
National Transportation Safety Board - Aircraft Accident/Incident Database

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| Accident Rpt# ERA17CA157 | 04/15/2017 1050 EDT | Regis# N340TP | Kingsland, GA | Apt: Oakwell R/c Airfield N/A |
| Acft Mk/Mdl AEROPRO CZ EUROFOX LSA-NO SERIE | Acft SN 20206 | Acft Dmg: SUBSTANTIAL | Rpt Status: Factual Prob Caus: Pending | |
| Eng Mk/Mdl ROTAX 912 ULS | Acft TT 401 | Fatal 0 Ser Inj 0 | Flt Conducted Under: FAR 091 | |
| Opr Name: PISCITELLO THOMAS J | Opr dba: | Aircraft Fire: NONE | | AW Cert: SPX |

Events

1. Landing-flare/touchdown - Hard landing
-

Narrative

The commercial pilot, who was also the owner of the experimental light-sport airplane stated that the airplane approached the grass strip with "all systems operating correctly," he performed a side slip to lose altitude and align the airplane with the field. The airplane descended "very quickly," and at touchdown the nose landing gear dug in, collapsed, and the airplane nosed over and came to rest inverted. A Federal Aviation Administration inspector witnessed the accident, and a video of the accident was posted on a local media website. The inspector's description and the landing depicted in the video was consistent with the pilot's description of events. The airplane landed hard in a flat attitude, the nose landing gear collapsed immediately, and the airplane nosed over and came to rest inverted.

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| Accident Rpt# ERA16LA199 | 05/31/2016 1045 CDT | Regis# N156WB | Elberta, AL | Apt: Perdido Winds Airpark AL08 |
| Acft Mk/Mdl AMERICAN LEGEND AIRCRAFT CO | | Acft SN AL-1173 | Acft Dmg: SUBSTANTIAL | Rpt Status: Factual Prob Caus: Pending |
| Eng Mk/Mdl CONT MOTOR O-200-D | | Acft TT 276 | Fatal 0 Ser Inj 0 | Flt Conducted Under: FAR 091 |
| Opr Name: MHOC LLC | | Opr dba: | | Aircraft Fire: NONE |
| | | | | AW Cert: LTSP |

Events

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

Narrative

On May 31, 2016, about 1045 central daylight time, an American Legend Aircraft Company AL3, N156WB, collided with terrain following a total loss of engine power after takeoff from Perdido Winds Airpark (AL08), Elberta, Alabama. The sport pilot incurred minor injuries and the airplane was substantially damaged. Visual meteorological conditions prevailed and no flight plan was filed for the personal flight. The airplane was registered to and operated by MHOC LLC, under the provisions of 14 Code of Federal Regulations Part 91.

The pilot was a mechanic for the company that owned the light-sport airplane. He stated that the airplane was due for a condition inspection, and he wanted to "warm the airplane up" before starting the inspection. He arrived at 82J and fueled the airplane with 17 gallons of fuel, waited a period of time, and sampled fuel from the fuel tanks. He completed the preflight inspection and took off for AL08.

The pilot made one full stop landing at AL08, taxied back, and departed runway 35 for two touch-and-go landings. After an uneventful touch-and-go landing to runway 35, he made a teardrop turn and planned to land on runway 17. He again performed another uneventful touch and go landing, and while climbing out decided he would return for another full stop landing on runway 35. During his slight right climbing turn, the engine "just quit." The airplane was approximately 200 feet above the ground, and he attempted to continue the turn back to runway 35; however, the airplane subsequently impacted trees about 50 feet short of the runway. The pilot observed fuel "pouring out" and shut off the electrical system prior to exiting the airplane.

The engine was then sent to the manufacturer for a full power test-run. The engine was set on an engine run stand and a slave carburetor was installed, since the original carburetor was fractured during impact. The engine started immediately and was idled for several minutes to warm up before the high power runs. The engine was run at several different power settings, from idle to full power, and all parameters were within the manufacturer's specification limits. After approximately 30 minutes of run time, the engine was shut down and no anomalies were noted.

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| Accident Rpt# GAA17CA195 | 03/17/2017 1130 CDT | Regis# N423SA | Mosby, MO | Apt: Midwest National Air Center GPH |
| Acft Mk/Mdl INIZIATIVE INDUSTRIALI ITALIAN SKY | Acft SN LSA 003 | Acft Dmg: SUBSTANTIAL | Rpt Status: Factual | Prob Caus: Pending |
| Eng Mk/Mdl ROTAX | Acft TT 1218 | Fatal 0 Ser Inj 0 | Flt Conducted Under: FAR 091 | |
| Opr Name: CHONG K. JUE | Opr dba: | | Aircraft Fire: NONE | |
| | | | AW Cert: LTSP | |

Events

1. Landing - Loss of control on ground
-

Narrative

The solo student pilot reported that, during the landing roll, the airplane veered to the left. The student pilot added power to go-around, applied back pressure to the control yoke, and applied right rudder inputs. He added that "[he] waited for the plane to lift off the ground. But it did not get off the ground." The airplane veered off the runway to the right and sustained substantial damage to both wings and the fuselage.

The student pilot report 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 010ø at 10 knots. The pilot landed on runway 36.

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| Accident Rpt# CEN17LA307 | 08/08/2017 | 2005 CDT | Regis# N56092 | Fort Atkinson, WI | Apt: Fort Atkinson Muni 61C |
| Acft Mk/Mdl PEGASUS QUANTUM-Q-2 | | | Acft SN 173671 | Acft Dmg: SUBSTANTIAL | Rpt Status: Prelim Prob Caus: Pending |
| Eng Mk/Mdl ROTAX 912 | | | | Fatal 2 Ser Inj 0 | Flt Conducted Under: FAR 091 |
| Opr Name: PLAMBECK DAVID C | | | Opr dba: | | Aircraft Fire: NONE |

Events

1. Approach-VFR go-around - Loss of control in flight
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Narrative

On August 8, 2017, about 2005 central daylight time, a Pegasus Quantum weight-shift-control aircraft, N56092, impacted a river following a visual approach to the Fort Atkinson Municipal Airport (61C), Fort Atkinson, Wisconsin. The aircraft was substantially damaged and the pilot and student pilot rated passenger were fatally 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. Day visual meteorological conditions prevailed for the local flight, which departed 61C about 1930.

According to a flight instructor witness located on the ramp at 61C, the pilot made a solo landing about 1915. After the passenger was loaded, the aircraft departed from runway 21 (paved) and made several approaches to a grass runway parallel to runway 21. During the final approach, the flight instructor stated the aircraft appeared to be flying an unstable approach. He noticed an engine power increase, followed by the aircraft banking to the left. The left bank steepened and the aircraft descended rapidly until impacting a river and submerging.

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| Accident Rpt# ERA16LA045 | 11/21/2015 1530 EST | Regis# N28365 | Monroe, NC | Apt: Edwards Airport 9NC3 |
| Acft Mk/Mdl PHANTOM AERONAUTICS PHANTOM X | Acft SN 0302004 | Acft Dmg: SUBSTANTIAL | Fatal 0 | Rpt Status: Factual Prob Caus: Pending |
| Eng Mk/Mdl ROTAX 582 | | Ser Inj 1 | | Fit Conducted Under: FAR 091 |
| Opr Name: ROBERT SCHOLL | Opr dba: | | | Aircraft Fire: NONE |
| | | | | AW Cert: SPX |

Events

1. Approach - Loss of engine power (partial)
2. Maneuvering - Aerodynamic stall/spin

Narrative

On November 21, 2015, about 1530 eastern standard time, an experimental light sport Phantom Aeronautics Phantom X1, N28365, impacted trees during approach to Edwards Airport (9NC3), Monroe, North Carolina. The airplane sustained substantial damage to the right wing and fuselage. The non-certificated pilot incurred serious injuries. Day visual meteorological conditions prevailed and no flight plan was filed for the personal flight, which was conducted under the provisions of Title 14 Code of Federal Regulations Part 91.

According to the pilot, he had flown two times earlier in the day without any anomalies. For the accident flight, he and another pilot were flying in formation to 9NC3. As they approached the airport, the other pilot conveyed that he was going to land, and the accident pilot responded that he would "make a slow circle" and then land at the airport. He then began a turn to the right and was overflying trees when he heard the engine "hiccup." He adjusted the throttle and then stated that the engine was "choking." Next, the pilot increased back pressure on the flight control stick in order to gain altitude, "but was already too slow to maintain level flight." The airplane struck a tree, descended "straight down," and impacted the ground nose first.

The pilot reported that he did not hold a Federal Aviation Administration (FAA) airman certificate or a medical certificate. However, he had approximately 32 hours of flight experience, of which, all the flight hours were in the same make and model as the accident airplane, and 18 hours were in the previous 90 days.

According to FAA records, the airplane was manufactured in 2002 and registered to the pilot/owner in 2015. The high wing, single seat, airplane was equipped with a Rotax 582 series, 65-hp engine, that was mounted above and forward of the cockpit. A review of the engine maintenance log indicated that the most recent engine inspection occurred on May 1, 2014, and at that time the engine had accumulated 165.4 total hours of time in service, and 20.8 hours since major overhaul.

When asked about the loss of engine power, the pilot stated that he thought the "old" gas he brought that day, which might have been contaminated with water. In addition, the pilot reported in the NTSB Pilot/Operator Aircraft Accident/Incident Report, Form 6120.1, under the Operator/Owner Safety Recommendation section of the form that "there had been rain during that week."

The airplane came to rest approximately a quarter mile to the northwest from the center of the airport. Postaccident examination of the wreckage revealed that the airplane impacted in a right wing low, nose down attitude. The outboard section of the right wing exhibited crush damage and was bent aft. The forward section of the fuselage was impact damaged and bent to the left. Flight control continuity was confirmed from the flight controls to all flight control surfaces. In addition, the engine remained attached to the fuselage; however, all propeller blades were impact separated and located in the vicinity of the main wreckage. The fuel tank was ruptured, leaking, and an unmeasured amount of fuel was noted in the tank. No debris was noted in the remaining fuel. In addition, the fuel lines remained attached to the engine, and there was fuel noted in the lines. There were no other obvious mechanical anomalies observed with the engine.

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| Accident Rpt# WPR17FA161 | 07/22/2017 1500 PDT | Regis# N331ST | Apple Valley, CA | Apt: Apple Valley APV |
| Acft Mk/Mdl APLEGATE PANZL S331E | | Acft SN 001 | Acft Dmg: SUBSTANTIAL | Rpt Status: Prelim Prob Caus: Pending |
| Eng Mk/Mdl LYCOMING IO-540 | | | Fatal 1 Ser Inj 0 | Flt Conducted Under: FAR 091 |
| Opr Name: CHASE MARGO S | | Opr dba: | | Aircraft Fire: NONE |
| | | | | AW Cert: SPE |

Events

1. Maneuvering-aerobatics - Loss of control in flight

Narrative

On July 22, 2017, about 1500 Pacific daylight time an Applegate Panzl S331E airplane, N331ST, impacted terrain while conducting aerobatic maneuvers about 3 miles northeast of the Apple Valley Airport (APV), Apple Valley, California. The pilot, sole occupant, died and the airplane sustained substantial damage. The airplane was registered to and operated by the pilot as a 14 Code of Federal Regulations Part 91 personal flight. Visual meteorological conditions prevailed and no flight plan was filed. The local flight originated from APV about 1445.

Witnesses reported this was the second flight of the day practicing this particular aerobatic sequence. About three quarters through the sequence, the pilot conducted an aileron roll and was descending towards the ground as expected, however, she never reduced power and leveled the airplane. Subsequently, the airplane impacted the ground.

The airplane has been recovered to a secure location for further examination.

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| Accident Rpt# WPR16LA135 | 07/04/2016 930 PDT | Regis# N916BN | St. Maries, ID | Apt: St. Maries Municipal Airport S72 |
| Acft Mk/Mdl BERT N NORRIS RV-6 | | Acft SN 21085 | Acft Dmg: SUBSTANTIAL | Rpt Status: Factual Prob Caus: Pending |
| Eng Mk/Mdl LYCOMING O-320 | | Acft TT 972 | Fatal 0 Ser Inj 0 | Flt Conducted Under: FAR 091 |
| Opr Name: PAUL F. VIETZKE | | Opr dba: | | Aircraft Fire: NONE |
| | | | | AW Cert: SPE |

Events

1. Approach-VFR pattern final - Fuel related

Narrative

On July 4, 2016, about 0930 Pacific daylight time, a Bert N. Norris RV-6, experimental amateur-built conventional gear airplane, was substantially damaged during a forced landing following a loss of engine power near St. Maries Municipal Airport (S72), St. Maries, Idaho. The airplane was registered to a private individual and operated by the pilot as a 14 Code of Federal Regulations Part 91 personal flight. The private pilot and one passenger were not injured. Visual meteorological conditions (VMC) prevailed and a flight plan was not filed. The flight originated from Homeport Airport (11WA), Cheney, Washington, about 0910.

During a telephone interview with the National Transportation Safety Board (NTSB) investigator-in-charge (IIC) on the day following the accident, the pilot stated that while on short final approach to runway 28 at S72, the engine experienced a partial loss of power. He believed the power loss was due to carburetor icing, as he may not have activated the carburetor heat. He then switched fuel tanks, activated the boost pump, pumped the throttle, but was unable to restore power. The pilot reported that he subsequently landed the airplane in a field about 100 yards from the approach end of runway 28. during the landing roll, the airplane nosed over, which resulted in substantial damage to the rudder.

In a written report submitted to the NTSB IIC on July 14, 2016, the pilot reported that as he approached S72 he visually confirmed that the weather was still VMC. He entered the [traffic] pattern for runway 28, began to reduce power on the engine, and while in the turn from base leg to final approach the engine completely quit. The pilot stated that he verified that the carburetor heat and the fuel boost pump were on, after which he changed the fuel selector to the opposite tank. He then looked for a place to land, but most of the fields were filled with hay bales, which prompted him to continue his turn to the airport. The pilot stated that the airplane touched down about 500 ft short of runway 28 and nosed over. The airplane sustained damage to both wings, the rudder and the elevator.

According to a Federal Aviation Administration aviation safety inspector who performed an onsite postaccident examination of the airplane, the inspector reported that he was able to rotate the propeller by hand, that the engine appeared to be in good shape, and the examination revealed no general indication of engine failure that would have been causal to the accident. Additionally, the inspector reported that the pilot relayed to him that carburetor heat might not have been applied during the flight, which may have caused the engine to lose power during the approach to the airport.

According to a carburetor icing probability chart, the reported temperature and dew point at the time of the accident were in a range for moderate carburetor icing at cruise power settings and serious carburetor icing at descent power settings.

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| Accident Rpt# ERA17LA256 | 07/18/2017 2030 EDT | Regis# N211CJ | Spartanburg, SC | Apt: Spartanburg Downtown Memorial SPA |
| Acft Mk/Mdl D & K AVIATION BABY BELLE-NO SERIES | Acft SN DK1-1 | Acft Dmg: SUBSTANTIAL | Rpt Status: Prelim | Prob Caus: Pending |
| Eng Mk/Mdl LYCOMING O-360-C2C | Acft TT 326 | Fatal 0 | Ser Inj 0 | Flt Conducted Under: FAR 091 |
| Opr Name: BERNARD CAMPBELL | Opr dba: | Aircraft Fire: NONE | AW Cert: SPE | |

Events

1. Landing-flare/touchdown - Loss of control in flight

Narrative

On July 18, 2017, at 2030 eastern daylight time, an experimental amateur-built D & K Aviation Baby Belle, N211CJ, was substantially damaged during an inflight loss of control and hard landing near Spartanburg, South Carolina. The private pilot received minor injuries. The helicopter was registered to a private company and was operated by the pilot under the provisions of 14 Code of Federal Regulations part 91 as a local, personal flight. Day, visual meteorological conditions prevailed at the time, and no flight plan was filed. The flight originated at Spartanburg Downtown Memorial Airport (SPA), Spartanburg, South Carolina at 2000.

According to the pilot, he was returning from the local flight and was preparing to land. At 4 feet above the ground, and between 16 and 24 mph, the helicopter yawed to the right. He corrected the yaw with pedal inputs. He subsequently lost control of the helicopter, and it impacted the ground hard, coming to rest on its side.

The pilot recovered the wreckage to a storage facility and reported the event to the National Transportation Safety Board on July 24. Initial examination of the wreckage revealed that the airframe had incurred substantial damaged during the accident. The main rotor blades were bent and delaminated. The tail boom was severed.

According to Federal Aviation Administration (FAA) airman records, the pilot did not possess a rotorcraft-helicopter rating at the time of the accident. The status of the helicopter's FAA registration was "expired."

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| Accident Rpt# ERA16CA259 | 07/17/2016 1130 EDT | Regis# N650WP | Hedgesville, WV | Apt: Green Landings WV22 |
| Acft Mk/Mdl HIRN ASSOCIATES LTD ZODIAC CH601XL | Acft SN 6-7152 | Acft Dmg: SUBSTANTIAL | Rpt Status: Factual | Prob Caus: Pending |
| Eng Mk/Mdl JABIRU 3300A | Acft TT 100 | Fatal 0 | Ser Inj 0 | Flt Conducted Under: FAR 091 |
| Opr Name: JUAN SONEN | Opr dba: | Aircraft Fire: NONE | | AW Cert: SPE |

Events

2. Takeoff - Loss of control in flight

Narrative

The pilot of the experimental amateur-built airplane reported that during the takeoff roll at approximately 35 knots, he realized that he forgot to turn on the airplane's anti-collision lights. He reached over to turn them on and his forearm brushed across the top of the control stick and activated the electric trim to a full nose up position. The airplane suddenly climbed off the runway in a steep nose high attitude to an altitude of about 60 ft before it started a roll to the left towards trees. As the airplane rolled left, the pilot attempted to compensate with right rudder and aileron input, but it had little effect on directional control, so he elected to turn back to the left and try to climb over the trees. The airplane impacted the top of the tree canopy then descended through the trees and impacted the ground. The wings and fuselage were substantially damaged. The pilot reported no preimpact mechanical failures or malfunctions with the airplane that would have precluded normal operation.

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Accident Rpt# GAA17CA478 08/08/2017 1220 PDT Regis# N993JK Reno, NV Apt: Reno/stead RTS
Acft Mk/Mdl KING JOHN E JR KITFOX-SERIES 6 Acft SN S6004-024 Acft Dmg: SUBSTANTIAL Rpt Status: Prelim Prob Caus: Pending
Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: KING JOHN E JR Opr dba: Aircraft Fire: NONE

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Accident Rpt# CEN17LA318 08/14/2017 1920 EDT Regis# N6862K Rochester, IN
Acft Mk/Mdl KNAPP EASY RAIDER Acft Dmg: SUBSTANTIAL Rpt Status: Prelim Prob Caus: Pending
Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: KEN L BERGMAN Opr dba: Aircraft Fire: NONE

Events

1. Initial climb - Loss of engine power (partial)
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Narrative

On August 17, 2017, at 1920 eastern daylight time, an amateur built Knapp Easy Raider, N6862K, collided with a steel handrail during a forced landing in Rochester, Indiana, following a loss of engine power. The student pilot received minor injuries and the airplane was substantially damaged. The airplane was registered to and 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 local flight was departing from the Fulton County Airport, (RCR), Rochester, Indiana, at the time of the accident.

The pilot reported that the engine had recently been rebuilt and that he installed it in the airplane himself. The engine had a "couple" of hours of ground run-up time on it and the accident occurred on the first flight. He reported the engine stopped responding to throttle control movements shortly after becoming airborne.

The pilot landed the airplane in a factory parking lot where it hit a steel handrail.

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| Accident Rpt# ERA16LA296 | 08/20/2016 1000 EDT | Regis# N51TM | Canandaigua, NY | Apt: Canandaigua D38 |
| Acft Mk/Mdl MANTELL ALLAN T KITFOX 4 1200-IV | | Acft SN C9406-0031 | Acft Dmg: SUBSTANTIAL | Rpt Status: Factual Prob Caus: Pending |
| Eng Mk/Mdl JABIRU 2200 | | Acft TT 551 | Fatal 0 Ser Inj 0 | Flt Conducted Under: FAR 091 |
| Opr Name: MANTELL ALLAN T | | Opr dba: | | Aircraft Fire: NONE |
| | | | | AW Cert: SPE |

Events

1. Landing - Sys/Comp malf/fail (non-power)

Narrative

On August 20, 2016, about 1000 eastern daylight time, an experimental amateur-built Kitfox 4-1200, N51TM, was substantially damaged while landing at Canandaigua Airport (D38), Canandaigua, New York. The private pilot was not injured. The airplane was registered to and operated by the private pilot as a personal flight conducted under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed and no flight plan was filed for the flight that originated from Whitfords Airport (B16), Weedsport, New York, about 0920.

The pilot reported that while landing on a turf airstrip adjacent to runway 31, a rudder pedal torque tube separated and the airplane departed the right side of the runway. The airplane subsequently impacted an uneven field and came to rest upright.

Examination of the wreckage by a Federal Aviation Administration inspector revealed substantial damage to the wings and fuselage. The separated section of rudder pedal torque tube was retained and forwarded to the National Transportation Safety Board Materials Laboratory for further examination. Metallurgical examination revealed that the vertical torque tube for the right rudder pedal fractured at a fillet welded intersection where it attached to a horizontal torque tube. The fracture surface exhibited a small thumbnail like fatigue region followed by an overstress region.

The single-seat, high-wing, fixed tailwheel airplane, serial number C9406-0031, was assembled from a kit by the pilot in 2000 and issued an FAA experimental airworthiness certificate. Its most recent condition inspection was completed on August 8, 2016. At that time, the airframe had accumulated 547.4 total hours of operation. It had flown an additional 3.3 hours from the time of the last inspection, until the accident.

The FAA inspector that examined the wreckage further stated that although assembly of the accident airplane was completed in 2000, the kit was actually a 1994 model. On August 22, 1995, the kit manufacturer released Service Letter No. 47 (SL-47), applicable to the accident airplane model, which advised owners that the company had recently noticed signs of fatigue in rudder pedal torque tubes. The SL instructed owners to inspect the areas for fatigue and offered a reinforcement kit (P/N 35015.000) for \$59.95. Further, in 2000, the kit manufacturer redesigned the rudder pedal torque tubes for subsequent models, to include a reinforcement similar to what had previously been offered in the reinforcement kit. The inspector added that the accident airplane was not equipped with the newer rudder torque tube design, nor was it equipped with the reinforcement kit offered in SL-47.

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| Accident Rpt# ERA16LA301 | 08/26/2016 1450 EDT | Regis# N48KM | Iron Station, NC | Apt: Lincolnton-lincoln County Rgnl IPJ |
| Acft Mk/Mdl MEANS ROBER C ROTORWAY EXEC | | Acft SN 3363 | Acft Dmg: SUBSTANTIAL | Rpt Status: Factual Prob Caus: Pending |
| Eng Mk/Mdl ROTORWAY 152 | | Acft TT 255 | Fatal 0 Ser Inj 0 | Flt Conducted Under: FAR 091 |
| Opr Name: JERRY SCRUGGS | | Opr dba: | | Aircraft Fire: NONE |
| | | | | AW Cert: SPE |

Events

2. Maneuvering-hover - Loss of control in flight

Narrative

On August 26, 2016, about 1450 eastern daylight time, an experimental amateur-built Rotorway Exec, N48KM, was substantially damaged following a loss of control while in hovering flight at Lincolnton-Lincoln County Regional Airport (IPJ), Iron Station, North Carolina. The private pilot sustained minor injuries. Visual meteorological conditions prevailed and no flight plan was filed for the local maintenance test flight which was conducted under the provisions of Title 14 Code of Federal Regulations Part 91.

According to the pilot, the purpose of the flight was to confirm the dynamic track and balance condition of the main rotor system following the replacement of elastomeric bearings in the main rotor hub. Four ground and hover tests had been performed previous to the accident flight.

In an interview with a Federal Aviation Administration (FAA) aviation safety inspector, the pilot said that while at a hover, the helicopter pitched up, to the left, and began transitioning rearward. He corrected with a full, right-forward cyclic input, yet the helicopter continued to transition to its rear until it struck a hangar. The helicopter continued inside the open hangar, collided with an airplane, and came to rest on its left side. The helicopter sustained substantial damage to the cockpit, fuselage, and tailboom.

Prior to the flights, the helicopter was configured with a ballast weight located on the right skid as prescribed in the pilot operating handbook (POH) for solo operation. Following the accident, the forward section of the right main landing gear tube, with counterweight ballast attached, was found between the positions of the helicopter where it hovered for the test, and where it came to rest.

Examination of the helicopter by FAA inspectors confirmed cyclic and collective control continuity. Additionally, the pilot reported that the helicopter had operated "flawlessly" up until the time of the accident.

The helicopter's most recent condition inspection was completed on July 22, 2016, at 254 total aircraft hours.

The pilot held a private pilot certificate with ratings for airplane single engine land and rotorcraft-helicopter. His most recent Federal Aviation Administration (FAA) third-class medical certificate was issued on March 14, 2016. He reported 600 total hours of flight experience, of which 500 were in the accident helicopter make and model.

Weather reported at the time of the accident included winds from 080 degrees at 4 knots, 10 statute miles visibility, clear skies, temperature 34 degrees C, dew point 17 degrees C, and an altimeter setting of 30.11 inches of mercury.

The forward section of the right main landing gear tube was forwarded to the NTSB Materials Laboratory in Washington, DC for examination. According to the Material Engineer's report, "The features on the fracture surface of the separated end were consistent with overstress. No indications of preexisting cracking or corrosion were observed."

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| Accident Rpt# WPR17FA179 | 08/03/2017 1503 PDT | Regis# N420M | Rio Linda, CA | Apt: Mc Clellan Airfield MCC |
| Acft Mk/Mdl MICHAELIAN LANCAIR IV-TP | | Acft SN LIV 071 | Acft Dmg: SUBSTANTIAL | Rpt Status: Prelim Prob Caus: Pending |
| Eng Mk/Mdl DIEMECH TURBINES M601D | | Acft TT 935 | Fatal 1 Ser Inj 0 | Flt Conducted Under: FAR 091 |
| Opr Name: MARSHALL MICHAELIAN | | Opr dba: | | Aircraft Fire: NONE |
| | | | | AW Cert: SPE |

Events

2. Enroute-cruise - Loss of engine power (total)

Narrative

On August 03, 2017, at 1503 Pacific daylight time, a single-engine experimental Michaelian Lancair IV-TP, N420M, impacted a residential area in Rio Linda, California following a loss of engine power while on approach to Mc Clellan Airfield, Sacramento, California. The commercial pilot, the sole occupant, was fatally injured; the airplane was substantially damaged. The airplane was registered to Pilot Proficiency Inc., and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91. The personal flight departed from Auburn Municipal Airport, Auburn, California at 1455 with a planned destination of San Carlos Airport, San Carlos, California. Visual meteorological conditions prevailed and a flight plan had not been filed; the pilot was receiving flight following advisories.

Located in the wreckage was a Garmin GPSMAP 396, battery-powered portable GPS receiver. The unit stores date, route-of-flight, and flight-time information; all recorded data is stored in non-volatile memory.

Recorded data plots were recovered for the time frame that matched the anticipated flight track of the airplane departing from Auburn. The track indicated that the airplane departed from runway 25 about 1455. After becoming airborne, the airplane climbed and headed toward San Carlos on a heading of about 220 degrees. At 1459:28, with the airplane about 6,800 ft msl, the airplane began a gradual descent and shifted to a 240-degree heading. The airplane continued in the direction while cruising between about 215-200 kts until 1502:02 when the airplane made a left turn to adjoin the final approach leg to runway 16 at Mc Clellan Airfield.

The last six hits of the flight track occurred over 35 seconds from 1502:06 to 1502:41. During that time the speed increased from 130 kts to 91 kts and the altitude decreased about 510 ft. The last recorded point placed the airplane approximately 790 feet north-northeast of the accident site at 155 feet msl.

Numerous witnesses observed the airplane flying south along 28th street toward Mc Clellan Airfield at a low altitude. The airplane suddenly made a sharp turn to the right and disappeared into the trees.

The accident site was in a back yard of a residence located on the corner of U street (east-west oriented) and 28th street (north-south oriented). Powerlines were located 190 ft north of the wreckage with two support structures (wood poles) on both sides of 28th street (south side of U street), at a distance of 75 ft apart. The lines had been separated from the west structure attach fittings (35-ft high) but remained attached to the east structure (about 50 ft high). The upper powerline had several bends in the center area consistent with the airplane having made contact with the wire.

National Transportation Safety Board - Aircraft Accident/Incident Database

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|-------------------------------------|---------------------|---------------|-----------------------|--|
| Accident Rpt# ERA17CA013 | 10/11/2016 1336 EDT | Regis# N686RM | Bell, FL | Apt: Flying Harness Farms 37FL |
| Acft Mk/Mdl MICKLER LARRY J RV6 A-A | | Acft SN 20686 | Acft Dmg: SUBSTANTIAL | Rpt Status: Factual Prob Caus: Pending |
| Eng Mk/Mdl LYCOMING IO-360 | | Acft TT 52 | Fatal 0 Ser Inj 1 | Flt Conducted Under: FAR 091 |
| Opr Name: MICKLER LARRY J | | Opr dba: | | Aircraft Fire: NONE |
| | | | | AW Cert: SPE |

Events

2. Landing-flare/touchdown - Abnormal runway contact

Narrative

The pilot/owner was landing at his home airport with a 60-degree, 10-knot crosswind that was gusting to 14 knots. The pilot stated the wind was "a little gusty" at the time and the airplane was "right at stall speed" at touchdown. The airplane touched down on the right main landing gear, and then the left main gear before the pilot lowered the nose landing gear to the runway. He said that when the nose gear touched down, the airplane bounced into a very nose-high attitude so he "pushed the nose over" and the propeller struck the ground, the airplane nosed over, and came to rest inverted. The pilot was seriously injured and the airframe incurred substantial damage to the fuselage and vertical stabilizer. According to the pilot owner, the performance and handling of the airplane on the day of the accident was "fine. you couldn't ask for a better airplane."

National Transportation Safety Board - Aircraft Accident/Incident Database

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|----------------------------------|-----------------|-----------------|-----------------------|--------------------|------------------------------|
| Accident Rpt# CEN17FA315 | 08/09/2017 1020 | Regis# N3664Z | Las Vegas, NM | | |
| Acft Mk/Mdl PIPER PA 22-150-160 | | Acft SN 22-7562 | Acft Dmg: SUBSTANTIAL | Rpt Status: Prelim | Prob Caus: Pending |
| Eng Mk/Mdl LYCOMING 0-320 SERIES | | | Fatal 1 | Ser Inj 0 | Flt Conducted Under: FAR 091 |
| Opr Name: PRIVATE INDIVIDUAL | | Opr dba: | | | Aircraft Fire: NONE |

Events

1. Enroute - Unknown or undetermined

Narrative

On August 9, 2017, about 1025 mountain daylight time, a Piper PA-23-150 airplane, N3664Z, impacted terrain near Las Vegas, New Mexico. The private pilot was fatally injured and the airplane was substantially damaged. 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. The cross-country flight departed Dalhart, Texas, and was en route to Santa Fe, New Mexico.

The airplane was reported overdue and a search was conducted. The wreckage was located in mountainous terrain on August 13. Impact signatures were consistent with the airplane striking trees before impacting terrain. The right wing was separated from the airplane and wrapped around a large tree. The remainder of the wreckage came to inverted.

The airplane was retained for further examination.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA449 07/22/2017 1000 CDT Regis# N304DR Atchison, KS Apt: Amelia Earhart K59
Acft Mk/Mdl RADFORD DARREL F CHRISTEN EAGLE Acft SN Acft Dmg: SUBSTANTIAL Rpt Status: Prelim Prob Caus: Pending
Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: DARRELL F. RADFORD Opr dba: Aircraft Fire: NONE

National Transportation Safety Board - Aircraft Accident/Incident Database

| | | | | |
|---------------------------|--------------------|-----------------|-----------------------|---------------------------------------|
| Accident Rpt# WPR17LA181 | 08/04/2017 900 PDT | Regis# N519TB | Athol, ID | Apt: Hackney ID05 |
| Acft Mk/Mdl RANS S9 | | Acft SN 0802177 | Acft Dmg: SUBSTANTIAL | Rpt Status: Prelim Prob Caus: Pending |
| Eng Mk/Mdl ROTAX 503 DCDI | | Acft TT 2 | Fatal 0 Ser Inj 1 | Flt Conducted Under: FAR 091 |
| Opr Name: TERRY F BOLSTAD | | Opr dba: | | Aircraft Fire: NONE |
| | | | | AW Cert: SPX |

Events

1. Initial climb - Loss of control in flight

Narrative

On August 4, 2017, about 0900 Pacific daylight time, an experimental, amateur-built Rans S-9 Chaos light sport airplane, N519TB, was substantially damaged in a hard landing during an aborted takeoff from Hackney Skypark (ID05), Athol, Idaho. The commercial pilot, who was also the builder and owner, received serious injuries. The personal flight was conducted under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed and no flight plan was filed.

According to the pilot's son, who was part of the ground crew for the flight attempt, this was the maiden flight of the kit-built airplane. Because the winds were "very light," the pilot decided to use runway 21, which afforded multiple flat fields beyond it. The airplane was fueled with about 12 gallons, and the canopy was left off (a configuration "approved" by the kit manufacturer) for the initial flight. The pilot conducted a "thorough pre-flight and control checks," and radio communication with the ground crew was confirmed. The elevator trim tab was set to neutral, the engine was started and warmed up, and the pilot taxied out uneventfully. He then conducted a "high speed taxi test," which included application of full power, acceleration to about 55 mph, followed by power reduction and rollout. This too was uneventful, and the pilot taxied back for his planned takeoff from runway 21.

The pilot announced his departure on the radio and applied full power. According to the pilot's son, the airplane accelerated well, and liftoff occurred about 300 to 400 feet down the runway. About 2 seconds after liftoff the airplane was observed pitching up to a "fairly nose high attitude" of about 15 to 20 degrees as it reached an altitude of about 50 feet, and the son radioed to the pilot about the excessive pitch attitude. When the airplane was at an altitude of about 150 feet, and less than halfway down the runway, the other ground crew member observed it to be descending rapidly. The airplane landed hard, collapsed the main landing gear, and came to rest upright near the right edge of the turf runway. There was no fuel leakage or fire. The ground crew helped the pilot exit the airplane. He sustained head injuries despite his shoulder harness, and was taken to the hospital for treatment. The pilot reported to the ground crew that he had difficulty controlling the pitch attitude of the airplane, and that the engine performed normally.

The airplane was equipped with a Rotax 503 DCDI series engine, and airplane construction was completed a few weeks before the accident.

The pilot held a commercial certificate with airplane single-engine, multiengine, and instrument ratings. He had about 6,000 hours total flight experience, including about 2 hours in the accident airplane make and model. His most recent flight review was completed in July 2016. At the time of the accident, he no longer held a current FAA medical certificate, and was operating under the light sport provisions via his driver's license.

ID05 was a private use airport, equipped with a single turf runway that measured 3,500 by 150 feet. Field elevation was 2,445 feet.

The 0856 automated weather observation at an airport located about 12 miles south of the accident site included winds from 080 degrees at 5 knots, visibility 10 miles, clear skies, temperature 24 degrees C, dew point 12 degrees C, and an altimeter setting of 29.89 inches of mercury.

National Transportation Safety Board - Aircraft Accident/Incident Database

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|--|--------------------|---------------|-----------------------|---------------------------------------|
| Accident Rpt# ERA17LA269 | 08/09/2017 926 EDT | Regis# N709HR | Tower City, PA | Apt: Bendigo Airport 74N |
| Acft Mk/Mdl ROSE HERBERT D PIETENPOL AIR | | Acft SN 1728 | Acft Dmg: SUBSTANTIAL | Rpt Status: Prelim Prob Caus: Pending |
| Eng Mk/Mdl SUBARU EJ 22 | | Acft TT 9 | Fatal 0 Ser Inj 1 | Flt Conducted Under: FAR 091 |
| Opr Name: ROSE HERBERT D | | Opr dba: | | Aircraft Fire: NONE |
| | | | | AW Cert: SPE |

Events

1. Initial climb - Loss of control in flight
-

Narrative

On August 9, 2017, at 0926 eastern daylight time, an experimental amateur-built Pietenpol Air Camper, N709HR, was substantially damaged following a loss of airplane control during takeoff at Bendigo Airport (74N), Tower City, Pennsylvania. The private pilot was seriously injured. The airplane was registered to and operated by the pilot under the provisions of 14 Code of Federal Regulations (CFR) part 91 as a local, flight test flight. Day, visual meteorological conditions prevailed at the time, and no flight plan was filed.

According to airport surveillance video, the pilot initiated the takeoff roll on runway 5 and the nose of the airplane veered to the left. The takeoff continued, and the airplane pitched up to a steep, nose high attitude, rolled to the left, then descended toward the ground. The airplane contacted the ground left wing first in a steep, nose-low attitude.

An inspector with the Federal Aviation Administration (FAA) reported that the airplane came to rest in a grass area adjacent to the runway. The fuselage and wings were structurally damaged. There was no fire. The wooden propeller blades were broken off and splintered at the blade roots.

The total time on the airframe at the time of the accident was 9.8 hours and within the Phase I test period in accordance with 14 CFR part 91.319(b). The pilot was the registered airplane builder and held a FAA experimental aircraft builder certificate.

National Transportation Safety Board - Aircraft Accident/Incident Database

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|---|---------------------|---------------|-----------------------|---------------------------------------|
| Accident Rpt# WPR17LA156 | 07/15/2017 1140 PDT | Regis# N422ES | Kenwood, CA | Apt: N/a |
| Acft Mk/Mdl SIMMONS GARY F STOL CH 701-NO | | Acft SN 7200 | Acft Dmg: SUBSTANTIAL | Rpt Status: Prelim Prob Caus: Pending |
| Eng Mk/Mdl VIKING 110 | | Acft TT 450 | Fatal 0 Ser Inj 0 | Flt Conducted Under: FAR 091 |
| Opr Name: GOLDNER LESLIE | | Opr dba: | | Aircraft Fire: NONE |

Events

1. Emergency descent - Loss of engine power (total)
-

Narrative

On July 15, 2017, at 1140 Pacific daylight time, an experimental kit-built Simmons STOL CH 701, N422ES, was substantially damaged during a forced landing to a small field following a loss of engine power near Kenwood, California. The pilot/owner, the sole occupant, was not injured. The pilot operated the airplane under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed for the flight that departed Cloverdale Municipal Airport (O60), Cloverdale, California, and was destined for Sonoma Skypark Airport (0Q9), Sonoma, California. No flight plan had been filed.

The pilot reported while in cruise flight there was a "severe vibration" that emanated from the engine and he was able to see cooling fluid leaking from the engine. Within 30 seconds the engine lost power. The pilot set up to land in a small narrow field surround by grape vineyards. He stated that during the approach, he could not line up with the field properly, and during the landing roll, the airplane slipped into a ditch, coming to rest nose down.

National Transportation Safety Board - Aircraft Accident/Incident Database

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|--|---------------------|---------------|-----------------------|--|
| Accident Rpt# ERA16LA260 | 07/14/2016 1930 CDT | Regis# N4714H | Somerville, TN | Apt: Fayette County Airport FYE |
| Acft Mk/Mdl SORENSEN DANNY PITTS S1 S-NO | | Acft SN DS-1 | Acft Dmg: SUBSTANTIAL | Rpt Status: Factual Prob Caus: Pending |
| Eng Mk/Mdl LYCOMING O-360 | | Acft TT 865 | Fatal 0 Ser Inj 0 | Flt Conducted Under: FAR 091 |
| Opr Name: RICHARD L. RICE | | Opr dba: | | Aircraft Fire: NONE |
| | | | | AW Cert: SPE |

Events

1. Landing-landing roll - Landing gear collapse
-

Narrative

On July 14, 2016, about 1930 central daylight time, an experimental amateur-built Pitts S1-S, N4714H, was substantially damaged while landing at Fayette County Airport (FYE), Somerville, Tennessee. The private pilot was not injured. The airplane was registered to and operated by the private pilot as a personal flight conducted under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed and no flight plan was filed for the flight that originated from Wolf River Airport (54M), Rossville, Tennessee, about 1845.

The pilot reported that after a normal three-point landing in a calm wind, the airplane began swerving as it slowed. The airplane then departed the right side of the runway and ground-looped, which resulted in substantial damage to the lower left wing.

Examination of the wreckage by a Federal Aviation Administration (FAA) inspector revealed that the left landing gear leg had separated and exhibited corrosion. The left landing gear leg was retained and forwarded to the National Transportation Safety Board Materials Laboratory for further examination. Metallurgical examination of the fracture surface revealed a small thumbnail like fatigue region followed by an overstress region.

The single-seat, bi-wing, fixed tailwheel airplane, serial number DS-1, was assembled from a kit in 1984 and issued an FAA experimental airworthiness certificate. Its most recent condition inspection was completed on April 23, 2016. At that time, the airframe had accumulated 865 total hours of operation. It had flown an additional 11 hours from the time of the last inspection, until the accident.

The FAA inspector that examined the wreckage further stated that a previous owner built the airplane and did not use the stock bungie landing gear that was included with the kit. Rather, to reduce drag, he designed and constructed his own round tapered rod landing gear.

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

This report was modified on August 16, 2017. Please see the docket for this accident to view the original report.

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.

National Transportation Safety Board - Aircraft Accident/Incident Database

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

National Transportation Safety Board - Aircraft Accident/Incident Database

ATC Transcripts - Partial Summary

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

Air Traffic Control Information

Controllers are required to provide weather and precipitation information to pilots as stated in FAA Order 7110.65, Paragraph 2-6-4, "Weather and Chaff Services":

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a. Issue pertinent information on observed/reported weather and chaff areas by defining the area of coverage in terms of azimuth (by referring to the 12-hour clock) and distance from the aircraft or by indicating the general width of the area and the area of coverage in terms of fixes or distance and direction from fixes.

NOTE - Weather significant to the safety of aircraft includes such conditions as funnel cloud activity, lines of thunderstorms, embedded thunderstorms, large hail, wind shear, microbursts, moderate to extreme turbulence (including CAT), and light to severe icing.

PHRASEOLOGY- WEATHER/CHAFF AREA BETWEEN (number) O'CLOCK AND (number) O'CLOCK (number) MILES, or (number) MILE BAND OF WEATHER/CHAFF FROM (fix or number of miles and direction from fix) TO (fix or number of miles and direction from fix).

b. Inform any tower for which you provide approach control services of observed precipitation on radar which is likely to affect their operations.

c. Use the term "precipitation" when describing radar-derived weather. Issue the precipitation intensity from the lowest descriptor (LIGHT) to the highest descriptor (EXTREME) when that information is available. Do not use the word "turbulence" in describing radar-derived weather.

1. LIGHT. 2. MODERATE. 3. HEAVY. 4. EXTREME.

PHRASEOLOGY - AREA OF (Intensity) PRECIPITATION BETWEEN (number) O'CLOCK AND (number) O'CLOCK, (number) MILES, MOVING (direction) AT (number) KNOTS, TOPS (altitude). AREA IS (number) MILES IN DIAMETER.

EXAMPLES

1. "Area of extreme precipitation between eleven o'clock and one o'clock, one zero miles moving

east at two zero knots, tops flight level three niner zero."

2. "Area of heavy precipitation between ten o'clock and two o'clock, one five miles. Area is two

five miles in diameter."

3. "Area of heavy to extreme precipitation between ten o'clock and two o'clock, one five miles.

Area is two five miles in diameter."

Weather Information

FAA Pilot Handbook of Aeronautical Knowledge, Chapter 11, "Weather Theory," states the following:

"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 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:

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- 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.