

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



WPR24LA268

AIRFRAME EXAMINATAION

August 15, 2024

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A. ACCIDENT

Location: Minden, Nevada
Date: August 5, 2024
Time: 0900 Pacific daylight time
Airplane: N4145B, Piper PA-34-220T

B. AIRFRAME EXAMINATAION

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FAA Inspector	William Mastley Federal Aviation Administration Reno, Nevada
Party Coordinator	Sean Holloway Piper Aircraft Inc. Vero Beach, Florida

C. SUMMARY

On April 11, 2024, about 0900 Pacific daylight time, a Piper PA-34-220T, N4145B, was substantially damaged when it was involved in an accident near Minden, Nevada. The pilot was not injured. The airplane was operated as a Title 14 Code of Federal Regulations Part 91 personal flight.

D. DETAILS OF THE EXAMINATION

1.0 Airframe Examination

Examination of the recovered airframe revealed buckling and bending on the forward fuselage near left and right wing. Buckling and bending was also observed above the windscreen on the fuselage. The nose landing gear was fracture separated and damage was observed to the nose landing gear wheel well. The observed hobbs meter time was 1455.5 hours.



Figure 1: View of accident airplane during examination.

The airplane was stabilized using floor jacks on the forward fuselage, near the nose landing gear. The rear seats, interior, and fuselage inspection panels were removed. A visual examination of the flight control cables was conducted, no damage was observed. Flight control continuity was established from the cockpit flight controls to the respective flight control surfaces.

The stabilator trim control wheel was observed in the full nose down position. Force was needed to rotate the stabilator trim control wheel to the neutral position, when rotated by hand. Binding was noted on stabilator trim control. Using the airplanes battery, power was applied to the electric trim controls. When the stabilator trim was placed in the full nose down position, the electric trim servo was heard operating, but would not move the stabilator trim cable. The stabilator trim control wheel was rotated by hand to the neutral position, and the electric stabilator trim control would move the stabilator trim cable. A visual examination of the stabilator trim control cable was conducted, no damage was observed. The empennage flight control cover was removed, and a visual inspection of the trim screw assembly was conducted. Corrosion was observed on the trim screw assembly. The trim screw assembly was moisture free. The exposed shaft of the trim screw was free of lubrication, the ends exhibited minimal lubrication. The trim screw assembly had radial and axial play when moved by hand, consistent with excessive wear on the upper and lower barrel mount bearings. The trim screw assembly was disassembled,

and circular grooves were observed on the outer sections of the upper and lower barrel mount bearings.



Figure 2: View of stabilator trim assembly.

2.0 Engine Examination

The airplane was equipped with a Continental TSIO-360 and a Continental LTSIO-360 engines. Both engines remained attached to the engine mounts. No damage was observed to the left and right engine nacelles.

3.0 Propeller Examination

The airplane was equipped with two, McCauley three blade constant speed propellers. The propellers and propeller hubs remained attached to the engine crank shaft. All propeller blades exhibited aft bending about mid span, consistent with the propellers impacting the runway surface.

4.0 Aircraft Information

According to the airframe logbook, an annual inspection of N4145B was completed on August 1, 2024.

