

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



CEN24FA215

EXAM SUMMARY

06/11/2024

TABLE OF CONTENTS

A. ACCIDENT.....	3
B. EXAM SUMMARY	3
C. SUMMARY	3
D. DETAILS OF THE EXAMINATION.....	4
1.0 ACCIDENT SITE	4
2.0 AIRFRAME EXAMINATION.....	4
2.1 Fuselage.....	4
2.2 Empennage	4
2.3 Wings	5
2.4 Cockpit.....	5
2.5 Fuel/Fuel System.....	6
3.0 ENGINE EXAMINATION	6
4.0 PROPELLER EXAMINATION	7
5.0 METEOROLOGICAL INFORMATION	7

A. ACCIDENT

Location: Clinton, MI
Date: June 10, 2026
Time: 13:11
Airplane: N1039X 1975 PA-28-140, S/N: 28-7525265

B. EXAM SUMMARY

IIC	Zane Brown National Transportation Safety Board Federal Way, WA
Party Member	David Schrader Federal Aviation Administration Ypsilanti, MI
Party Member	David Harsanyi Lycoming Engines Williamsport, PA
Party Member	Sean Holloway Piper Aircraft, Inc. Vero Beach, FL

C. SUMMARY

On June 10, 2024, about 1311 eastern daylight time, a Piper PA-28-140 airplane, N1039X, was substantially damaged when it was involved in an accident near Clinton, Michigan. The flight instructor was fatally injured, and the student pilot sustained serious injury. The airplane was operated as a Title 14 Code of Federal Regulations Part 91 instructional flight.

According to the operator, the purpose of the flight was for the flight instructor and student pilot to conduct initial flight training maneuvers, and it was their first flight together. ADS-B data indicated that the airplane departed Ann Arbor Municipal Airport, Ann Arbor, Michigan, about 1132 and proceeded south of the airport, where it performed several maneuvers. The airplane impacted a field about 13 nautical miles southwest of Ann Arbor Municipal Airport.

D. DETAILS OF THE EXAMINATION

1.0 Accident Site

The accident site was a generally flat, dry field. The initial impact point was identified near 42°05.141' N, 83°56.730' W. The airplane came to rest near 42°05.132' N, 83°56.729' W. There were no structures or persons on the ground involved.

The airplane initially impacted terrain with the right wing tip and then the nose. Pieces of the right wing tip were located in a shallow ground scar near the first identified point of impact. The main wreckage came to rest south of the initial impact point. There was no fire, and all major structural components were present at the accident location. Rescue operations further damaged the forward cabin area.



Figure 1 Accident Airplane

2.0 Airframe Examination

2.1 Fuselage

The forward firewall and instrument panel were detached from the fuselage at the right side. The forward left side of the cabin area was significantly impact damaged. The left side of the fuselage aft of the cabin area was buckled from impact. The right aft area of the fuselage was punctured by the leading inboard corner of the detached right wing.

2.2 Empennage

The rudder was attached at the hinges. Rudder control cables were attached to the rudder bar, and continuity was confirmed to the rudder by movement of the cables. The horizontal stabilator and left elevator had crumple damage near the midspan of the left horizontal stabilator, with the tip of the left stabilator and elevator

bent upward. The right side of the horizontal stabilator and right elevator had minimal damage.

2.3 Wings

LEFT WING

The left wing remained attached to the fuselage. The left flap separated from the wing and came to rest under the fuselage. The left aileron remained attached at the hinges, and the drive and balance cables were intact and connected. The left main landing gear separated from the wing and came to rest under the fuselage.

The left fuel tank contained a visible amount of fuel within the tank. No water was detected in the fuel. The fuel cap was secure to the tank filler, and the cap seal was intact and pliable. About 1.25 gallons of fuel were drained from the tank after recovery. The left fuel tank was filled with water during the off-site examination and was not breached. Low-pressure air flowed freely from the fuel tube connection at the fuel selector to the left tank.

RIGHT WING

The right wing separated from the airplane at the wing root and came to rest approximately parallel to the fuselage longitudinal axis. The wing came to rest inverted, with the forward inboard corner of the wing punctured into the aft fuselage and the wing lying over the right horizontal stabilizer. The right aileron was attached at the hinges. The aileron bellcrank was pulled through the wing to the wing root. The drive and balance cables were connected to the bellcrank. The drive cable was separated with broomstrawed characteristics about 150 inches from the bellcrank. The right flap was attached to the wing at the hinges and was retracted.

The right fuel tank contained a negligible, immeasurable amount of fuel. No water was detected in the fuel. The fuel cap was attached to the filler, and the seal was intact and pliable. The right fuel tank was tested for leakage after recovery and was not breached. The fuel hose at the aft inboard corner of the fuel tank separated at the inboard fitting. Low-pressure air flowed freely from the fuel tube connection at the fuel selector to the left tank.

2.4 Cockpit

The right seat remained attached to its seat rails, and both right seat rails were detached from the fuselage. The left seat remained attached to its seat rails, and both left seat rails remained attached to the fuselage. The forward lap and shoulder restraint belts were connected at their respective attachment points. The restraint straps had been cut during rescue operations. The buckles were latched and

unlatched to confirm operation. The shoulder harnesses were directly attached and were not equipped with inertia reels.

The engine tachometer indicated 0 rpm, and the tachometer time indicated 3263.7 hours. The throttle and mixture controls were found full forward. The carburetor heat lever was on. The engine primer was stowed. The electric fuel pump switch was on.

The flaps and flap handle were in the retracted position. The flap torque tube and drive chain were present in their respective locations. The left and right yoke tubes were detached from the tee bar. The tee bar was broken on the right horizontal bar near the vertical center portion.

Flight and trim control continuity was established from all primary flight control surfaces to the area of their respective controls in the forward cabin through impact-related separations and cuts made during recovery and rescue operations. The horizontal stabilator pitch trim shaft was extended about 1 inch, corresponding to an approximate neutral setting. The pitch trim control rod and cables were correctly attached.

2.5 Fuel/Fuel System

The fuel selector handle and valve were found between the left tank and off position, rotated toward off beyond the lockout. When tested with low pressure airflow, the fuel selector valve operated correctly in the detent positions. When tested in its as-found position, the valve did not flow. The fuel selector was located on the left side of the cockpit adjacent to the left seat occupant's left leg.

The fuel feed line was cut and pinched about 3 inches forward of the fuel selector valve. The cut end of the line was bent upward and contained a small amount of fuel. The fuel strainer and gascolator were clean and contained no fuel. The electric fuel pump was clean, appropriately operated when electrical power was applied, and contained no fuel.

3.0 Engine Examination

The airplane was equipped with a Lycoming O-320-E3D engine, serial number L-41358-27A. The engine remained attached to the forward fuselage section and came to rest about 40 ft from the initial impact point. The forward fuselage section contained the instrument panel, firewall, and engine. The engine was cut from its mount to facilitate the examination.

The engine sustained impact damage to the exhaust tubes, intake tubes, carburetor, airbox, magneto harnesses, engine mount, and cowling. The oil filler neck was

fractured from the engine case. The starter ring gear was fractured into multiple pieces, and the tooth portion was free to rotate from the aluminum plate. The top spark plugs were removed from each cylinder. The engine was rotated by hand using the attached propeller and produced thumb compression and suction on each cylinder. Rocker arm movement was observed on each cylinder. A lighted borescope examination of each cylinder was unremarkable. Thumb compression and suction was obtained on all cylinders by manually rotating the propeller.

The oil suction screen was tightly installed and safety wired to the oil sump. The screen was removed and was unobstructed. The oil filter was tightly installed on the accessory section of the engine and was marked with a date of 6/6/24.

Both magnetos were installed on the rear of the engine. The left magneto was tightly installed with no observed damage. The right magneto was slightly loose and could be turned within the accessory case; visible damage to the rear of the magneto was consistent with impact with the engine firewall. The magnetos were removed, and spark was present at each lead when the magnetos were rotated. The spark plugs were Champion REM40E massive-electrode plugs. The spark plug coloration and wear were consistent with normal engine operation.

4.0 Propeller Examination

The fixed-pitch aluminum propeller remained attached at the crankshaft. The propeller was straight and had minimal damage.

5.0 Meteorological Information

The weather reported at Ann Arbor Municipal Airport at 1253 included wind from 360° at 11 knots, gusting to 18 knots; 10 statute miles visibility; few clouds at 4,800 ft agl; temperature 18°C; dew point 7°C; and an altimeter setting of 29.87 inches of mercury. Day visual conditions prevailed.

Submitted by:

Zane Brown
Aviation Accident Investigator