

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



WPR22LA353

AIRFRAME EXAMINATION

Factual Report

October 14, 2022

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A. ACCIDENT

Location: Pasco, WA
Date: September 20, 2022
Time: 0709 PDT
1409 UTC
Airplane: N528DV, Cessna 525B

B. AIRFRAME EXAMINATION PARTICIPANTS

NTSB-IIC	Albert Nixon Senior Aviation Accident Investigator National Transportation Safety Board Phoenix, AZ
FAA	Taha Rabbani Aviation Safety Inspector Federal Aviation Administration Spokane, WA
Textron Aviation	Andrew Hall Chief Air Safety Investigator Textron Aviation Wichita, KS

C. SUMMARY

Examination of the recovered airframe and engine was conducted on October 13th and 14th, 2022, at the facilities of Bergstrom Aviation, Tri-Cities Airport (PSC), Pasco Washington. The examination of the airframe revealed no evidence of pre-impact mechanical failures or malfunctions that would have precluded normal operation.

D. DETAILS OF THE EXAMINATION

1.0 Airframe prior to the Examination

The airplane wreckage was recovered from the runway and situated in a hanger with the left main landing gear extended and the airplane resting on its nose and right wing. The aft portion of the fuselage was bent downwards and to the right. A majority of the wreckage sustained significant thermal damage. The entire fuselage sustained thermal damage.



Photograph 1- Airplane wreckage on runway as viewed from the front. (Note: the left main landing gear door is partially extended).



Photograph 2- Airplane wreckage as viewed from the left side.



Photograph 3- Airplane wreckage as viewed from the right side.

1.1 Airframe Examination

The left wing sustained thermal damage the entire span and the outboard section was folded over the top section of the inboard portion. The left wing's flap and aileron were significantly thermally damaged and only a small portion remained. The right wing was flush with the ground and the inboard half sustained thermal damage. The right flap was attached and sustained thermal damage and the aileron was attached. The right flap was observed in a partially extended position. The right wing's speed break was observed in the retracted position and the left wing speed break was not observed. The horizontal stabilizer was the only section that was observed that did not sustain thermal damage. On the bottom of the fuselage, the auxiliary landing gear skid was observed to be worn and abraded off the aircraft.

Both wing fuel tanks were compromised from damage sustained during the accident and thermal damage.

The flap actuator was examined and indicated that the flaps were in the land position.



Photograph 4- The left main landing gear as viewed from the front.

Both main landing gear uplock hooks were observed in the gear released position. The left main landing gear down lock was examined and no anomalies were noted. The left main landing gear door sustained abrasion damage on the outboard edge. The left main landing gear tire sustained thermal damage. The right main landing gear's uplock hook lower end was separated. The separation was consistent with impact damage. The right main landing gear door could not be examined as no heavy equipment was available to lift the airplane wreckage.

The engines remained attached, sustained thermal damage, and the two engine FADEC controls were removed from the fuselage for shipment for potential download of data.

Flight continuity was established to the rudder and elevators. Aileron continuity could not be established due to extensive thermal damage, however, each aileron was appropriately connected.

The front windscreen and about half the passenger windows sustained thermal damage and were rendered unusable. The remnants of the main cabin door had separated and sustained thermal damage.

In the cockpit, the flaps were set to landing position. All circuit breakers were in. The throttles were at the idle position. The landing gear lever was observed in the down (gear extended) position and the emergency landing gear handle was observed in the stowed position. The battery was off. The cockpit and cabin interior sustained significant thermal damage.



Photograph 5- Airplane cockpit area as viewed from the rear.

The following were removed for future examination; two engine FADECs, three landing gear control PCB circuit cards, and the landing gear lever and associated landing gear position lights. Additionally, the aircraft was equipped with the AReS 1 system that records maintenance troubleshooting and flight data. The AReS card was retrieved earlier by the FAA for shipment for potential download.

The accident landing zone and runway was reviewed by the investigative team on Oct 14, 2022. The accident site was located in the departure end of runway 03L about

160 ft past the runway end threshold. A review of the runway revealed that about 3,000 ft down from the runway threshold of 03L, the first runway skid marking, were observed that was consistent with the airplane's auxiliary landing gear skid. The mark continuing to about the 1,000 ft remaining marker. An 18 inches of a braided aluminum material was removed from the area of the skid mark on the runway. Subsequently, the debris collected on the runway was examined and was identical the braided aluminum material located on the runway. In addition, additional debris collected from the runway were larger portions of the airplane's auxiliary landing gear skid.

Submitted by:

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Senior Aviation Accident Investigator