

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# CEN15LA212 04/18/2015 1440 CDT Regis# NONE Smithville, TX Apt: Smithville Crawford Muni 84R
Acft Mk/Mdl BUCKEYE BREEZE-2200 Acft SN UNK Acft Dmg: MINOR Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl ROTAX 583 Fatal 0 Ser Inj 1 Flt Conducted Under: FAR 091
Opr Name: HERBERT COWAN Opr dba: Aircraft Fire: NONE
AW Cert: SPX

Summary

The noncertificated pilot, who had not received any previous flight instruction, reported that, during takeoff, the powered parachute was caught by a gust of wind and veered off the left side of the runway. He was unable to regain control, as he was unfamiliar with the parachute and engine controls, and the aircraft impacted a utility pole and hangar. A nearby weather observation system reported calm winds at the time of the accident. Therefore, it is likely that the pilot experienced a loss of control due to his unfamiliarity with the aircraft.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The noncertificated pilot's loss of directional control during takeoff, which resulted in impact with a utility pole and hangar. Contributing to the accident was the pilot's failure to obtain flight instruction before attempting to fly the aircraft.

Events

1. Takeoff - Loss of control on ground
2. Takeoff - Runway excursion
3. Takeoff - Collision during takeoff/land

Findings - Cause/Factor

1. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
2. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Directional control-Not attained/maintained - C
3. Personnel issues-Experience/knowledge-Experience/qualifications-Qualification/certification-Pilot - F
4. Personnel issues-Experience/knowledge-Training-Initial instruct/training-Pilot - F

Narrative

On April 18, 2015, about 1440 central daylight time, an unregistered Buckeye Breeze 2200 powered parachute impacted obstructions during takeoff at Smithville Crawford Municipal Airport (K84R), Smithville, Texas. The powered parachute sustained substantial damage and the pilot was seriously injured. Visual meteorological conditions prevailed at the time of the accident. The personal flight was conducted under the provisions of 14 Code of Federal Regulations Part 91 and a flight plan had not been filed.

The pilot reported that he started the engine, inflated the parachute canopy with air, and initiated the takeoff roll. During takeoff, the powered parachute was hit by a "strong crosswind" and veered to the left exiting the runway. The pilot reported he was confused about the engine power control and he had inadvertently increased power instead of decreasing engine power to abort the takeoff. The powered parachute impacted a utility pole and then a hangar before coming to rest. The pilot reported he broke his leg when he impacted the utility pole.

At 1435, the automated weather observation system at Fayette Regional Air Center Airport (K3T5), located approximately 13 miles southeast of 84R, reported calm winds.

The pilot reported that he did not hold a pilot certificate, and he had no previous ground training or flight training. This accident flight was his first attempt at flight. The two-seat powered parachute was equipped with wheeled tricycle landing gear, a 10-gallon fuel tank, and had an empty weight of about 395 pounds; meeting the light sport aircraft classification. It had not been issued a required Federal Aviation Administration (FAA) registration certificate or an FAA airworthiness certificate.

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Accident Rpt# GAA17CA250 04/30/2017 800 PDT Regis# N366DN Boulder City, NV Apt: N/a
Acft Mk/Mdl NORTH WING UUM INC SPORT X2-N-NO Acft SN LS7003 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl ROTAX 582 UL Acft TT 652 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: SALLY E. LARIMORE Opr dba: Aircraft Fire: NONE
AW Cert: LTSP

Summary

The student pilot of the weight-shift-control aircraft reported that, while practicing touch-and-go landings on a dried lake bed, the flight instructor was controlling the throttle inputs, and she "controlled the wing." She added that, just before the accident, she observed three dust devils to the east and that, during a final pass near the north end of the lake bed, they came upon "strong localized turbulence." The aircraft impacted the ground and rolled to the left.

The flight instructor reported that, during the turbulence encounter "about 4-6 ft" above the ground, the "wing stalled," which resulted in a "hard nose wheel landing."

The weight-shift-control aircraft sustained substantial damage to both wings.

The flight instructor reported that there were no preaccident mechanical failures or malfunctions with the weight-shift-control aircraft that would have precluded normal operation.

The flight instructor reported that the wind was light and variable and that the temperature was 70°F at the accident location. A review of recorded data from the automated weather observation station located about 6 miles northeast of the accident site reported that, about the time of the accident, the wind was calm, and the temperature was 64°F.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The student pilot's exceedance of the weight-shift-control aircraft's critical angle of attack and the flight instructor's delayed remedial action and failure to maintain the proper airspeed after encountering localized turbulence during approach, which resulted in an aerodynamic stall.

Events

1. Landing - Turbulence encounter
2. Landing - Loss of control in flight
3. Landing - Collision with terr/obj (non-CFIT)

Findings - Cause/Factor

1. Personnel issues-Task performance-Use of equip/info-Aircraft control-Student/instructed pilot - C
2. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Angle of attack-Capability exceeded - C
3. Personnel issues-Action/decision-Action-Delayed action-Instructor/check pilot - C
4. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Airspeed-Not attained/maintained - C
5. Personnel issues-Task performance-Use of equip/info-Aircraft control-Instructor/check pilot - C
6. Personnel issues-Psychological-Attention/monitoring-Monitoring other person-Instructor/check pilot - C
7. Personnel issues-Psychological-Attention/monitoring-Monitoring other person-Instructor/check pilot - C
8. Environmental issues-Conditions/weather/phenomena-Wind-Dust devil/whirlwind-Effect on operation

Narrative

The student pilot of the weight-shift-control aircraft reported that while practicing touch-and-go landings on a dried lake bed, the flight instructor was controlling the throttle inputs and she "controlled the wing". She added that just before the accident, she observed three dust devils to the east and during a final pass near the north end of the lake bed, they came upon "strong localized turbulence". The aircraft impacted the ground and rolled to the left.

The flight instructor reported that during the turbulence encounter "about 4-6 ft" above the ground, the "wing stalled" which resulted in a "hard nose wheel landing".

The weight-shift-control aircraft sustained substantial damage to both wings.

The flight instructor reported that there were no preaccident mechanical failures or malfunctions with the weight-shift-control aircraft that would have precluded normal operation.

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The flight instructor reported the wind was light and variable, and the temperature was 70øF at the accident location. A review of recorded data from the automated weather observation station located about 6 miles northeast of the accident site reported that about the time of the accident the wind was calm and the temperature was 64øF.

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|--|---------------------|-----------------------|---------------------|------------------------------|--|
| Accident Rpt# CEN17LA182 | 05/13/2017 1820 CDT | Regis# N616NG | Weatherford, TX | | |
| Acft Mk/Mdl PIPISTREL DOO AJDOVSCINA VIRUS | Acft SN 742SWN100 | Acft Dmg: SUBSTANTIAL | Rpt Status: Prelim | Prob Caus: Pending | |
| Eng Mk/Mdl ROTAX 912ULS | | Fatal 0 | Ser Inj 2 | Flt Conducted Under: FAR 091 | |
| Opr Name: PRIVATE INDIVIDUAL | Opr dba: | | Aircraft Fire: NONE | | |
| | | | AW Cert: SPE | | |

Events

1. Takeoff - Unknown or undetermined

Narrative

On May 13, 2017, about 1820 central daylight time, a Pipistrel Virus SW motor-glider, N616NG, collided with terrain while performing touch and go landings. The pilot and passenger were seriously injured. The airplane was registered to and operated by a private individual under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Visual meteorological conditions prevailed for the flight, which operated without a flight plan.

According to preliminary information provided to the responding Federal Aviation Administration inspectors, an eyewitness saw the motor-glider performing a touch and go landing. The witness perceived that the airplane's airspeed was slow and appeared to stall during the takeoff phase and impact terrain.

The motor-glider was retained for further examination.

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|--------------------------------------|---------------------|---------------|-----------------------|--|
| Accident Rpt# GAA17CA092 | 11/18/2016 1730 EST | Regis# N12680 | Philadelphia, PA | Apt: Northeast Philadelphia PNE |
| Acft Mk/Mdl PITCAIRN PA 18-NO SERIES | | Acft SN G-67 | Acft Dmg: SUBSTANTIAL | Rpt Status: Factual Prob Caus: Pending |
| Eng Mk/Mdl KINNER R55 | | Acft TT 600 | Fatal 0 Ser Inj 0 | Flt Conducted Under: FAR 091 |
| Opr Name: ASPLUNDH ERIC | | Opr dba: | | Aircraft Fire: NONE |
| | | | | AW Cert: STN |

Events

2. Landing-landing roll - Dynamic rollover

Narrative

According to the pilot of the tailwheel-equipped gyroplane, he landed on the right main landing gear. The gyroplane begin rolling to the right, but the gyroplane's heading was aligned to the left of the runway heading and continued in a left direction of travel. He attempted to correct the gyroplane's right roll by moving the control stick to the left, however, the aileron movement did not subside the roll. He reported that in hindsight, opening the throttle and right rudder application may have subsided the roll, "but my mental preparedness was biased to preventing a ground loop, not a dynamic rollover". However, the gyroplane continued to roll right and impacted the ground. The gyroplane came to rest on the runway and sustained substantial damage to the main rotor system, right wing, and the empennage.

The pilot reported that his lack of experience in the gyroplane model contributed to the accident, because the critical angle was exceeded in this gyroplane more quickly than other gyroplanes that he was accustomed to flying.

The pilot reported that there were no pre-accident mechanical malfunctions or failures with the gyroplane that would have precluded normal operation.

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Accident Rpt# GAA17CA340 06/14/2017 1300 PDT Regis# N4206N Reno, NV Apt: Air Sailing NV23
Acft Mk/Mdl SPORTINE AVIACIJA LAK 12-NO SERIES Acft SN 682 Acft Dmg: SUBSTANTIAL Rpt Status: Prelim Prob Caus: Pending
Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: EDWARD E. WINCHESTER Opr dba: Aircraft Fire: NONE

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| Accident Rpt# GAA17CA198 | 10/29/2016 730 CDT | Regis# NONE | Blountstown, FL | Apt: Calhoun County F95 |
| Acft Mk/Mdl AEROS 2 | | Acft SN 04705 | Acft Dmg: SUBSTANTIAL | Rpt Status: Factual Prob Caus: Pending |
| Eng Mk/Mdl ROTAX 912 ULS | | | Fatal 0 Ser Inj 1 | Flt Conducted Under: FAR 091 |
| Opr Name: PAUL CURRY | | Opr dba: | | Aircraft Fire: NONE |
| | | | | AW Cert: NON |

Summary

The noncertificated pilot of the weight-shift-controlled trike reported that, during the takeoff, he was "fighting the wing." He added that the aircraft was about 30 ft above the ground when he "pulled on the control bar," the right wing rose, and the left wing dipped down. The aircraft subsequently impacted terrain in a left-wing-down attitude to the left of the runway.

The center fuselage spar and wing sustained substantial damage.

The pilot reported that there were no preaccident mechanical malfunctions or failures with the aircraft that would have precluded normal operation.

The pilot added that the accident flight was his first flight in the unregistered trike and that he had received no flight training before the accident flight. He reported that when he purchased the weight-shift-controlled trike, the bill of sale indicated that the aircraft was an "ultralight."

According to the trike's operating manual, the aircraft specifications exceeded the maximum takeoff weight, fuel capacity, and seat limitations stated in 14 Code of Federal Regulations Part 103 for ultralight aircraft.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The noncertificated pilot's decision to fly the weight-shift-controlled aircraft without having received training in the aircraft type, which resulted in his loss of aircraft control shortly after takeoff.

Events

1. Initial climb - Loss of control in flight
2. Initial climb - Collision with terr/obj (non-CFIT)

Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Pitch control-Not attained/maintained - C
2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
3. Personnel issues-Experience/knowledge-Experience/qualifications-Qualification/certification-Pilot - C
4. Personnel issues-Action/decision-Info processing/decision-Decision making/judgment-Pilot - C

Narrative

The noncertificated pilot of a weight-shift controlled trike reported that during the takeoff he was "fighting the wing." He added that the aircraft was about 30 feet above ground, when he "pulled on the control bar," the right wing rose, and the left wing dipped down. The aircraft subsequently impacted the terrain in a left wing down attitude to the left of the runway.

The center fuselage spar and wing sustained substantial damage.

The pilot reported that there were no preaccident mechanical malfunctions or failures with the aircraft that would have precluded normal operation.

The pilot added that the accident flight was his first flight in the unregistered trike. He added that he possessed no pilot certificate and had received no flight training prior to the accident flight. He reported that when he purchased the weight-shift controlled trike, the bill of sale indicated that the aircraft was an "ultralight."

According to the trike's operating manual, the aircraft specifications exceeded the maximum takeoff weight, fuel capacity, and seat limitations stated in 14 Code of Federal Regulations Part 103 for ultralight aircraft.

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| Accident Rpt# WPR17LA121 | 06/04/2017 917 MST | Regis# N51FB | Goodyear, AZ | Apt: Phoenix Goodyear GYR |
| Acft Mk/Mdl BOB FREDERICK TITAN T-51 | | Acft SN | Acft Dmg: SUBSTANTIAL | Rpt Status: Prelim Prob Caus: Pending |
| Eng Mk/Mdl SUZUKI | | | Fatal 0 Ser Inj 0 | Flt Conducted Under: FAR 091 |
| Opr Name: LEE OWENS | | Opr dba: | | Aircraft Fire: IFLT |
| | | | | AW Cert: SPE |

Events

1. Initial climb - Powerplant sys/comp malf/fail

Narrative

On June 4, 2017, at 0917 mountain standard time, an experimental Bob Frederick (Titan Aircraft), Titan T-51 Mustang, N51FB, lost engine power during takeoff from Phoenix Goodyear Airport, Goodyear, Arizona. The flight instructor was not injured, and the airplane sustained substantial damage to the left wing and aft fuselage during the forced landing. The airplane was registered to the builder, and operated by the pilot as a 14 Code of Federal Regulations Part 91 personal flight. Visual meteorological conditions prevailed for the local flight, and no flight plan had been filed.

The pilot reported that immediately after takeoff, the airplane began to vibrate. It felt like one of the wheels was still spinning, so he applied the brakes, but it continued. As he transitioned the airplane to the downwind leg, the vibration increased and the engine began to stream smoke. As he initiated a return to runway 21, the cockpit filled with smoke, and the engine lost power. Unable to reach the runway, he landed short in the adjacent dirt area, where the landing gear collapsed.

The airplane was equipped with a Suzuki six-cylinder, 2.7-liter automobile engine. Post-accident examination revealed two holes in the lower left side of the engines crankcase, adjacent to the cylinder number 4 crankshaft journal.

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| Accident Rpt# ANC16LA068 | 09/16/2016 1104 AKD | Regis# N8008Z | Wasilla, AK | Apt: N/a |
| Acft Mk/Mdl JEFFERY D TUTTLE BDK CARBON | Acft SN BDK-001 | Acft Dmg: SUBSTANTIAL | Rpt Status: Factual | Prob Caus: Pending |
| Eng Mk/Mdl LYCOMING O-320-A2B | | Fatal 0 Ser Inj 1 | Flt Conducted Under: FAR 091 | |
| Opr Name: JEFFERY D TUTTLE | Opr dba: | | Aircraft Fire: NONE | |
| | | | AW Cert: LTSP | |

Events

2. Approach-VFR pattern base - Sys/Comp malf/fail (non-power)

Narrative

On September 16, 2016, about 1104 Alaska daylight time, a tailwheel-equipped, experimental amateur-built, Tuttle BDK Carbon Concepts airplane, N8008Z, sustained substantial damage following an inflight structural failure of the leading-edge wing slats, followed by a loss of control, and subsequent impact with terrain. The accident occurred as the pilot was attempting to return for an emergency landing near Wasilla, Alaska. The airplane was registered to and operated by the pilot, as a visual flight rules (VFR) flight under the provisions of 14 Code of Federal Regulations (CFR) Part 91 when the accident occurred. The certificated commercial pilot, the sole occupant of the airplane sustained serious injuries. Visual meteorological conditions prevailed, and no flight plan had been filed. The local area flight departed Anderson Lake Airport, Wasilla, Alaska at about 1100 with a planned stop at Palmer Airport, Palmer, Alaska for touch-and-go landings prior to returning to Anderson Lake Airport.

During a telephone conversation with the National Transportation Safety Board (NTSB) investigator-in-charge (IIC) on September 21, the pilot reported, from his hospital room, that the accident flight was the first flight after he completed building the experimental, amateur-built airplane. He added that the airplane was equipped with carbon fiber, leading-edge wing slats, manufactured by Carbon Concepts LLC, Wasilla.

The pilot said that after departure from Anderson Lake Airport, he flew the airplane westbound while climbing to an altitude of about 1,000 feet, followed by a turn to the east. After completing the turn to the east, the pilot heard a loud "pop" and he immediately saw that the airplane's left wing leading-edge wing slat had buckled and distorted making the airplane difficult to control about the longitudinal and vertical axis. He stated that while struggling to maintain control of the airplane he realized that he was too high to make an emergency, straight in approach to the Anderson Lake Airport, so he chose to overfly the airport while descending. He added that during the emergency descent to the airport, he was forced to make significant engine power adjustments in an effort to maintain control of the airplane. After overflying the airport, he made a right turn to begin the approach to the Anderson Lake Airport when the right wing leading-edge wing slat failed, resulting in almost a complete loss of control. He guided the airplane using the rudder and varying the engine power settings to an open road, with his main concern being not to cause undue harm to people or property on the ground. During the emergency descent the airplane struck the top of a tree before impacting the road in a nose low attitude, sustaining substantial damage to wings and fuselage.

On September 29, 2016, the NTSB IIC, along with the rest of the investigative team examined the airframe and engine at a private residence in Wasilla. All the primary flight control surfaces remained connected to their respective attach points, and flight control continuity was verified from all of the primary flight control surfaces to the cockpit.

Each wing was equipped with three carbon fiber leading-edge slats located center, inboard and outboard. The right wing's leading-edge slats revealed features consistent with a compression failure of the leading edge, trailing edge bond failure, lack of adhesive in the joints, and ply bridging. In addition, the inboard slat attachment bracket exhibited deformation patterns consistent with an overload failure.

The left wing leading-edge slats had no apparent leading edge damage but revealed signatures consistent with resin starvation. In addition, the attach bracket between the inboard and center slat exhibited features consistent with an adhesive failure in the joint and a disbond at the attachment. Microscopic inspection of the attachment bracket revealed a lack of adhesion, improper surface preparation, and improper adhesive thickness.

The propeller remained attached to the engine crankshaft and one of the propeller blades exhibited chordwise scratching. Examination of the Lycoming O-320-A2B engine revealed no anomalies, contamination, or evidence of malfunction in any of the engine accessories. The cylinders, pistons, valve train, crankshaft, and other internal components were all without evidence of anomaly or malfunction.

The closest weather reporting facility is Wasilla Airport, Wasilla, Alaska about 8 miles southwest of the accident site. At 1056, an aviation routine weather report (METAR) at Wasilla, reported: wind from 070ø at 5 knots; visibility, 10 statute miles; sky condition, scattered clouds 7,000 feet, scattered clouds 8,000 feet; temperature, 54ø? F; dew point 41ø? F; altimeter, 29.38 inHG.

After repeated attempts, the pilot did not submit an NTSB Pilot/Operator Accident Report form (NTSB Form 6120.1) as required.

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| Accident Rpt# CEN17LA206 | 05/31/2017 1920 CDT | Regis# N6165 | Boonville, MO | Apt: Jesse Viertel Memorial VER |
| Acft Mk/Mdl KENNETH B HINES NIEUPORT 28-NO | Acft SN 061112 | Acft Dmg: SUBSTANTIAL | Fatal 0 | Rpt Status: Prelim Prob Caus: Pending |
| Eng Mk/Mdl VOLKSWAGEN 2130 | | Ser Inj 0 | Flt Conducted Under: FAR 091 | |
| Opr Name: PRIVATE INDIVIDUAL | Opr dba: | | Aircraft Fire: NONE | |

Events

1. Takeoff - Unknown or undetermined

Narrative

On June 1, 2017, about 1920 central daylight time, a Kenneth B Hine Nieuport 28 airplane, N6165, experienced a loss of engine power on takeoff and collided with terrain near Boonville, Missouri. The pilot was not injured. The airplane was registered to and operated by a private individual under the provisions of 14 Code of Federal Regulations Part 91 as a test flight. Visual meteorological conditions prevailed for the flight and a flight plan was not filed. The local flight was originating at the time of the accident.

According to information provided to the responding Federal Aviation Administration inspector, the flight was the first for the airplane since built. The airplane had departed and was about 30 ft in the air when the engine began to run rough. The pilot reduced power to land on the runway. The airplane landed hard collapsing the landing gear. The airplane nosed over and came to rest upside down. Substantial damage was sustained to the vertical stabilizer and rudder.

The airplane was retained for further examination.

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| Accident Rpt# ERA17CA030 | 10/28/2016 1400 EST | Regis# UNREG | West Middlesex, PA | Apt: West Middlesex PA21 |
| Acft Mk/Mdl KOLB FIRE FLY | | Acft SN 042A021 | Acft Dmg: SUBSTANTIAL | Rpt Status: Factual Prob Caus: Pending |
| Eng Mk/Mdl ROTAX 503 | | | Fatal 0 Ser Inj 0 | Flt Conducted Under: FAR 091 |
| Opr Name: GARY FOBES | | Opr dba: | | Aircraft Fire: NONE |
| | | | | AW Cert: NON |

Summary

According to the noncertificated pilot of the unregistered airplane, he was flying at a low altitude when he encountered a wind gust. He then lost control of the airplane, and it subsequently impacted trees, which resulted in substantial damage to the airframe. The pilot reported that there were no preimpact mechanical failures or malfunctions of the airframe or engine that would have precluded normal operation.♠

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The noncertificated pilot's loss of airplane control while maneuvering at a low altitude.

Events

1. Maneuvering-low-alt flying - Loss of control in flight
2. Maneuvering-low-alt flying - Collision with terr/obj (non-CFIT)

Findings - Cause/Factor

1. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
2. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-(general)-Not attained/maintained - C
3. Environmental issues-Physical environment-Object/animal/substance-Tree(s)-Contributed to outcome

Narrative

According to the non-certificated pilot of the unregistered airplane, he was flying at a low altitude when he encountered a gust of wind. He then lost control of the airplane, and it subsequently impacted trees, resulting in substantial damage to the airframe. The pilot reported that there were no pre-impact mechanical failures or malfunctions of the airframe or engine that would have precluded normal operation.

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| Accident Rpt# CEN17LA224 | 06/07/2017 930 CDT | Regis# N31313 | Juneau, WI | Apt: Dodge County Airport UNU |
| Acft Mk/Mdl MCKENNA SD 1A-NO SERIES | | Acft SN 7 | Acft Dmg: SUBSTANTIAL | Rpt Status: Prelim Prob Caus: Pending |
| Eng Mk/Mdl CONTINENTAL MOTORS O-200G | | | Fatal 0 Ser Inj 0 | Flt Conducted Under: FAR 091 |
| Opr Name: WOODS DONALD E | | Opr dba: | | Aircraft Fire: NONE |
| | | | | AW Cert: SPE |

Events

1. Takeoff - Flight control sys malffail
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Narrative

On June 7, 2017, about 930 central daylight time, an amateur-built McKenna SD 1A airplane, N31313, was substantially damaged during a precautionary landing at Dodge County Airport (UNU), Juneau, Wisconsin. The private pilot was not injured. The personal flight was conducted under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed and no Federal Aviation Administration (FAA) flight plan had been filed for the flight. The local flight was originating at the time of the accident.

According to the pilot, immediately after takeoff the left wing felt "extremely heavy" and required an "exceptional amount of right aileron" to maintain level flight. The pilot was able to fly the airplane around the traffic pattern and perform a precautionary landing on runway 20. During the landing the airplane bounced and turned hard to the right. The left main landing gear collapsed and the engine mount was substantially damaged.

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Accident Rpt# ERA16LA076 12/19/2015 1120 AST Regis# N124LP Guanica, PR Apt: N/a
Acft Mk/Mdl PORRATA LUIS G RANS S 12XL-NO Acft SN 06061007 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl ROTAX 582 Acft TT 213 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: RAFAEL CORTES RAMOS Opr dba: Aircraft Fire: NONE
AW Cert: SPE

Summary

The sport pilot was conducting a cross-country flight in the light sport airplane when, after about one hour of flight, the engine first experienced a partial loss of power, followed shortly thereafter by a total loss of power. The pilot twice unsuccessfully attempted to restart the engine using the emergency checklist before performing a forced landing to a field. During the landing, the airplane sustained substantial damage to the fuselage.

The engine was manufactured about 10 years before the accident and maintenance logs indicated that it had not been overhauled since that time. Examination of the engine revealed that connecting rod bearing material was distributed throughout the power take off (PTO) section of the engine. Furthermore, corrosion was noted on the PTO connecting rod and connecting rod bearing. Although the engine had not yet reached the manufacturer's recommended 300 flight hour time limit for overhaul, it had exceeded the recommended 5-year calendar time limit for overhaul by 5 years. It is likely that a piece of the failed bearing became lodged in the rotary valve disc, which prevented the disc from rotating, and subsequently blocked the air and fuel to the engine, which resulted in a total loss of engine power. Had the engine been overhauled, the corrosion likely would have been discovered and the inflight loss of power prevented.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot/owner's failure to maintain the engine in accordance with manufacturer guidance, which resulted in the undetected corrosion of the power takeoff bearing, subsequent bearing failure, and a total loss of engine power.

Events

1. Enroute-cruise - Loss of engine power (total)
2. Emergency descent - Off-field or emergency landing
3. Landing-flare/touchdown - Collision with terr/obj (non-CFIT)

Findings - Cause/Factor

1. Aircraft-Aircraft power plant-Engine (reciprocating)-(general)-Not serviced/maintained - C
2. Personnel issues-Task performance-Maintenance-Scheduled/routine maintenance-Pilot - C

Narrative

On December 19, 2015, about 1120 Atlantic standard time, an experimental amateur-built Rans S-12XL, N124LP, was substantially damaged during a forced landing following a total loss of engine power near Guanica, Puerto Rico. The sport pilot was not injured. Visual meteorological conditions prevailed, and no flight plan was filed for the flight, which originated from Dr. Hermenegildo Ortiz Quinones Airport (X63), Humacao, Puerto Rico, about 1015, and was destined for Eugenio Maria de Hostos Airport (TJMZ), Mayaguez, Puerto Rico. The personal flight was conducted under the provisions of Title 14 Code of Federal Regulations Part 91.

According to the pilot, he performed a preflight and engine run-up with no anomalies noted. He flew the airplane for about an hour before the engine "sounded weird," then began to lose power, until it lost power completely. The pilot unsuccessfully attempted to restart the engine two times using the emergency checklist prior to performing a forced landing to a field. During the landing, the airplane incurred substantial damage to the fuselage.

According to Federal Aviation Administration records, the airplane was manufactured in 2009 and registered the pilot in May 2015. It was equipped with a Rotax 582 series engine that was manufactured in 2005. According to airplane maintenance logbooks, the most recent 100-hour inspection was completed on September 26, 2015, and at that time, the airplane had accumulated 213 hours of total time.

According to the manufacturer's guidance, a general overhaul of the engine was "to be carried out every five years or every 300 hours, whichever comes first." There were no entries in the maintenance logs that indicated an engine overhaul had taken place. According to the checklist from the maintenance manual, which was the checklist that the mechanic initialed as items accomplished, item 38 "General overhaul of engine" was marked as "N/A." A manufacturer representative indicated that an overhaul consisted of at least a complete engine teardown, the replacement of all bearings, seals, gaskets, crankshaft, and piston rings.

An examination of the engine revealed that there was fuel noted in the fuel tanks, fuel pump, fuel filter, and both carburetors. One spark plug was removed from

National Transportation Safety Board - Aircraft Accident/Incident Database

each cylinder and thumb compression was obtained from all cylinders. However, when the propeller was rotated by hand, a metal scraping sound was heard. The engine oil was drained and metal particles were noted in the oil. The tachometer in the cockpit indicated 228 total hours of time.

The engine was further examined and the power take off intake had several pieces of bearing material, and one piece specifically that was contacting the rotary valve disc, which was making the scraping noise. In addition, the bearing material was noted in the combustion chamber and exhaust sections of the power take off side of the engine. The cylinder head of the power take off side was removed and revealed damage to the piston head. Next, the power take off cylinder was removed. Corrosion and damage was noted on the connecting rod and the fractured connecting rod bearing.

National Transportation Safety Board - Aircraft Accident/Incident Database

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|------------------------------------|-----------------|---------------|---------------------|---------------------------------------|
| Accident Rpt# WPR17FA128 | 06/17/2017 1145 | Regis# N177TT | Payette, ID | Apt: Payette S75 |
| Acft Mk/Mdl PRESCOT E. WILKIE RV-3 | | Acft SN 10508 | Acft Dmg: DESTROYED | Rpt Status: Prelim Prob Caus: Pending |
| Eng Mk/Mdl LYCOMING O-235-N2C | | | Fatal 1 Ser Inj 0 | Flt Conducted Under: FAR 091 |
| Opr Name: PRESCOTT E WILKIE | | Opr dba: | | Aircraft Fire: NONE |
| | | | | AW Cert: SPE |

Events

1. Maneuvering-aerobatics - Part(s) separation from AC

Narrative

On June 17, 2017, about 1145 mountain daylight time, an experimental amateur-built Vans RV-3 airplane, N177TT, impacted terrain following the separation of the left wing while maneuvering near Payette, Idaho. The airline transport pilot sustained fatal injuries; the airplane was destroyed. The pilot was operating the airplane under the provisions of Title 14 Code of Federal Regulations (CFR) Part 91. The local personal flight departed Payette Municipal Airport (S75), Payette, Idaho about 1140. Visual meteorological conditions prevailed and no flight plan had been filed.

Witnesses observed the airplane depart Runway 31 and make a steep climbing right turn. They observed the airplane turn left and descend back toward the airport for a low pass over the runway. The airplane then pitched up steeply at the opposite end of the runway and performed another course reversal and low pass in the opposite direction. It repeated this sequence of maneuvers several times. During the course reversal on the last pull-up, the left wing separated and the airplane spiraled into a field.

National Transportation Safety Board - Aircraft Accident/Incident Database

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|------------------------------------|--------------------|---------------|-----------------------|--|
| Accident Rpt# WPR17LA098 | 05/05/2017 915 MDT | Regis# N136BC | Hanksville, UT | Apt: Hanksville HVE |
| Acft Mk/Mdl ROBERT E BOUNDS BOUNDS | | Acft SN 01 | Acft Dmg: SUBSTANTIAL | Rpt Status: Factual Prob Caus: Pending |
| Eng Mk/Mdl LYCOMING O-340-A1A | | Acft TT 289 | Fatal 0 Ser Inj 2 | Flt Conducted Under: FAR 091 |
| Opr Name: WILLIAM WELLS | | Opr dba: | | Aircraft Fire: NONE |

Events

1. Landing-flare/touchdown - Nose over/nose down
-

Narrative

On May 5, 2017, about 0915 mountain daylight time, an experimental amateur-built Bounds Bearcoupe, N136BC, nosed-over during landing at Hanksville Airport, Hanksville, Utah. The flight instructor and private pilot were seriously injured, and the airplane sustained substantial damage. The airplane was registered to the private pilot, and operated as a personal flight by the instructor at the time of the accident, under the provisions of 14 Code of Federal Regulations Part 91. The flight departed about 0830 from a backcountry airstrip in Utah, known as Hidden Splendor. Visual meteorological conditions prevailed, and no flight plan had been filed.

The instructor stated that about 10 minutes before landing, he asked the pilot if he could take control of the airplane and perform the landing. The pilot agreed, and he transitioned control to the instructor. The instructor stated that the airplane was a unique design, with foot pedals that were raised off the floor. He therefore needed to hold his feet in place on the pedals to reach the toe-brakes, rather than rest his heels on the floor as he was accustomed. As such, there was no reference for him to properly gauge the position of his foot during the landing approach. He stated that as soon as the main landing gear touched the ground, the airplane nosed-over, and he realized he had been inadvertently applying brake pressure.

The airplane sustained substantial damage to the vertical stabilizer and wing attach fittings during the accident (Photo 1).

The airplane was designed and built by the pilot; it was a mid-wing design, and configured with tailwheel-type landing gear. The pilot reported about 296 hours of flight experience in the airplane, and the landing approach was the first time the instructor had flown the airplane.

Both the pilot and instructor reported that there were no preimpact mechanical malfunctions or failures that would have precluded normal operation.

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Accident Rpt# GAA17CA214 04/01/2017 1154 MST Regis# N9898R Willcox, AZ Apt: Cochise County P33
Acft Mk/Mdl RONALD J BENDER BAKING DUCE-NO Acft SN 0001 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-290-G Acft TT 12 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: LAWRENCE J. WILLIAMS II Opr dba: Aircraft Fire: NONE
AW Cert: SPE

Summary

The pilot of the tailwheel-equipped airplane reported that, during the landing roll and as he pulled the power to idle and lowered the tail, he raised the flaps and that the airplane then encountered a "sudden and strong wind" that caused it to weather-vane. Subsequently, the airplane veered off the right side of the runway, the main landing gear collapsed, and the airplane came to rest nose down.

The airplane sustained substantial damage to both right and left wings and both lift struts.

The pilot reported that there were no preaccident mechanical failures or malfunctions with the airplane that would have precluded normal operation.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's failure to maintain directional control of the airplane during the landing roll after encountering a dirt devil.

Events

1. Landing-landing roll - Loss of control on ground
2. Landing-landing roll - Runway excursion
3. Landing-landing roll - Nose over/nose down

Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Directional control-Not attained/maintained - C
2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
3. Environmental issues-Conditions/weather/phenomena-Wind-Dust devil/whirlwind-Ability to respond/compensate

Narrative

The pilot of the tailwheel-equipped airplane reported that during the landing roll as he pulled the power to idle and lowered the tail, he raised the flaps and the airplane encountered a "sudden and strong wind" that caused the airplane to weather-vane. Subsequently, the airplane veered off the right side of the runway, the main landing gear collapsed, and the airplane came to rest nose down.

The airplane sustained substantial damage to both right and left wings and both lift struts.

The pilot reported that there were no pre-accident mechanical failures or malfunctions with the airplane that would have precluded normal operation.

National Transportation Safety Board - Aircraft Accident/Incident Database

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|-----------------------------------|---------------------|---------------------|-----------------------|--|
| Accident Rpt# GAA17CA246 | 04/24/2017 1531 CDT | Regis# N614WB | Chesterfield, MO | Apt: Spirit Of St Louis SUS |
| Acft Mk/Mdl THOMAS B MCGRATH JA30 | | Acft SN JA422-11-14 | Acft Dmg: SUBSTANTIAL | Rpt Status: Factual Prob Caus: Pending |
| Eng Mk/Mdl ROTAX BULLYHAWK 914 | | Acft TT 80 | Fatal 0 Ser Inj 0 | Flt Conducted Under: FAR 091 |
| Opr Name: THOMAS B. MCGRATH | | Opr dba: | | Aircraft Fire: NONE |
| | | | | AW Cert: SPE |

Summary

The pilot of the tailwheel-equipped airplane reported that, after several attempts to land, the wind had changed to a more favorable direction and that "[he] was confident in [landing] the plane." He added that the approach was uneventful but that, during the landing roll, "a cross wind started pushing the aircraft and tail left." Subsequently, the airplane ground looped to the right.

The airplane sustained substantial damage to the left wing, left wing aileron, and right wing rear spar.

The pilot reported that there were no preaccident mechanical failures or malfunctions with the airplane that would have precluded normal operation.

The automated weather observation system on the airport, about the time of the accident, reported that the wind was from 180ø at 10 knots. The pilot landed on runway 8L.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's failure to maintain directional control of the airplane during the landing roll in crosswind conditions.

Events

1. Landing - Loss of control on ground
2. Landing - Attempted remediation/recovery
3. Landing - Dragged wing/rotor/float/other
4. Landing - Nose over/nose down

Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Directional control-Not attained/maintained - C
2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
3. Environmental issues-Conditions/weather/phenomena-Wind-Crosswind-Effect on operation

Narrative

The pilot of the tailwheel-equipped airplane reported that after several attempts to land, the wind had changed to a more favorable direction and "[he] was confident in [landing] the plane". He added that the approach was uneventful, but during the landing roll "a cross wind started pushing the aircraft and tail left". Subsequently, the airplane ground looped to the right.

The airplane sustained substantial damage to the left wing, left wing aileron and right wing rear spar.

The pilot reported that there were no pre-accident mechanical failures or malfunctions with the airplane that would have precluded normal operation.

The automated weather observation system on the airport, about the time of the accident, reported the wind at 180ø at 10 knots. The pilot landed on runway 8L.

National Transportation Safety Board - Aircraft Accident/Incident Database

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|------------------------------------|--------------------|---------------|-----------------------|---------------------------------------|
| Accident Rpt# CEN17LA228 | 06/09/2017 830 CDT | Regis# N335JT | Homer, LA | Apt: Homer Municipal Airport 5F4 |
| Acft Mk/Mdl THOMPSON ANGEL HAWK II | | Acft SN 001 | Acft Dmg: SUBSTANTIAL | Rpt Status: Prelim Prob Caus: Pending |
| | | | Fatal 0 Ser Inj 1 | Flt Conducted Under: FAR 091 |
| Opr Name: DAVID H THOMPSON | | Opr dba: | | Aircraft Fire: NONE |
| | | | | AW Cert: SPE |

Events

1. Initial climb - Loss of engine power (total)
-

Narrative

On June 9, 2017, about 0830 central daylight time, an amateur built Angel Hawk II airplane, N335JT, collided with terrain during a forced landing near the Homer Municipal Airport (5F4), Homer, Louisiana. The pilot was seriously injured, and the airplane was substantially damaged. The airplane was registered to a private individual and was being operated by the pilot as a 14 Code of Federal Regulations Part 91 personal flight. Visual flight rules conditions existed near the accident site at the time of the accident, and a flight plan had not been filed. The airplane departed 5F4 just before the accident. The intended destination is unknown.

National Transportation Safety Board - Aircraft Accident/Incident Database

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|----------------------------|---------------------|---------------|---------------------|--|
| Accident Rpt# CEN16LA281 | 07/22/2016 1040 EDT | Regis# N807LK | Springfield, OH | Apt: N/a |
| Acft Mk/Mdl VANS RV9-A | | Acft SN 91528 | Acft Dmg: DESTROYED | Rpt Status: Factual Prob Caus: Pending |
| Eng Mk/Mdl SUPERIOR XP-320 | | Acft TT 53 | Fatal 2 Ser Inj 0 | Flt Conducted Under: FAR 091 |
| Opr Name: LEVON G KING | | Opr dba: | | Aircraft Fire: NONE |
| | | | | AW Cert: SPE |

Events

1. Enroute-cruise - Loss of control in flight
2. Enroute-cruise - Inflight upset

Narrative

HISTORY OF FLIGHT

On July 22, 2016, about 1040 eastern daylight time, a Levon G King Vans RV9A airplane, N807LK, impacted terrain near Springfield, Ohio. The pilot and one passenger were fatally injured and the airplane was destroyed. The airplane was registered to and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Marginal visual meteorological conditions prevailed near the accident site and the airplane was receiving visual flight rules flight following. The flight departed Tri-Cities Regional Airport (TRI), Bristol/Johnson/Kingsport, Tennessee, about 0850 and was en route to Grosse Ile Municipal Airport (ONZ), Detroit/Grosse Ile, Michigan.

A review of the air traffic control (ATC) and radar data revealed that while en route to ONZ, the pilot was in contact with ATC and attempted to navigate around the oncoming weather and precipitation. From 0957 to 1038 the pilot communicated with the controllers about avoiding the precipitation and requested assistance in doing so. The pilot stated that he could avoid the clouds if ATC could keep him out of the precipitation. The controllers gave the pilot several heading suggestions to the northwest to avoid the precipitation that they observed on their radar scopes. The pilot continued flying east toward the severe weather (figure 1).

In the final 3.5 minutes of the flight while flying east, the airplane made a left 360° turn while descending about 2,900 ft per minute (fpm), then resumed a climb while heading east. Less than one minute later, the airplane made a right 310° turn, descending about 1,200 fpm. The airplane then flew northeast and descended about 4,600 fpm to an elevation of 3,440 ft above ground level (agl). The descent rate increased to about 6,450 fpm until radar contact was lost (figure 2).

A witness observed the accident airplane above her house as it flew east-northeast (figure 2). She stated that the airplane was in a steep descent and disappeared behind a tree line when she heard the sound of an impact. She heard the engine operating before the airplane disappeared behind the trees.

PILOT INFORMATION

AIRCRAFT INFORMATION

The pilot built the airplane from a kit, which was configured for 2 occupants with side-by-side seating. The airplane received a special airworthiness certificate with an experimental designation on April 27, 2015. The pilot logged the airplane's first flight on July 30, 2015.

The airplane was equipped with a TruTrak electronic flight instrument system, a Garmin GTX 327 transponder, and Free Flight automatic dependent surveillance-broadcast (ADS-B). A Garmin 795 handheld GPS was found onboard and was damaged to the extent that a download of non-volatile memory was not possible. An external Garmin GPS antenna was found by the FAA inside the pilot's hangar at ONZ.

The investigation did not find any evidence of a satellite weather subscription and could not determine if the pilot was receiving weather information to the cockpit instruments.

METEOROLOGICAL INFORMATION

While en route, air traffic controller advised the pilot that two other airplanes had flown over Dayton, Ohio, but that route was located between two cells with heavy precipitation, and there was only 5 to 8 miles clearance on either side. The controller informed the pilot that she would request pilot reports (PIREPs) from the pilots. The air traffic controller informed the accident pilot that the pilots who had transitioned over Dayton indicated that they "didn't really have any problems" flying through that area.

A search of weather briefing sources revealed that the accident pilot contacted Lockheed Martin Flight Service at 0619 and 0804 and received weather briefings. During the first weather briefing, the briefer explained a Convective SIGMET (a weather advisory concerning convective weather significant to the safety of all aircraft) outlook which bordered the area along the western edge of the intended flight track and was valid through 1150. An Airmen's Meteorological Information (AIRMET) for moderate turbulence was current to the west of ONZ. It was anticipated that thunderstorms would continue to develop due to a frontal boundary in the area and turbulence was likely near ONZ.

During the second weather briefing at 0804, the briefer explained that rain had developed through northern portions of Ohio and was slowly moving east-southeast. A Convective SIGMET had been issued for the route of flight and an AIRMET for higher level turbulence had been issued for the northern portion of the route of flight. Additional Convective SIGMETs could be issued for Ohio northward during the accident flight and deviations to the west would likely avoid the SIGMET. Thunderstorms were moving southeast toward Columbus, Ohio. The briefer further explained that due to the weather conditions, the pilot would likely go direct Ohio State University Airport (OSU), Columbus, Ohio, then direct to ONZ in order to avoid the thunderstorms.

There is no record of the accident pilot receiving or retrieving any other weather information other than the information provided by ATC.

FAA Advisory Circular AC 00-24C, "Thunderstorms," defines the echo intensity levels and weather radar echo intensity terminology associated with those levels. For decibel (dBZ) values less than 30 the weather radar echo intensity terminology should be "light," 30 to 40 dBZ should be "moderate," and 40 to 50 dBZ should be "heavy." Any values above 50 dBZ shall be described as "extreme." From the National Weather Service, precipitation conditions at the surface can be inferred from VIP Levels described as:

- VIP 1 (Level 1, 18-30 dBZ) - Light precipitation
- VIP 2 (Level 2, 30-38 dBZ) - Light to moderate rain.
- VIP 3 (Level 3, 38-44 dBZ) - Moderate to heavy rain.
- VIP 4 (Level 4, 44-50 dBZ) - Heavy rain
- VIP 5 (Level 5, 50-57 dBZ) - Very heavy rain; hail possible.
- VIP 6 (Level 6, >57 dBZ) - Very heavy rain and hail; large hail possible.

The GPS flight track indicated that the airplane flew through an area of 10 to 40 dBZ reflectivity values located along the route of flight before the accident time. Reflectivity values of 25 to 40 dBZ were located north of the flight path. The accident flight flew into an area of defined thunderstorms while an outflow boundary north of the accident site was moving south. As the outflow boundary moved south across the accident site there was a corresponding increase in the dBZ values in the base reflectivity data. There were lightning flashes and strikes surrounding the accident area with more than 900 lightning flashes associated with the thunderstorms between 1030 and 1040 EDT. The flight path was within 2 miles of the lightning flashes after 1037:02 EDT through the accident time (figure 1).

COMMUNICATIONS

ATC Transcripts - Partial Summary

National Transportation Safety Board - Aircraft Accident/Incident Database

10:34:15 - (pilot) good morning Columbus, experimental November eight zero seven lima kilo we're level (unintelligible) at nine point four

10:34:22 - (ATC) experimental eight zero seven lima kilo Columbus approach altimeter is three zero seven seven

10:34:28 - (pilot) three zero seven seven, seven lima kilo

10:34:35 - (pilot) and seven lima kilo we'd like all the help you can give us around this precip[itation]

10:34:40 - (ATC) experimental seven lima kilo say again

10:34:43 - (pilot) any help you can give us to avoid the precip[itation] we'd appreciate

10:34:47 - (ATC) seven lima kilo roger my radar scope you need to turn straight to the northwest about a three twenty to three thirty heading uh if you want to try and go through the least amount of precip[itation] on your present heading then your current heading looks good you might you might need to turn a little bit to the right but if you want to stay out of it completely then you need to turn to the northwest

10:35:09 - (pilot) seven lima kilo I think I'll maintain present heading

10:35:13 - (ATC) Roger

10:36:07 - (pilot) Columbus approach seven lima kilo [what do you show] as my present heading?

10:36:13 - (ATC) experimental seven lima kilo your present heading takes you through the uh worst of the precipitation heavy to extreme precipitation I suggest you turn to the south southwest

10:36:23 - (pilot) seven lima kilo

10:37:38 - (ATC) experimental seven lima kilo Columbus

10:37:40 - (pilot) seven lima kilo go ahead

10:37:43 - (ATC) I was just, are you turning back to the northeast?

10:37:46 - (pilot) I intended to turn to the southeast

10:37:50 - (ATC) okay your present heading is taking you straight eastbound again right into, at least on my scope, the worst of the precip[itation] so you need to turn the right, if you want to turn to the right to the southwest or southeast if you want to go through the least of it

10:38:04 - (pilot) okay we'll go to the right

10:39:50 - (ATC) experimental seven lima kilo I can see you continuing to the northeast at least on my scope if you turn a little bit to the left go northbound that you be a through the precipitation here in about twenty miles

10:40:10 - (ATC) experimental seven lima kilo Columbus

10:40:17 - (ATC) experimental seven lima kilo if you can hear me Springfield airport is off to your right or the Lisbon airport is just off to your left it's runway five two three one thousand eight hundred by seventy-five feet

10:41:10 - (ATC) experimental seven lima kilo if you can hear radar contact is lost, if you can hear me uh just uh respond

End of Transcript.

WRECKAGE AND IMPACT INFORMATION

The responding Federal Aviation Administration (FAA) inspector reported that the airplane was found in a corn field (figure 3) about 7 statute miles east of Springfield-Beckley Municipal Airport (SGH), Springfield, Ohio.

The main wreckage debris path was generally oriented north and contained the engine, propeller, left and right wings, fuselage, and most of the empennage. The debris path was about 25 yards in length beginning with pieces of a wing and ended with the main wreckage. The instrument panel and forward cockpit area separated from the airplane and were found near the middle of the debris path. The throttle, mixture, and propeller knobs were found near the full forward position. The engine separated from its mounts and sustained impact damage. The propeller was separated from the engine and sustained leading edge damage, S-bending, and rearward bending.

The vertical stabilizer, rudder, and several small pieces separated from the empennage and came to rest in separate locations 0.61 to 0.63 nautical miles southwest of the main wreckage. The vertical stabilizer and rudder (figure 5) and were found with overload signatures at all separation points. The vertical stabilizer separated near the bottom of the rear spar. The rudder was found separated in two large pieces with several small pieces also identified. The counterweight was laterally separated from the top of the rudder. The rudder hinge brackets remained attached to the control rod ends. Most of the hinge bracket rivets were pulled through the vertical stabilizer.

MEDICAL AND PATHOLOGICAL INFORMATION

Clark County Coroner's Office, Dayton, Ohio, completed an autopsy on the pilot and the cause of death was blunt force injuries. The Bioaeronautical Research Laboratory at the FAA's Civil Aerospace Medical Institute conducted toxicology testing, which revealed 48 milligrams per deciliter (mg/dL) of ethanol in the muscle and 23 mg/dL in the liver. No putrefaction was reported.

Ethanol is primarily a social drug with a powerful central nervous system depressant. After absorption, ethanol is uniformly distributed throughout all tissues and body fluids. The distribution pattern parallels the water content and blood supply of each organ. Postmortem production of ethanol also takes place due to putrefaction processes, but vitreous humor and urine do not suffer from such production to any significant extent in relation to blood. Vitreous humor would normally have about 12% more ethanol than blood if the system is in the post absorptive state, and urine would normally have about 25% more ethanol than blood. The average rate of elimination of ethanol from blood is 18 mg/dL (15-20 mg/dL) per hour.

ADDITIONAL INFORMATION

FAA Pilot Handbook of Aeronautical Knowledge - Chapter 11, "Weather Theory"

".if an aircraft enters a thunderstorm, the aircraft could experience updraft and downdraft that exceed 3,000 ft per minute.a good rule of thumb is to circumnavigate thunderstorms by at least 5 nautical miles.if flying around a thunderstorm is not an option, stay on the ground until it passes."

FAA Safety Team FAA-P-8740-12 - AFS-8 (2008) "Thunderstorms - Don't Flirt.Skirt 'Em"

Pilots should observe the following rules for any flight routed even potentially near actual or possible thunder-storm activity:

- Avoid all thunderstorms.
- Never get closer than 5 miles to any visible storm cloud with overhanging areas, and strongly consider increasing that distance to 20 miles or more. You can encounter hail and violent turbulence anywhere within 20 miles of very strong thunderstorms.
- Do not attempt flight beneath thunderstorms, even when visibility is good, because of the destructive potential of shear turbulence in these areas.
- At the first sign of turbulence, reduce airspeed immediately to the manufacturer's recommended airspeed for turbulent air penetration for a specific gross weight (design maneuvering speed).
- If the aircraft inadvertently penetrates the thunderstorm, maintain a straight and level altitude on a heading that will take you through the storm area in the minimum time.

National Transportation Safety Board - Aircraft Accident/Incident Database

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|---------------------------------------|---------------------|-----------------|---------------------|--|
| Accident Rpt# CEN17LA004 | 10/02/2016 1557 CDT | Regis# N6666D | Mandan, ND | Apt: Mandan Municipal Airport Y19 |
| Acft Mk/Mdl VOLAIRCRAFT 10A-NO SERIES | | Acft SN 10A-026 | Acft Dmg: DESTROYED | Rpt Status: Factual Prob Caus: Pending |
| Eng Mk/Mdl LYCOMING O-320 | | Acft TT 2100 | Fatal 0 Ser Inj 0 | Flt Conducted Under: FAR 091 |
| Opr Name: RITZ RODNEY | | Opr dba: | | Aircraft Fire: GRD |
| | | | | AW Cert: STN |

Summary

The student pilot stated that, while on final approach for landing, the airplane encountered turbulence on final approach that "pushed the plane down." The airplane landed short of the runway, the student egressed, and the airplane subsequently caught fire and was destroyed. The student pilot reported that there were no mechanical problems before the accident; there were no witnesses. Visual examination of the wreckage revealed that the fuel/gascolator line had ruptured during impact, resulting in the postimpact fire. The local weather at the time of the accident included wind from 130ø at 3 knots, and the smoke was observed billowing straight up from the fire; indicating calm to light wind at the time of the accident. It is likely that the student pilot failed to maintain a proper approach path during the landing approach, which resulted in the airplane impacting terrain short of the runway.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The student pilot's failure to maintain the proper approach path on landing, which resulted in impact with terrain short of the runway.

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Events

1. Landing - Loss of control in flight

Findings - Cause/Factor

1. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
2. Personnel issues-Experience/knowledge-Experience/qualifications-Total experience-Pilot - F

Narrative

On October 2, 2016, about 1557 central daylight time, a Volaircraft 10A airplane, N6666D, registered to the student pilot, was destroyed by post impact fire after it landed short of runway 13 at the Mandan Municipal Airport (Y19), Mandan, North Dakota. The student pilot, who was the sole occupant, was not injured. The flight was being conducted under the provisions of Federal Code of Regulations Part 91. Visual meteorological conditions prevailed and a flight plan was not filed. The local flight had originated from Y19.

According to local respondent authorities, the airplane landed short of the runway and skidded to a stop beside the paved runway surface. After the student pilot exited uninjured, the airplane caught fire and was destroyed. The student pilot did not report any mechanical problems prior to the event and there were no witnesses. On NTSB Form 6120, the student pilot stated that he encountered turbulence on final approach and pushed the airplane downward. He stated that a fuel line ruptured upon impact and sparks ignited, resulting in a post-impact fire. There were three distinct ground impressions in a grassy area just prior to the paved runway threshold. The impressions correlated with the fixed landing gear of the aircraft. Visual inspection of the wreckage by an FAA inspector revealed that the fuel/gascolator line had ruptured during the impact.

The reported local weather at the time of the accident was: Wind 130 at 3 knots, 10 miles visibility, temperature 22 C, dew point 13 C, altimeter 29.92. Soon after the accident when the aircraft was still on fire, a photo was taken of the accident scene by first responders. The photo shows billowing smoke going straight up from the fire. the photo is included in the public docket for this case file.

According to the FAA and the pilot's submitted NTSB Form 6120, the student pilot reported a total of 20 hours of total flight time, all of which were flown in the accident airplane.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA350 06/18/2017 940 EDT Regis# N251CW Williston, FL Apt: Williston Muni X60
Acft Mk/Mdl WARD CHRISTOPHER BARRY RAI 6-NO Acft SN F16 Acft Dmg: SUBSTANTIAL Rpt Status: Prelim Prob Caus: Pending
Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: WARD CHRISTOPHER BARRY Opr dba: Aircraft Fire: NONE

National Transportation Safety Board - Aircraft Accident/Incident Database

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|---------------------------------|---------------------|---------------|-----------------------|--|
| Accident Rpt# ERA14LA358 | 07/25/2014 1108 EDT | Regis# N3831W | Grove City, PA | Apt: Grove City 29D |
| Acft Mk/Mdl WINDER ROBERT S VP1 | | Acft SN 01 | Acft Dmg: SUBSTANTIAL | Rpt Status: Factual Prob Caus: Pending |
| Eng Mk/Mdl VOLKSWAGEN | | Acft TT 4 | Fatal 0 Ser Inj 1 | Flt Conducted Under: FAR 091 |
| Opr Name: WINDER ROBERT S | | Opr dba: | | Aircraft Fire: NONE |
| | | | | AW Cert: SPE |

Summary

A witness saw the experimental amateur-built airplane as it performed takeoffs and landings in the airport traffic pattern. After completing several circuits, she again saw the airplane on final approach to land about 1/4-mile from the runway threshold. The airplane suddenly "jerked" left, away from the runway centerline, and continued that track in a shallow descent until it impacted a berm off the left side of the runway about 750 ft beyond the threshold. The witness reported that, before impact, the engine sound was smooth and continuous and did not change in pitch or intensity. The engine sound continued uninterrupted until impact. The private pilot was unable to recall any details of the accident. Postaccident examination of the wreckage revealed no evidence of any preimpact mechanical malfunctions or failures of the airframe or engine that would have precluded normal operation; therefore, the reason for the deviation from the approach path and subsequent impact with terrain could not be determined.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: A collision with terrain during the landing approach for reasons that could not be determined based on available information.

Events

1. Approach-VFR pattern final - Miscellaneous/other

Findings - Cause/Factor

1. Not determined-Not determined-(general)-(general)-Unknown/Not determined - C

Narrative

On July 25, 2014, about 1108 eastern daylight time, an experimental amateur-built VP1, N3831W, was substantially damaged when it impacted terrain while attempting to land at Grove City Airport (29D), Grove City, Pennsylvania. The private pilot was seriously injured. Visual meteorological conditions prevailed, and no flight plan was filed for the local personal flight, which was conducted under the provisions of 14 Code of Federal Regulations Part 91.

According to an employee of the fixed base operator at 29D, the accident pilot was performing takeoffs and landings in the airport traffic pattern, and had completed three to four circuits when the accident occurred. She watched as the airplane was on final approach to land on runway 28; about 1/4-mile from the runway threshold, it suddenly "jerked" left, away from the runway centerline. The airplane continued on that track in a shallow descent until it impacted a berm about 200 feet south of the runway, about 750 feet beyond the threshold. Prior to impact, the engine sound was smooth and continuous, and did not change in pitch or intensity. The engine sound continued uninterrupted until impact. Medevac personnel based at the airport subsequently responded to the accident site to render assistance to the pilot.

Due to the nature of the injuries he sustained during the accident, the pilot was unable to recall any details of the accident.

The pilot, age 83, held a private pilot certificate with a rating for airplane single-engine land. His most recent Federal Aviation Administration third-class medical certificate was issued in June 2010 with the limitation "must wear corrective lenses." He also held an experimental aircraft builder repairman certificate for the accident airplane. None of the pilot's personal flight logs were available for inspection and his total flight experience could not be determined.

The airplane's airworthiness certificate was issued in December 2010. It was equipped with a Volkswagen 65 horsepower engine driving a Heagy fixed-pitch propeller. The airplane's most recent condition inspection was completed by the pilot on July 18, 2014, with no anomalies noted.

Federal Aviation Administration inspectors examined the wreckage after it was recovered from the accident site. During the examination, the inspectors confirmed flight control continuity for the elevator and ailerons. The rudder pedals had separated from the fuselage floor during impact, but were otherwise intact and connected to the rudder. The engine was separated from the fuselage, though the engine control cables remained connected and intact.

Continuity of the engine power and valvetrain was confirmed through rotation of the crankshaft, and thumb compression was noted on all cylinders. The spark plugs exhibited a clean appearance with a small amount of external corrosion. Fuel and a small quantity of dirt were found in the fuel filter and in the carburetor float bowl.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA236 04/15/2017 1525 EDT Regis# N122BD Oliver Springs, TN Apt: N/a
Acft Mk/Mdl ZEILER BAKENG DUCE 1976 CZ- Acft SN 1776-CZ Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-290 Acft TT 788 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: TIMOTHY M. STRINGER Opr dba: Aircraft Fire: NONE
AW Cert: SPE

Summary

The pilot reported that, during approach, while flying from the rear seat of the tandem-seat, high-wing airplane, he "needed to lose speed and altitude." He placed the airplane in a right-wing-low, forward slip, and he added that the airplane had poor forward visibility at slower speeds. He aligned the airplane with the center of the runway and "pulled the nose up slightly to slow [down]," and a "wind gust" came from the right and "pushed" the airplane over the trees. He "saw [the] tree tops coming up fast under [his] left wing," and "out of shear instinct, [he] banked slightly right to avoid going in nose first." The airplane collided with the tree tops.

The airplane sustained substantial damage to both wings and the empennage.

The pilot reported that there were no preaccident mechanical failures or malfunctions with the airplane that would have precluded normal operation.

The automated weather observation system about 3 nautical miles from the accident site, about the time of the accident, reported that the wind was variable at 3 knots. The pilot landed to the southwest.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's unstabilized approach and failure to go around, which resulted in impact with trees.

Events

1. Landing - Miscellaneous/other
2. Landing - Loss of control in flight
3. Landing - Collision with terr/obj (non-CFIT)

Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Descent/approach/glide path-Not attained/maintained - C
2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
3. Personnel issues-Action/decision-Action-Lack of action-Pilot - C
4. Environmental issues-Physical environment-Object/animal/substance-Tree(s)-Contributed to outcome

Narrative

The pilot reported that during approach, while flying from the rear seat of the tandem seat, high-wing airplane, he "needed to lose speed and altitude". He placed the airplane in a right-wing low, forward slip, and he added that the airplane had poor forward visibility at slower speeds. He aligned the airplane with the center of the runway and "pulled the nose up slightly to slow [down]," and a "wind gust" came from the right and "pushed" the airplane over the trees. He "saw [the] tree tops coming up fast under [his] left wing", and "out of shear instinct, [he] banked slightly right to avoid going in nose first". The airplane collided with the tree tops.

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