



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

# Aviation Investigation Final Report

<b>Location:</b>	Farmingdale, New York	<b>Accident Number:</b>	ERA24LA116
<b>Date &amp; Time:</b>	February 20, 2024, 11:41 Local	<b>Registration:</b>	N33667
<b>Aircraft:</b>	Piper PA-28-180	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Fuel starvation	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

## Analysis

The student pilot in the left seat and his instructor in the right seat were preparing for a local flight. They estimated that there were about 30 gallons of fuel on board prior to departure; 17 gallons in the left tank and 13 gallons in the right tank. After airwork and emergency procedures practice, they returned to the departure airport for some takeoffs and landings. During the second approach to landing, about two hours into the flight, the student pilot advanced the throttle; however, the engine did not respond. Since they were at low altitude, the instructor took the controls and landed the airplane on a nearby highway. After touchdown, the right wing struck a road sign, partially severing the wing. The pilots egressed the airplane and were not injured.

An examination of the wreckage by Federal Aviation Administration inspectors revealed substantial damage to the right wing. The fuel tank selector handle, which was located near the student pilot's left leg, was found in the LEFT tank position. The left wing fuel tank was uncompromised and contained about ½ gallon of fuel. Although the flight instructor stated that he reminded the student several times to switch tanks, the student did not recall ever switching tanks during the flight. The pilots reported that there were no preaccident mechanical malfunctions or failures with the airplane that would have precluded normal operation.

## Probable Cause and Findings

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

The student pilot's lack of fuel management during the flight and the flight instructor's inadequate monitoring of his student's fuel management, resulting in fuel starvation and a forced landing to a highway.

## Findings

<b>Personnel issues</b>	Use of equip/system - Student/instructed pilot
<b>Aircraft</b>	Fuel - Fluid management
<b>Personnel issues</b>	Monitoring other person - Instructor/check pilot

## Factual Information

### History of Flight

<b>Approach-VFR pattern final</b>	Fuel starvation (Defining event)
<b>Emergency descent</b>	Off-field or emergency landing
<b>Landing-landing roll</b>	Collision during takeoff/land

### Flight instructor Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	24, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 1 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	July 8, 2023
<b>Flight Time:</b>	555 hours (Total, all aircraft), 35 hours (Total, this make and model), 469 hours (Pilot In Command, all aircraft), 104 hours (Last 90 days, all aircraft), 42 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

### Student pilot Information

<b>Certificate:</b>	Student	<b>Age:</b>	42, Male
<b>Airplane Rating(s):</b>	None	<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>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 3 With waivers/limitations	<b>Last FAA Medical Exam:</b>	October 24, 2023
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	22 hours (Total, all aircraft), 16 hours (Total, this make and model), 12 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N33667
<b>Model/Series:</b>	PA-28-180	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1975	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	28-7505166
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	August 30, 2023 Annual	<b>Certified Max Gross Wt.:</b>	2450 lbs
<b>Time Since Last Inspection:</b>	55 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3180 Hrs at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	C126 installed, not activated	<b>Engine Model/Series:</b>	O-360-A4A
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	180
<b>Operator:</b>	On file	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KFRG, 81 ft msl	<b>Distance from Accident Site:</b>	1 Nautical Miles
<b>Observation Time:</b>	11:53 Local	<b>Direction from Accident Site:</b>	340°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	3 knots /	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	20°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	30.52 inches Hg	<b>Temperature/Dew Point:</b>	1°C / -13°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Farmingdale, NY	<b>Type of Flight Plan Filed:</b>	VFR
<b>Destination:</b>	Farmingdale, NY	<b>Type of Clearance:</b>	VFR
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class D

## Airport Information

<b>Airport:</b>	Republic Airport FRG	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	81 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	1	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	5516 ft / 150 ft	<b>VFR Approach/Landing:</b>	Forced landing;Traffic pattern

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	40.71814,-73.40784(est)

## Administrative Information

Investigator In Charge (IIC):	Hicks, Ralph
Additional Participating Persons:	John Harris; FAA/FSDO; Farmingdale, NY
Original Publish Date:	April 12, 2024
Last Revision Date:	
Investigation Class:	<a href="#">Class 4</a>
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	<a href="https://data.nts.gov/Docket?ProjectID=193824">https://data.nts.gov/Docket?ProjectID=193824</a>

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](#).