

# National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



WPR22FA173

## AIRFRAME AND ENGINE EXAMINATION

Factual Report

March 6, 2023

## Table of Contents

|                                                      |   |
|------------------------------------------------------|---|
| A. ACCIDENT.....                                     | 3 |
| B. EXAMINATION PARTICIPANTS .....                    | 3 |
| C. SUMMARY .....                                     | 3 |
| D. DETAILS OF THE EXAMINATION.....                   | 3 |
| 1.0 Airplane Wreckage PRIOR TO THE EXAMINATION ..... | 3 |
| 1.1 AIRFRAME EXAMINATION .....                       | 3 |
| 1.2 ENGINE EXAMINATION .....                         | 5 |

## A. ACCIDENT

Location: Grasmere, Idaho

Date: May 8, 2022

Time: 1419 MDT  
2119 UTC

Airplane: N801DT, Experimental amateur-built Comp Air 8 SS52

## B. AIRFRAME AND ENGINE EXAMINATION PARTICIPANTS

NTSB-IIC                      Albert Nixon  
                                     NTSB, AS-WPR  
                                     Phoenix, Arizona

## C. SUMMARY

The examination of the airframe and engine was accomplished at Air Transport in Phoenix, Arizona. The examination revealed no evidence of preimpact mechanical failures or malfunctions that would have precluded normal operation. The only anomaly noted was debris noted in the right-wing fuel screen.

## D. DETAILS OF THE EXAMINATION

### 1.0 Airframe and Engine prior to the Examination

The engine remained partially attached to the airframe during the relocation of the wreckage from the accident site. The airplane's aft portion of the fuselage with the vertical stabilizer and rudder attached was the only main section of the airplane, that was relatively intact.

### 1.1 Airframe Examination

Both wings were separated. The left wing was disbanded and split open. The right wing appeared mostly intact. Borescope examination of the right fuel tank revealed no anomalies. Examination of the left-wing remnants revealed no perforations noted that would be consistent with a fuel leak. The fuel tanks were observed to have at a depth of about 10 inches. The fuel header tank was examined and was intact and no anomalies were noted.

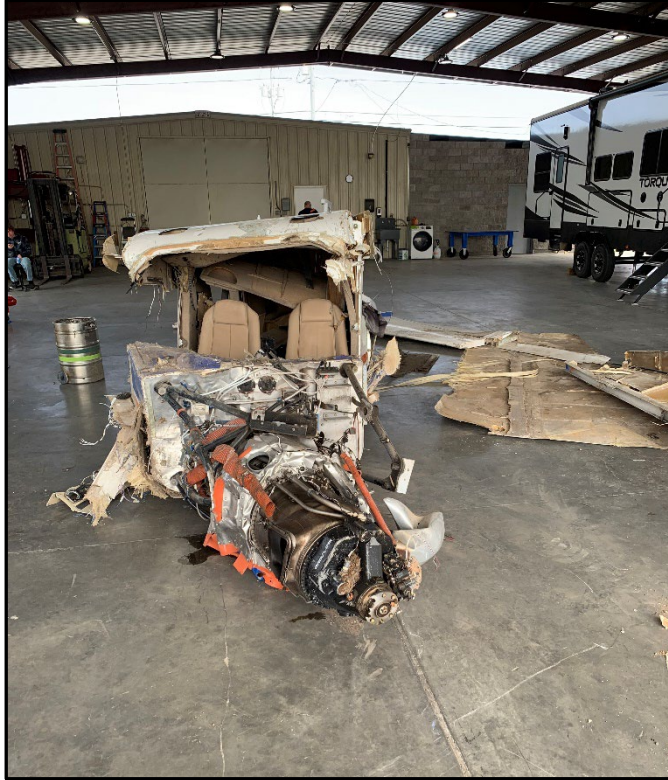


Photograph 1 - Airplane wreckage as viewed from the right side.

Both fuel caps were examined, and no anomalies were noted. The locking tabs worked appropriately, and the seals were in good condition. The fuel cap vents had no obstruction to flow, that was determined by blowing compressed air through them.

Flight control continuity was established to the cockpit controls. The rudder was attached and continuity to the rudder pedals was established. The elevators and horizontal stabilizer were separated. However, a small portion of the left elevator that connected to right elevator, and the control rod that was attached too, confirmed continuity. Aileron continuity was confirmed from to the wing root from the push rod.

The flap actuator was examined and revealed that the flaps were selected in the retracted position.



Photograph 2- Front view of the wreckage and engine.

## 1.2 Engine Examination

The Walter M601D engine, serial number 861017, was partially secured to the airframe, however damage consistent with impact damage was noted to the engine mounts and engine mounting carriage. No external damage to the engine was noted except the propeller assembly had separated from the propeller flange and was damaged.

Control continuity with the engine controls and the engine were verified. The levers had sustained impact damage and were difficult to move.

The engine turbine was examined by borescope and no anomalies were noted and all the blades appeared to be intact. The inlet section was externally examined, and no anomalies were noted.

The fuel control unit was attached. The fuel control unit inlet line was removed, and fuel residue was present. The unit sustained no impact damage. The throttle linkage was examined, and no anomalies were noted. When moving the linkage from the idle to the full power position, residue fuel was observed to drip out of the fuel control unit fuel outlet line.

The engine vacuum pump was attached and appeared to be undamaged. The vacuum pump was removed, and the internal gearing was intact and was manually rotated with no anomalies noted.

The fuel filter had separated and was located and examined. Examination of the filter pleats revealed no obstructions to flow.

All fuel lines were attached and examined. No leaks were observed in the lines. The left fuel selector was positioned on, and the right fuel selector was positioned off. There was impact damage near the right fuel selector. The fuel screens, in each wing were examined. The left wing's screen was partially deteriorated. The right wing's screen was intact, and some debris was observed. Fuel continuity was established through blowing compressed air through the lines to the engine. The fuel line to the engine had no observable fuel present.

Submitted by:

Albert Nixon  
Senior Aviation Accident Investigator