



Aviation Investigation Final Report

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|--------------------------------|--------------------------------------|-------------------------|-------------|
| Location: | Laytonsville, Maryland | Accident Number: | ERA20CA091 |
| Date & Time: | January 17, 2020, 17:05 Local | Registration: | N1557F |
| Aircraft: | Cessna 185 | Aircraft Damage: | Substantial |
| Defining Event: | Loss of control on ground | Injuries: | 1 None |
| Flight Conducted Under: | Part 91: General aviation - Personal | | |

Analysis

After two uneventful circuits in the traffic pattern, the pilot aligned the airplane to the runway for another a touch-and-go landing. As he applied engine power, he used the right rudder to center the airplane on the runway. About 50 ft into the takeoff roll, the airplane veered left. The pilot applied right brake and right rudder to correct; however, the airplane became "momentarily airborne." He reduced the engine power, and as the airplane settled back onto the runway, it veered right. The pilot attempted to stop the airplane by applying the brakes; however, it continued off the right side of the runway and traveled through mud, and subsequently, the left main landing gear collapsed. The left wing, left elevator, and left horizontal stabilizer sustained substantial damage. An examination of the wreckage by a Federal Aviation Administration inspector revealed that the airplane came to rest on the left side of the fuselage. The tailwheel attachment tube was separated from the empennage, but the tailwheel control cables remained attached.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The failure of the tailwheel attachment tube during the takeoff roll, which resulted in a loss of directional control, a runway excursion, and the left main landing gear collapsing.

Findings

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| Aircraft | Nose/tail landing gear - Failure |
| Aircraft | Directional control - Attain/maintain not possible |

Factual Information

History of Flight

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| Takeoff | Part(s) separation from AC |
| Takeoff | Loss of control on ground (Defining event) |
| Takeoff | Attempted remediation/recovery |
| Takeoff | Runway excursion |
| Takeoff | Landing gear collapse |

Pilot Information

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|---------------------------|--|-----------------------------------|-----------------|
| Certificate: | Private | Age: | 71,Male |
| Airplane Rating(s): | Single-engine land | Seat Occupied: | Left |
| Other Aircraft Rating(s): | None | Restraint Used: | 4-point |
| Instrument Rating(s): | Airplane | Second Pilot Present: | No |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | Class 3 With waivers/limitations | Last FAA Medical Exam: | October 1, 2019 |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | January 4, 2019 |
| Flight Time: | 1800 hours (Total, all aircraft), 900 hours (Total, this make and model) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|----------------------------------|---------------------------------------|-----------------|
| Aircraft Make: | Cessna | Registration: | N1557F |
| Model/Series: | 185 D | Aircraft Category: | Airplane |
| Year of Manufacture: | 1965 | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 185-0928 |
| Landing Gear Type: | Tailwheel | Seats: | 4 |
| Date/Type of Last Inspection: | August 19, 2019 Annual | Certified Max Gross Wt.: | 3197 lbs |
| Time Since Last Inspection: | 14 Hrs | Engines: | 1 Reciprocating |
| Airframe Total Time: | 3697.3 Hrs as of last inspection | Engine Manufacturer: | Continental |
| ELT: | Installed, not activated | Engine Model/Series: | IO-470 SERIES |
| Registered Owner: | On file | Rated Power: | 265 Horsepower |
| Operator: | On file | Operating Certificate(s) Held: | None |

Meteorological Information and Flight Plan

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| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
| Observation Facility, Elevation: | GAI,539 ft msl | Distance from Accident Site: | 5 Nautical Miles |
| Observation Time: | 16:56 Local | Direction from Accident Site: | 190° |
| Lowest Cloud Condition: | Clear | Visibility | 10 miles |
| Lowest Ceiling: | None | Visibility (RVR): | |
| Wind Speed/Gusts: | 5 knots / None | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 310° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 30.69 inches Hg | Temperature/Dew Point: | -1°C / -11°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | Laytonsville, MD (W50) | Type of Flight Plan Filed: | VFR |
| Destination: | Laytonsville, MD (W50) | Type of Clearance: | Special VFR |
| Departure Time: | 17:05 Local | Type of Airspace: | Class B |

Airport Information

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|-----------------------------|-----------------|----------------------------------|---------|
| Airport: | Davis W50 | Runway Surface Type: | Asphalt |
| Airport Elevation: | 609 ft msl | Runway Surface Condition: | Dry |
| Runway Used: | 08 | IFR Approach: | None |
| Runway Length/Width: | 2000 ft / 50 ft | VFR Approach/Landing: | None |

Wreckage and Impact Information

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|----------------------------|--------|-----------------------------|---------------------------|
| Crew Injuries: | 1 None | Aircraft Damage: | Substantial |
| Passenger Injuries: | | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 1 None | Latitude, Longitude: | 39.243331,-77.150001(est) |

Administrative Information

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| Investigator In Charge (IIC): | Kemner, Heidi |
| Additional Participating Persons: | Philippe Derosier; FAA/FSDO ; Baltimore , MD |
| Original Publish Date: | June 16, 2020 |
| Last Revision Date: | |
| Investigation Class: | Class |
| Note: | This accident report documents the factual circumstances of this accident as described to the NTSB. |
| Investigation Docket: | https://data.nts.gov/Docket?ProjectID=100889 |

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).