

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



CEN23LA344

EXAMINATION SUMMARY

September 13, 2023

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A. ACCIDENT

Location: Oberlin, Kansas
Date: July 20, 2023
Time: 1236 central daylight time
Airplane: Beechcraft Bonanza A36, N36900

B. EXAMINATION SUMMARY

IIC	Brian Rutt NTSB Denver, Colorado
Investigator	Zane Brown NTSB Denver, Colorado

C. SUMMARY

On July 20, 2023, about 1236 central daylight time, a Beech A36 airplane, N36900, sustained substantial damage when it was involved in an accident near Oberlin, Kansas. The pilot was not injured, and the passenger sustained minor injuries. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The airplane departed from Northeast Wyoming Regional Airport (GCC), Gillette, Wyoming, enroute to Dalhart Municipal Airport (DHT), Dalhart, Texas. The pilot reported that while in cruise flight over a cloud layer near Oberlin, the airplane experienced a loss of engine power. While the pilot attempted to troubleshoot the issue, the airplane descended through the clouds, and he regained visual reference about 1,500 ft above ground level (agl). The pilot maneuvered the airplane for a forced landing to a road. Upon touchdown, the airplane exited the road, encountered an embankment, and impacted terrain which resulted in substantial damage to the left wing and fuselage.

1.0 Engine & Fuel System Examination

The engine was examined on the airframe at Beegles Recovery and Storage in Greeley, Colorado

- The engine remained attached to the fuselage.
- The left and right wings, elevator and horizontal were removed from the fuselage during recovery.
- The fuel tanks were not compromised during the accident or recovery.

- The foam air filter was embedded with dirt from impact.
- No blockages were noted in the exhaust or induction systems.
- There was oil indicated on the dipstick at the 12 quarts mark.
- A blue liquid consistent with aviation gasoline was observed at the fuel servo.
- Top spark plugs removed and when compared to Champion AV-27 Check-a-Plug chart. They were all consistent with "severe worn out" condition.
- All magneto leads sparked when both magnetos were rotated by the propeller.
- All cylinders exhibited normal thumb compression and suction when tested.
- Fuel lines were pressure tested from the wing tanks to the fuel pump inlet hose with no anomalies noted.
- The fuel selector functioned normally.
- The fuel pump was removed at the accident site by a Federal Aviation Administration inspector and provided at the exam.
- The fuel pump coupler remained attached to the engine and rotated when the propeller was turned by hand.
- The fuel pump coupler was removed and intact (figure 3).
- The fuel pump exhibited pressure at the out outlet when the fuel pump drive was manually rotated.
- The fuel injectors were removed and found to be unremarkable.
- Fuel was collected from the fuel strainer consistent with 100 low lead fuel. The fuel sample was clear and free of debris.
- Water finding paste was used and no water was found in the fuel sample.
- The fuel strainer filter was removed. There was fibrous material on the filter.
- The fuel distributor screen was removed and was unremarkable.
- The fuel check valve was removed. The screen was clear.
- The fuel flow transducer was removed and was unremarkable.
- Throttle cable was continuous to the fuel servo and exhibited full motion.
- Mixture cable was continuous to the fuel servo and exhibited full motion.
- Induction alternate air was free and correct.
- The fuel servo was removed and was unremarkable.
- The right-wing fuel vent was unobstructed.
- The left-wing fuel vent was obstructed when pressure tested. Investigators cleared most of the debris when applying pressurized air.
- The left-wing fuel vent check valve was found stuck closed and insect debris were observed inside. (Figure 4)



Figure 1: View of fuselage

1.1 Fuel/Fuel System

The wings were separated from the fuselage for recovery (Figure 1). Fuel was collected from the fuel strainer consistent with 100 low lead aviation fuel. The fuel sample was clear and free of debris. Water finding paste was used and no water was found in the fuel sample. The fuel strainer filter was removed. There was an unknown fibrous material on the outside of the filter (Figure 2), however the majority of the filter was clear.



Figure 2: Fuel Strainer Filter

The engine driven fuel pump was removed at the accident site by a Federal Aviation Administration (FAA) inspector and provided during the examination. The coupler remained attached to the engine and rotated when the propeller was rotated by hand. The fuel pump drive coupler was measured at 1.37 inches, in compliance with Teledyne Continental Aircraft Engine Mandatory Service Bulletin MSB95-6. Pressure was obtained at the fuel pump outlet when the fuel pump drive was manually rotated.



Figure 3: Fuel pump drive coupler

The fuel system was pressure tested at the left and right wing tanks to the fuel pump inlet. No anomalies were noted. The right-wing fuel tank vents were unobstructed. The left-wing fuel tank vents were obstructed. When pressure tested, debris was removed from the vent lines. The left-wing fuel vent check valve was observed stuck in the closed position. The vent line from the tank was also obstructed. The fuel selector functioned normally.



Figure 4: Left wing fuel vent check valve

Submitted by:

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NTSB