

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



ERA25LA007

EXAMINATION SUMMARY

January 08, 2025

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A. ACCIDENT

Location: Rutherford, North Carolina
Date: October 03, 2024
Time: 1730 EDT
2130 UTC
Airplane: North American, Navion A, NAV-4-960, N9117R

B. EXAMINATION SUMMARY

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C. SUMMARY

On October 03, 2024, about 1730 eastern daylight time, a North American Navion airplane, N9117R, was substantially damaged when it was involved in an accident at Rutherford County Airport / Marchman Field (FQD), Rutherfordton, North Carolina. The pilot and passenger sustained minor injuries. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The pilot reported that he departed Concord-Padgett Regional Airport (JQF), Concord, North Carolina and was destined for FQD. On final approach to runway 19 at FQD, the pilot heard a loud "pop" and felt heat coming from behind the pilot and copilot's seats. As the airplane approached the runway threshold, the cabin filled with smoke, and fire was visible in the cabin. During the landing, the airplane's nose gear collapsed, and the airplane came to rest on the runway.

D. DETAILS OF THE EXAMINATION

1.0 Accident Site

The airplane came to rest in a nose down attitude on runway 19 at FQD. The inflight and postaccident fire consumed majority of the airplane.



Figure 1- Accident site (photo provided by FAA)

2.0 Airframe Examination

The wreckage was recovered to a hangar at FQD and later repositioned to a secure hangar at Fairview Airport (33A), Landrum, South Carolina. An airplane examination was performed on January 08, 2025.

2.1 Fuselage

Majority of the fuselage was destroyed. All flight control continuity was established through recovery and thermal separations.

2.2 Empennage

Thermal damage was noted to the empennage. Majority of the left elevator and horizontal stabilizer were destroyed. The right elevator and horizontal stabilizer

remained attached to their mounts. The rudder remained attached to the vertical stabilizer.

2.3 Wings

The right wing remained attached to the fuselage with thermal damage noted to the wing root area. The right aileron and flap remained attached to the wing. About 4ft of the inboard area of the left wing and flap were destroyed. The left aileron remained attached to the wing.

2.4 Landing Gear

The landing gear was noted in the down position. The nose landing gear exhibited impact and thermal damage, and the wheel assembly was impact separated from the strut. The left main landing gear's supporting structure was thermally destroyed; its oleo tube was separated from the trunnion and thermal discoloration was noted to the landing gear. The right main landing gear remained attached to the right wing with thermal damage noted.

2.5 Cockpit

The instrument panel and flight instruments were destroyed.

2.6 Fuel/Fuel System

Majority of the fuselage mounted fuel supply, vent, and vapor return lines were destroyed. The right wing's fuel tank exhibited thermal expansion and was breeched at its inboard manufactured seam. The fuel cap remained attached to the receptacle. The rigid vent line was thermally destroyed at the fuselage area. The fuel tank's flexible vent line remained attached; however, its two hose clamps were not secured. The left fuel tank's supporting structure was destroyed, and the thermal expansion was noted to the fuel tank. The accumulator tank for the wing fuel tanks exhibited thermal deformation and its fuel screen was clear of debris. The fuselage mounted auxiliary fuel tank, and its associated accumulator tank were mostly destroyed.

The fuel selector valve was observed in the auxiliary fuel tank position, and its position was confirmed during field test with low-pressure air. The gascolator was not observed within the recovered wreckage. Thermal damage was noted to the electric fuel pump, and its fuel screen was clear of debris. No anomalies were noted to the fuel pressure relief valve. The interior of the fuel system check valve contained a small amount of debris, and an orange in color material, consistent to that of room-temperature vulcanizing (RTV), was observed on the valve's O-ring and hinge.

3.0 Engine Examination

No anomalies were noted to the engine. Thermal damage was noted to the hydraulic components in the engine area. A loose high-pressure hydraulic line B-nut was observed at the controllable relief valve which was mounted to the firewall above the left exhaust extension pipe. There was no hydraulic fluid observed in the reservoir. Majority of the hydraulic lines were destroyed aft of the firewall.

4.0 Propeller Examination

The two-bladed aluminum propeller remained attached to the engine. Both propeller blades exhibited aft deformation and chord-wise abrasion to their outboard areas.

5.0 Additional Information

Review of the airplane's maintenance manual indicated that the main fuel tank vent line extended into the atmosphere beneath the left side of the fuselage near the wing's leading edge. A preaccident photograph of the airplane showed that the vent line was positioned approximately 10 inches aft and generally aligned with the left exhaust extension pipe (see figure 2).



Figure 2- Annotated photograph of the vent location.

Submitted by:
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