive after the removal of impact-damaged pushrods. Spark plugs showed coloration consistent with normal operation, and electrodes remained mechanically undamaged. A borescope inspection of all cylinders revealed no anomalies. The oil filter was opened and inspected, and no debris was noted. Fuel injectors were removed and found to be free of obstructions. Residual or no fuel was found during the examination and removal of fuel system components, including fuel lines, injector lines, and the fuel pump. The nacelle fuel transfer pump was damaged by fire, and the interior of the pump was melted, which prevented further examination.

Examination of the left propeller revealed that it was not feathered. The propeller had separated from the engine mounting flange. Two of the three blades exhibited aft bending with no remarkable twist or leading edge damage, and the third blade exhibited no remarkable bending or twisting. All three blades exhibited mild chordwise/rotational abrasion.

Right Engine and Propeller Examination

The right engine remained attached to the right wing and its engine mounts, which were fractured in multiple locations. The right propeller was located at the initial ground impact point, which was about 18 ft from the right engine, and all but 6 inches of the propeller was buried.

The right engine crankshaft did not rotate upon initial examination. The ignition harness leads sustained minor impact damage. Cylinder Nos. 2, 4, and 6 displayed varying degrees of impact damage on their tops. The alternator mount was fractured, and the alternator was missing. Spark plugs showed coloration consistent with normal operation, and electrodes remained mechanically undamaged. Both magnetos produced sparks at all leads when tested. The fuel servo was dissembled, and both diaphragms were present and free of damage. Engine crankshaft rotation was achieved through the vacuum pump drive after the removal of impact-damaged pushrods. A borescope inspection of all cylinders revealed no anomalies. The oil filter was opened and inspected, and no debris was noted. Fuel injectors were removed and found to be free of obstructions. The oil suction screen was found unobstructed but contained nonferrous pieces of material. Fuel was found during the examination of the right engine fuel lines, injector lines, and fuel pump.

The right propeller had separated from the engine mounting flange. All blades exhibited aft bending and bending opposite the direction of rotation, leading-edge-down twisting of the blades, and chordwise rotational scoring on both the face and camber sides of the blades.

MEDICAL AND PATHOLOGICAL INFORMATION

The Hamilton County Coroner's Office, Cincinnati, Ohio, performed the autopsy of the pilot. His cause of death was blunt force injuries.

Toxicology testing was performed at the Federal Aviation Administration (FAA) Forensic Sciences Laboratory detected dextromethorphan in the pilot's cavity blood, dextrorphan in the pilot's cavity blood and liver, and doxylamine in the pilot's cavity blood (61 ng/mL) and liver (489 ng/g). No ethanol and carbon monoxide were detected in the pilot's specimens.

Dextromethorphan is a nonsedating over-the-counter cough suppressant, and dextrorphan is the metabolite of that medication. Doxylamine is an over-the-counter sedating antihistamine used to treat cold and allergy symptoms. The therapeutic range is 50 to 150 ng/mL and it has a half-life of 6 to 12 hours. Doxylamine can decrease alertness and impair performance of potentially hazardous tasks.

ORGANIZATIONAL INFORMATION

Marc, Inc. was based in Brandon, Mississippi. At the time of the accident, they owned 15 PA-31-350 airplanes, 4 of which were non-operational.

ADDITIONAL INFORMATION

Pilot Operating Handbook

According to the PA-31-350 pilot operating handbook, the airplane's air minimum control speed (VMCA), defined as the lowest airspeed at which the airplane was controllable with one engine operating and takeoff flaps configured, was 76 knots indicated airspeed (KIAS).

The pilot operating handbook procedure for an engine failure during flight at an airspeed above 76 KIAS indicated the following:

If an engine fails at an airspeed above 76 KIAS during flight, begin corrective response by identifying the inoperative engine. The operative engine should be adjusted as required after the loss of power has been verified. Attain and maintain an airspeed of 106 KIAS. Once the inoperative engine has been identified and the operating engine adjusted properly, an engine restart may be attempted if altitude permits.

Prior to securing the inoperative engine, check to make sure the fuel flow to the engine is sufficient. If the fuel flow is deficient, turn ON the emergency fuel pump. Check the fuel quantity on the inoperative engine side and switch the fuel selector to the other tank if a sufficient supply is indicated. Check the oil pressure and oil temperature and insure that the magneto switches are ON.

If the engine fails to start it should be secured using the 'Engine Securing Procedure'

The pilot operating handbook procedure for securing (feathering) an engine stated to begin the securing procedure "by closing the throttle of the inoperative engine and moving its propeller control to FEATHER (fully aft) before the propeller speed drops below 1000 rpm."

Special Airworthiness Information Bulletin CE-05-51

The FAA issued Special Airworthiness Information Bulletin (SAIB) CE-05-51, dated April 29, 2005, to alert operators of piston multiengine airplanes of a condition in which pilots "could have the inability to continue level flight with one engine inoperative with a windmilling propeller." The SAIB explained that "the inability to feather a propeller on the inoperative engine can be a result of...the propeller windmilling speed being below the start-lock disengagement speed." The SAIB further stated the following:

The inability to maintain level flight is exacerbated by a windmilling propeller. A windmilling propeller is a large producer of parasitic drag.... In the case of a piston multi-engine airplane, the effect of a windmilling propeller is to increase the total drag of the airplane and induce an asymmetric drag about the yaw axis.... The net result of a windmilling propeller is the aircraft total drag exceeds the power available, thus the aircraft is no longer able to sustain level flight.

History of Flight

Enroute	Fuel related
Enroute-descent	Fuel starvation
Enroute-descent	Engine shutdown
Enroute-descent	Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)
Post-impact	Fire/smoke (post-impact)

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	62,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	Unknown
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane single-engine; Instrument airplane	**Toxicology Performed:**	Yes
Medical Certification:	Class 1 With waivers/limitations	**Last FAA Medical Exam:**	November 8, 2018
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	January 31, 2017
Flight Time:	(Estimated) 6421 hours (Total, all aircraft), 1364 hours (Total, this make and model), 4746 hours (Pilot In Command, all aircraft), 88 hours (Last 90 days, all aircraft), 21.5 hours (Last 30 days, all aircraft), 4.4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N400JM
Model/Series:	PA31 350	**Aircraft Category:**	Airplane
Year of Manufacture:	1981	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	31-8152002
Landing Gear Type:	Retractable - Tricycle	**Seats:**	3
Date/Type of Last Inspection:	July 1, 2018 Annual	**Certified Max Gross Wt.:**	
Time Since Last Inspection:		**Engines:**	2 Reciprocating
Airframe Total Time:	19094 Hrs as of last inspection	**Engine Manufacturer:**	Lycoming Engines
ELT:	C126 installed, activated, did not aid in locating accident	**Engine Model/Series:**	TIO-540-J2B
Registered Owner:		**Rated Power:**	350 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:	MARC, Inc.	**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	LUK,490 ft msl	**Distance from Accident Site:**	5 Nautical Miles
Observation Time:	14:53 Local	**Direction from Accident Site:**	201°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	3 knots /	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:	350°	**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:	30.37 inches Hg	**Temperature/Dew Point:**	9°C / -7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Cincinnati, OH (LUK)	**Type of Flight Plan Filed:**	None
Destination:	Cincinnati, OH (LUK)	**Type of Clearance:**	VFR flight following
Departure Time:	10:51 Local	**Type of Airspace:**	Class E

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	39.179443,-84.380279

Administrative Information

Investigator In Charge (IIC):	Spencer, Lynn
Additional Participating Persons:	Andrew Porter; FAA Cincinnati FSDO; Cincinnati, OH Piper Aircraft ; Vero Beach , FL Lycoming Engines; Williamsport, PA Les Doud; Hartzell; Piqua, OH
Original Publish Date:	August 25, 2020
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=99098