

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



CEN23LA206

EXAMINATION SUMMARY

August 3, 2023

TABLE OF CONTENTS

A. ACCIDENT	3
B. EXAMINATION SUMMARY	3
C. SUMMARY	3
D. DETAILS OF THE EXAMINATION.....	3
2.0 AIRFRAME EXAMINATION.....	3
2.1 Fuselage.....	3
2.2 Empennage	4
2.3 Wings.....	4
2.4 Landing Gear	4
2.5 Cockpit.....	4
2.7 Fuel/Fuel System.....	4
3.0 ENGINE EXAMINATION	4
4.0 PROPELLER EXAMINATION	5

A. ACCIDENT

Location: Divide, CO
Date: May 29, 2023
Time: 1130 MDT
1730 UTZ
Airplane: Cessna 172B, N8098X

B. EXAMINATION SUMMARY

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Investigator	Zane Brown NTSB Denver, CO
Investigator	Damian Galbraith NTSB Denver, CO
Investigator	Jennifer Rodi NTSB Denver, CO

C. SUMMARY

An examination of the airframe and engine was completed on August 3, 2023, in West Pueblo, CO. Investigators from the NTSB were present to witness and assist. The examination revealed no pre-accident mechanical anomalies that would have precluded normal operation of the airplane.

D. DETAILS OF THE EXAMINATION

1.0 Airframe Examination

1.1 Fuselage

No issues noted.

1.2 Empennage

No issues noted.

1.3 Wings

Removed prior to examination for recovery purposes. No issues noted.

1.4 Landing Gear

Nose landing gear found separated from the airframe due to ground impact. No issues noted with the main landing gear.

1.5 Cockpit

No issues noted. Throttle, Carb Heat, and Mixture controls were free and correct when moved by hand.

1.6 Fuel/Fuel System

The fuel selector valve was found in the BOTH position and rotated correctly when moved by hand. The wing fuel tank caps were both found in their locked position with intact gaskets.

No fuel line blockages were observed between the fuselage connection b nut and the carburetor. Air was blown through both wing fuel tank lines at the fuselage connection and fuel was found in the line between the fuel selector valve and the gascolator. Less than a pint of fuel was collected from this fuel line. The collected fuel was blue in color with a smell consistent with 100LL Avgas. A sample of fuel was also field tested for water with a negative test result observed. The fuel was also found in the gascolator. The fuel screen was removed and found to be clear of debris.

2.0 Engine Examination

The engine was found still attached to the engine mount with vegetation debris and mount damage consistent with the accident sequence. The Throttle and Carb Heat cables found attached to the carburetor and airbox respectfully. The Mixture cable was found separated from the carburetor with damage consistent from impact. Mechanical continuity noted through the engine when propeller was manually rotated.

The upper spark plugs were removed and showed signs of heavy carbon fouling with engine oil present. This is consistent with the engine being inverted for several weeks prior to the airplane being recovered from the accident site. All cylinders were inspected with a borescope with no issues noted.

The ignition system was tested by manually rotating the propeller with the ignition key on BOTH. Spark was observed on all spark plug leads. The upper spark plug lead for cylinder #6 was found to be frayed but still produced a spark.

The air intake and exhaust system were inspected with a borescope with no blockages or issues noted. The Brackett engine air filter was intact, clean, and the correct Revision H per AD 96-09-06.

The carburetor was removed from the intake system with no blockages observed in the venturi, around the throttle plate, or fuel inlet ports. The throttle had free and smooth movement through the entire allowed range. The fuel nozzle was clear of debris. The carburetor bowl and floats were removed with no fuel observed in the bowl. The bowl was clean with no foreign material. The float was replaced in 2014 and had free movement with no witness marks on the bowl from the float sticking.

The oil level was checked with the dipstick and observed at 2 quarts below the minimum limitation of 6 quarts. However, the engine had been inverted for several weeks prior to recovery. The engine oil filter, dated 12/22/22, was removed and cut open to inspect the filter media. Metal particles were found within the filter media, but nothing was observed over the size of fine art type glitter.

3.0 Propeller Examination

The propeller was found still attached to the crankshaft with rotational bending of the blades. No issues noted.

Submitted by:

Andrew Finne
Air Safety Investigator