

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# CEN17LA105	02/21/2017 20 CST	Regis# N6343L	Gainesville, TX	Apt: Gainesville Muni GLE
Acft Mk/Mdl AMERICAN AVIATION AA 1A		Acft SN AA1A-0343	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-235-C2C			Fatal 0 Ser Inj 1	Flt Conducted Under: FAR 091
Opr Name: BRADLEY KELLY		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

1. Approach - Fuel exhaustion

Narrative

HISTORY OF FLIGHT

On February 21, 2017, about 0020 central standard time, an American Aviation AA-1A airplane, N6343L, made a forced landing short of runway 36 at Gainesville Municipal Airport (GLE), Gainesville, Texas. The private rated pilot sustained minor injuries, the passenger sustained serious injuries, and the airplane sustained substantial damage. 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. Night visual meteorological conditions prevailed during the accident and no flight plan had been filed. The cross-country flight originated from Denton Enterprise Airport (DTO), Denton, Texas about 2130.

The responding law enforcement officer reported that the passenger was seated in the right seat. Also, the pilot told the officer that he attempted to assist the passenger in flying the airplane when it began to descend following the loss of engine power.

The airport director responded to the accident site and reported that he spoke to the pilot who stated, "the engine quit on short final, the wing dropped, and [the pilot] grabbed the yoke and tried to straighten it out..." The airport director also spoke to a pilot rated first responder who told the airport director that he moved the fuel selector from RIGHT to OFF while at the accident site.

The Federal Aviation Administration (FAA) inspector spoke with the pilot on the phone, who stated that the passenger had recently purchased the airplane. The passenger, who was not a certificated pilot, asked the pilot to fly with him on a familiarization flight. They departed DTO and reportedly completed about 15 touch-and-go landings at North Texas Regional Airport (GYI), Sherman/Denison, Texas. They then departed GYI for GLE to get additional fuel for the airplane. They approached GLE from the north and intended to land on runway 18. During the final descent, the pilot, who claimed to be flying the airplane, observed a coyote on the runway, so he executed a go-around. During the go-around, the pilot stated that the engine lost power and he made a 180° turn back toward the runway because he did not want to land on the highway. The pilot did not remember in which direction the turn was made. The airplane was not able to make the runway, so the pilot made a forced landing to a field (figure 1).

The pilot provided a written statement and spoke with the NTSB Investigator-In-Charge on the phone. He stated that on February 19, 2017, he and the passenger, who owned the airplane, flew the accident airplane from DTO to GLE for dinner, the passenger added fuel to the airplane, then they returned to DTO. This was the last time the airplane was serviced with fuel. On February 20, 2017, he met the passenger at DTO and they departed for GYI before the DTO control tower closed. They arrived at GYI after the control tower had already closed. They performed about 8 touch-and-go landings with a short break after the fifth. They departed the pattern at GYI and proceeded to GLE for fuel. About 5 minutes before arriving at GLE, the passenger noticed that the fuel pressure gauge indicated 0 psi, but the engine was still operating smoothly. The pilot turned on the electric fuel boost pump and the fuel pressure gauge returned to 5 psi. The boost pump remained on for the rest of the flight. During the final approach and before landing the pilot, who again claimed to be flying the airplane, observed a coyote on the runway and executed a go-around. The engine experienced a loss of power during the climb while 150 to 250 ft above ground level. He stated that the passenger recalled that the engine lost power while on left crosswind in the traffic pattern. The pilot reported that he turned and attempted to land on runway 36, but the airplane landed in a field about 200 to 300 ft short of the runway. He added that after the accident he saw fuel on the ground at the accident site.

The passenger provided a written statement for the investigation; in the statement he did not report seeing a coyote on the runway, only that the pilot saw one. He also reported that the first responders discussed fuel on the ground at the accident site as they worked on extracting him from the airplane. He added that the fuel selector was positioned to the right fuel tank.

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PERSONNEL INFORMATION

On July 22, 2015, the passenger was denied an FAA medical certificate for reasons unknown. He reported 16 hours of total flight time.

AIRCRAFT INFORMATION

The airplane was equipped with two wing spar fuel tanks, each with a capacity of 12 gallons for a total of 24 gallons. The usable fuel quantity was 22 gallons, and the unusable fuel was one gallon per tank. The pilot reported that the airplane had 20 gallons of fuel when they departed DTO.

On February 19, 2017, the airplane was serviced with 12.57 gallons of fuel. The pilot and passenger then flew the airplane from GLE to DTO, which was about a 15-minute flight.

METEOROLOGICAL INFORMATION

WRECKAGE AND IMPACT INFORMATION

The airplane came to rest upright facing east in a field about 150 yards south of runway 36 at GLE and was slightly right of the runway's extended centerline (figure 2). The initial impact point and subsequent debris path was oriented toward the northwest. One propeller blade was bent aft near mid span and the other blade was straight and unremarkable. The right wing had separated from the fuselage, folded upside down, and twisted aft toward the empennage. The right-side fuel lines to the wing were separated and no fuel was observed in the right wing fuel tank. The left wing remained attached to the fuselage. The FAA inspector drained the left fuel tank sump drain, which contained a few tablespoons of dirty liquid.

The airplane was recovered by a wreckage retrieval company. When the left wing was removed for transport, there was less than one cup of fuel recovered from the left fuel tank. The ring wing tank was completely empty.

The right fuel tank quantity indicator is located on the lower right panel between front right seat and the lower right side of the instrument panel. The indication ball was not visible in the gauge. The left fuel tank quantity indicator is in the same position, but on the left side of the airplane.

There were no preaccident anomalies noted with the airplane during the on-scene examination by the FAA inspector.

TESTS AND RESEARCH

According to the airplane's pilot operating handbook (POH), the cruise performance chart matched the checklist found onboard the airplane, which the pilot reported referencing. The climb and cruise performance numbers provided in the POH were used and extrapolated to calculate an estimated fuel consumption for the accident flight. The calculation used the most conservative numbers regarding gallons per hour (gph) and two different estimates for the number of touch-and-go landings performed based on the pilot and passenger's initial and follow-up statements. It is possible that the actual fuel consumption was higher than the estimated number used for this report.

The first fuel consumption calculation (figure 3) estimated 7 minutes per landing and 15 total landings. The estimated 85% power was used to account for the higher power setting needed during touch-and-go landings, which yielded an average fuel burn of 7.16 gph. This fuel consumption calculation estimated a total of 19 gallons used, which would have left less than 1 gallon remaining in the fuel tanks, none of which would have been considered usable. Based on this calculation, the total flight time was estimated to be 2 hours and 42 minutes.

The second fuel consumption calculation (figure 3) also used an estimated 7 minutes per landing and only 9 total landings to match the pilot and passengers' follow-up statements. The same 85% power setting and fuel burn of 7.16 gph was used. This fuel consumption calculation estimated a total of 14 gallons used which would have left less than 6.0 gallons remaining in the fuel tanks, 4.0 of which would have been considered usable. However, based on this calculation the total flight time was estimated to only be 2 hours.

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Accident Rpt# CEN18LA084	01/22/2018 845 CST	Regis# N3600A	Abilene, TX	Apt: Dyess Air Force Base DYS
Acft Mk/Mdl BEECH A36		Acft SN E-1328	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
			Fatal 0 Ser Inj 1	Flt Conducted Under: FAR 091
Opr Name: PILOT		Opr dba:		Aircraft Fire: NONE
				AW Cert: STU

Events

2. Enroute-climb to cruise - Powerplant sys/comp malf/fail

Narrative

On January 22, 2018, at 0845 central standard time, a Beech A36, N3600A experienced a total loss of engine power during climb after departing from Abilene Regional Airport (ABI), Abilene, Texas. The pilot then performed a forced landing to a field near Abilene, Texas. The airplane received minor damage. The pilot sustained serious injuries. The airplane was registered to and operated by the pilot under 14 Code of Federal Regulations Part 91 as a personal flight that was operating on a visual flight rules flight plan. Visual meteorological conditions prevailed at the time of the accident. The flight originated from ABI at 0835 and was destined to Sierra Blanca Regional Airport (SRR), Ruidoso, New Mexico.

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Incident Rpt# OPS18IA003 12/24/2017 1810 PST Regis# Medford, OR
Acft Mk/Mdl BOMBARDIER INC CL600 2D24-900 Acft SN 15162 Acft Dmg: NONE Rpt Status: Prelim Prob Caus: Pending
Fatal 0 Ser Inj 0
Opr Name: Opr dba: Aircraft Fire: NONE
AW Cert: STT

Events

2. Approach - Air traffic event

Narrative

On December 24, 2017 about 1808 PST, SkyWest Airlines Flight 3567 (SKW3567), a Bombardier CRJ9, registration N162PQ, operated below the minimum vectoring altitude (MVA) while conducting an instrument approach to the Rogue Valley International - Medford Airport (MFR), Medford, Oregon and initiated a climb after receiving an alert from the Enhanced Ground Proximity Warning System (EGPWS.) The crew and passengers were not injured and there was no damage to the airplane. SKYW3567 was operating under the provisions of 14 Code of Federal Regulations (CFR) Part 121 as a scheduled passenger flight from Salt Lake City International Airport (SLC), Salt Lake City, Utah to MFR and instrument meteorological conditions prevailed at the time.

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Accident Rpt# CEN18LA040	11/26/2017 915 CST	Regis# N8637S	Midland, TX	Apt: N/a
Acft Mk/Mdl CESSNA 150F-F		Acft SN 15061937	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR O-200-A		Acft TT 4205	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: ON FILE		Opr dba:		Aircraft Fire: NONE

Events

1. Enroute - Loss of engine power (total)

Narrative

On November 26, 2017, at 0915 central standard time, a Cessna 150F airplane, N8637S, impacted terrain during a forced landing following a total loss of engine power near Midland, Texas. The student pilot, who was the sole occupant, was not injured, and the airplane sustained substantial damage. The airplane was registered to Skycop, LLC, Midland, Texas, and operated by a private individual. The instructional flight was conducted under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed, and a visual flight rules flight plan had been filed for the solo cross-country flight. The flight departed the Midland Airpark (MDD), Midland, Texas, about 0900, and was destined for San Angelo, Texas.

The student pilot stated the airplane preflight, engine run-up, and takeoff were normal with no anomalies noted. About 15 minutes into the solo cross-country flight, the engine lost total power, and the student pilot performed a forced landing to a mesquite tree covered area. During the forced landing, the airplane impacted a power line and mesquite trees.

The airframe and engine were examined by Federal Aviation Administration (FAA) inspectors at the accident site, and after the airplane was recovered. Examination of the airplane revealed oil residue on the back of the engine, lower engine cowling, and the right main landing gear strut. The top mounting nut on the generator was missing, and the two lower mounting nuts were loose. Evidence of oil leakage past the generator mounting gasket was identified after removal of the generator from the engine. A hole in the engine crankcase was noted above the No. 1 cylinder.

On the day of the accident, the FAA inspector examined the engine run-up and taxiway area at MDD, consistent with where the student pilot completed his engine run prior to the flight. The engine run-up area contained a large oil stain and residual oil.

A review of the engine logbook revealed the most recent 100-hr inspection was completed on February 19, 2017, at an aircraft tachometer time of 4,204.8 hours. At the time of the accident, the tachometer indicated 4,282.3 hours. According to the student pilot, an engine oil change had been completed about 10 hours before the accident. No entry for the oil change was found in the engine records.

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Accident Rpt# ERA16FA161	04/18/2016 1910 EDT	Regis# N1863Y	Westmoreland, NY	Apt: Sophie's Choice NA
Acft Mk/Mdl CESSNA 172-C		Acft SN 17249463	Acft Dmg: DESTROYED	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR O-300-D		Acft TT 3303	Fatal 2 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: BALIO JOHN M		Opr dba:		Aircraft Fire: GRD
				AW Cert: STN

Events

1. Takeoff - Loss of control in flight
2. Takeoff - Loss of control in flight

Narrative

HISTORY OF FLIGHT

On April 18, 2016, about 1910 eastern daylight time, a Cessna 172C, N1863Y, collided with trees and terrain during takeoff from Sophie's Choice airstrip, Westmoreland, New York. The private pilot and one passenger were fatally injured, one passenger sustained minor injuries, and the airplane was destroyed by postcrash fire. The airplane was being operated as a Title 14 Code of Federal Regulations Part 91 personal flight. Visual meteorological conditions prevailed near the accident site at the time and no flight plan was filed for the flight, which was destined for Griffiss International Airport (RME), Rome, New York.

Earlier that day, the accident pilot and the pilots of two other airplanes flew from a private airstrip near Poland, New York, to Boonville Inc., Airport (1NK7), Boonville, New York, where they landed uneventfully. The three airplanes subsequently departed from 1NK7 and flew to Sophie's Choice airstrip where they landed and secured their airplanes. The pilot-rated airstrip owner reported that, before departure, he suggested to the accident pilot that he begin the takeoff from at least just west of the "break" point of the runway, which allowed for about 1,344 ft of available runway (see figure 1).

The pilot of one of the airplanes that departed before the accident airplane reported seeing the accident airplane stopped on the side of the runway, about 1,150 ft from the departure end of the east runway (see figure 1). Using the radio frequency (122.7 MHz) that they had used throughout the day to communicate, he broadcast for the accident pilot to stop and not initiate takeoff from that point, but the accident pilot did not respond. He also attempted to communicate with the other pilot who had just departed, but he did not respond either.

The pilot-rated passenger onboard the accident airplane stated that, after boarding the airplane, the pilot started the engine and then taxied to the west portion of the runway for an intended takeoff to the east from the down-sloping runway. She indicated that the pilot did not discuss with the passengers where the takeoff should begin. She reported that the winds were calm and that the pilot performed a run-up while on the runway centerline. He initiated the takeoff with an unknown flap extension, and when the flight was past a road located immediately east of the departure end of the runway, she heard the stall warning horn chirp. She did not observe any engine indications and did not recall the airspeed at any time during the flight. When asked if the engine sound changed at any time during the flight, she responded that she did not perceive any change in sound at any time. She stated to an acquaintance postaccident that she and the pilot exited the airplane from the left door because of her inability to open the right door. Because the rear seat occupant needed help exiting the airplane, the pilot attempted to assist him. About that time, the airplane exploded.

The airstrip owner, who was located near the departure end of the runway, recorded the takeoff on his cellular phone. He stated that, during the accident airplane's takeoff roll, he noticed the flaps were extended between 10 \emptyset and 20 \emptyset and that the airplane became airborne when it was just past the windsock. He indicated that at no time did he hear any abnormal sounds from the engine, and after becoming airborne, it appeared to him that the airplane was "hanging on the propeller." He indicated that the airplane entered an incipient stall, with the left wing dropping, followed by the right wing. Based on a review of the video, following the sound of the impact, the airstrip owner stated, ".I told them to use more runway." He later reported going to the scene and talking with the female passenger and telling her he thought they should have initiated the takeoff from farther to the west, and she replied that they should have begun the takeoff from a point farther west of where they did.

The airstrip owner's wife, who was about 100 ft east from the airstrip owner, indicated that, as the airplane went past her position, she did not discern any unusual engine sounds.

A 911 call was made at 1912, and first responders were dispatched.

PERSONNEL INFORMATION

According to Federal Aviation Administration (FAA) records, the pilot held a private pilot certificate with an airplane single-engine land rating. His most recent FAA first-class medical certificate was issued on August 31, 2015, with no limitations.

Including a 2.3-hour flight earlier that day, but excluding subsequent flights later that day, the pilot logged a total time of about 458 hours, 382 hours of which were in the accident airplane make and model and 298 hours of which were as pilot-in-command.

According to FAA records, the pilot-rated passenger in the right front seat held a private pilot certificate with an airplane single-engine land rating. She estimated her total flight time was between 100 and 300 hours.

AIRCRAFT INFORMATION

The four-seat, high-wing airplane was manufactured in 1962. It was powered by a 145-horsepower Continental O-300-D engine and equipped with a two-blade McCauley 1C172/EM7653 fixed-pitch propeller.

A review of the airplane's Type Certificate Data Sheet revealed that the maximum red line engine rpm was 2,700.

The maintenance records were reportedly in the airplane at the time of the accident. A review of documents provided by the facility that performed the airplane's last annual inspection revealed it was signed off as being completed on April 5, 2016, at an airframe total time of 3,302.55 hours. Based on pilot logbook entries, including the logged 2.3-hour flight earlier on the accident date but excluding the subsequent unlogged flights later that day, the airplane had been operated 6.2 hours since the annual inspection was completed.

METEOROLOGICAL INFORMATION

The 1853 recorded weather at RME, located 7 nautical miles north-northeast from the accident site, included wind from 300° at 10 knots, visibility 10 statute miles, clear skies, temperature 20°C (or 68°F), dew point -01°C, and an altimeter setting of 30.13 inches of mercury. A review of an FAA Special Airworthiness Information Bulletin pertaining to carburetor ice revealed that the atmospheric conditions at the time of the accident were not favorable for the formation of carburetor ice.

According to the airstrip owner, the wind at the time of the accident was nearly calm, or no more than 1 to 2 knots from the west.

AIRPORT INFORMATION

The private, decommissioned airstrip had a grass runway oriented 8/26 and was about 1,980 ft long. A "break" near the west side of the runway allowed for a usable runway distance of 1,344 ft when departing from runway 8. The runway was down-sloping from the "break" to the departure end of runway 8. A functioning windsock was located north of the runway and about 263 ft from its departure end.

Examination of the airstrip revealed marks/impressions in the grass from three tires, which were consistent with that from a tricycle-gear-equipped airplane taxiing on the runway for an east departure. From that point, about 1,130 ft of runway remained, all of which was down-sloping. (The airstrip owner indicated that the elevation at the point where the pilot initiated the takeoff was about 633 ft, whereas the elevation at the departure end of the runway was about 603 ft.)

The marks from the three tires continued for about 362 ft from the start of the takeoff roll, at which point the nose tire mark disappeared. The marks from the main landing gear tires continued to about abeam the windsock, and at that point, a narrow 30-ft-long mark consistent with contact by the tail tiedown loop was noted. Further examination of the runway revealed that the grass was about 2 inches high. In general, the portion of runway 08 from its start to the "break" was noted to be slightly soft, whereas the remainder of the runway was noted to be harder.

WRECKAGE AND IMPACT INFORMATION

The airplane crashed in the yard of a residence; the main wreckage was located about 089ø and 520 ft from the departure end of runway 08. The main wreckage was upright heading 020ø on gently sloped terrain with the wings oriented upslope and downslope.

Examination of the accident site revealed impact damage to trees and ground about 40 ft west of the resting position of the airplane. A tree left of the resting position of the main wreckage was damaged about 30 ft above ground level (agl); the left wingtip was found in the tree, and the left elevator counterweight was found on the ground at the base of the tree, or about 482 ft past the departure end of the runway. Nearly in-line with the tree contact was a ground contact scar with specs of white paint in the dirt. A section of the right aileron and right wingtip were located on the ground slightly east of the ground contact location. Immediately adjacent to the ground contact was damage to several small diameter trees about 8 ft agl.

Fire damage was noted in the area immediately adjacent to the resting position of the wreckage. Examination of a tree that was resting partially on the engine cowling revealed one limb about 1.75 inches in diameter that exhibited a 45ø cut; the cut was located about 108 inches agl. Two small diameter tree sections with opposite 45ø cuts were found immediately adjacent to the accident site. The trees were associated with the first contact small diameter trees between 1.0 and 1.5 inches in diameter. The limbs were about 14 inches long and exhibited black transfer marks on the cut surfaces.

The cockpit, cabin, and inboard portions of both wings were nearly consumed in the postcrash fire. The manual flap selector was found positioned to the 10ø extension position. All four female portions of the lapbelts were located, none of which had the male portion connected. The pilot's lapbelt, which exhibited heat damage, was buckled and noted to easily release. The remains of the fuel selector handle and plate were located; however, the body of the fuel selector valve was not identified.

All components necessary to sustain flight remained attached or were found near the resting position of the main wreckage. Flight control continuity was confirmed for roll, pitch, and yaw from each control surface to each respective cockpit control. During examination of the elevator trim system cable, one cable broke at the swaged end of the chain. The fracture surface was noted to be fresh and did not exhibit soot. Flap cable continuity was confirmed from the flap selector handle to each flap bellcrank adjacent to the control surface.

Examination of the right entry door revealed that about two-thirds of it, including the forward and upper portions, was consumed by postcrash fire; the hinges were found loose in the wreckage. The exterior door handle was in the "closed" position, which corresponded with the door latch being extended (locked), and it moved by hand actuation. Deformation was noted to the lower portion of the door; it could not be determined whether the deformation was due to fire or impact.

Examination of the fuselage revealed that it was nearly consumed by postcrash fire to fuselage station (FS) 140, but it was continuous from that point to FS 228. The vertical stabilizer with attached rudder and right horizontal stabilizer with attached elevator and counterweight remained attached to the empennage. Examination of the elevator trim tab actuator revealed it was extended about 1.70 inches, which equates to 20ø-tab trailing edge up (maximum is 28ø). The trim tab control cables were continuous to the cockpit. The left horizontal stabilizer with attached elevator was separated and found immediately forward of the right horizontal stabilizer. The tail tiedown located at FS 228 had dirt adhering to it. Examination of the bulkhead at FS228 revealed no damage at the bottom or at the lower elevator control cable attachment pass-through area. A wrinkle was noted on the fuselage bottom from FS 214 to 219.

Examination of the separated baggage door, which was found in the main wreckage and had sustained heat damage, revealed that the outer latch was in.

Examination of both wings revealed that they sustained impact and postaccident fire damage. Both fuel tank outlet screens were unobstructed. Examination of the left fuel tank vent check valve revealed that the check valve flapper was in place, and it moved freely by hand actuation.

Examination of the engine compartment revealed that the fuel strainer was separated from its attachment point on the firewall and exhibited extensive fire damage. The inlet was separated, but a flexible hose remained connected to the outlet fitting. The B-nut of the hose connected at the outlet fitting was about 2.5 flats loose. Disassembly of the fuel strainer revealed that the screen exhibited some corrosion on the exterior surface.

Examination of the engine revealed that the upper and lower engine cowlings were in place. Following removal of the upper cowling, heat damage was noted to the engine. The engine remained attached to the airframe, and the case halves matched. The oil dipstick and oil filler cap were found in place; no oil level registered on the dipstick. The engine was removed from the airframe, and following removal of the lower engine cowling, engine oil was noted resting on the

interior surface. Rotation of the propeller revealed crankshaft, camshaft, and valve train continuity, including continuity to the accessory section; during rotation, the impulse coupling was heard to activate. Thumb suction and compression were noted in all cylinders.

Examination of the upper and lower spark plugs revealed normal wear; the lower plugs of the odd cylinders were noted to be oil soaked, but the engine was resting with those cylinders in a lower elevation than the opposite-side cylinders. The ignition harness was heat damaged. Both magnetos were tightly installed to the accessory case, and during hand rotation of the propeller, no spark was noted at the heat damaged ignition leads. The left magneto was partially disassembled, which revealed that the distributor block was destroyed, the rotor gear was not in place, and the distributor gear exhibited heat damage. The right magneto exhibited heat damage to the rotor and distributor gears. During rotation of the propeller, the rotor shafts of both magnetos rotated.

Examination of the carburetor revealed that it remained attached to the oil sump but exhibited heat damage. The mixture and throttle cables, which remained attached to each respective control levers, were in the full rich and nearly full wide-open positions, respectively. Examination of the carburetor heat control revealed that the control cable remained attached to the control lever, which was found oriented nearly parallel to the lower surface of the oil sump and correlated to the open, or cold, position. Disassembly of the carburetor revealed that one float had separated; the other float remained attached but was not fully seated. Examination of the separated float revealed resolidified solder. Dark discoloration was noted in the carburetor bowl.

Examination of the propeller, which remained attached to the engine, revealed one blade was fractured about 31 inches from the hub centerline, whereas the other blade was full span; the separated blade piece was not located. The fractured blade exhibited a slight forward bend beginning about 7 inches from the fracture point of the blade; no evidence of preimpact failure or malfunction. The full span blade exhibited "S" bending, the center points of which were located 12 and 25 inches, respectively, from the bulkhead location. The outer 4.5 inches of the leading edge exhibited blade damage, which was curled forward.

MEDICAL AND PATHOLOGICAL INFORMATION

The pilot died 6 days after the accident while hospitalized, and an autopsy was not performed. According to the death certificate, the cause of death was listed as "complications of smoke inhalation and thermal injuries."

The FAA's Bioaeronautical Sciences Research Laboratory, Oklahoma City, Oklahoma, conducted toxicological testing on the pilot's serum samples. The FAA toxicology report stated that it did not perform testing for carbon monoxide and cyanide and that no volatiles were detected in the serum samples. Unquantified amounts of ketamine and midazolam and 0.13 ug/ml norketamine were detected in the serum samples. These medications are only available in IV form and are generally used during resuscitation efforts.

The rear seat occupant died the day after the accident while hospitalized, and an autopsy was not performed. According to the external examination report, the cause of death was listed as "complications of thermal and inhalational injuries due to airplane crash."

SURVIVAL ASPECTS

According to the front seat passenger, after the airplane came to rest, all occupants were alert and conscious. She was unable to open the right door and attributed this to either the impact or operational issues.

ADDITIONAL INFORMATION

Weight and Balance

Weight calculations were performed using the empty weight listed from a weight and balance form dated October 23, 2008 (1,516.83 lbs), the weight of oil (15.0 lbs), the pilot's weight per his last medical application (168 lbs), the weight of the right front seat passenger (138 lbs), the estimated weight of the rear seat occupant (162 lbs), and the estimated fuel load (161 lbs). The airplane weight at engine start was estimated to be about 2,161 lbs, or about 89 lbs less than the maximum certificated gross weight of 2,250 lbs. Center-of-gravity calculations indicated that the loaded aircraft moment was 87.85 lb-inches, which was within the normal category envelope of 2,161 lbs.

Takeoff Performance

According to the takeoff data chart contained in the owner's manual, which was for a hard-surfaced runway with flaps retracted, based on the airport elevation (average 618 ft), the temperature about the time of the accident (68°F), the estimated airplane weight at the time of the accident (2,161 lbs), and no headwind, the ground run was calculated to be about 786 ft, and the distance to clear a 50-ft obstacle was calculated to be about 1,370 ft. The chart did not contain figures for a grass surface nor any tailwind or sloped runway components. The owner's manual also indicated that 10° of flap extension shortened the ground run about 10%, but the advantage was lost to climb over a 50-ft obstacle.

The owner's manual also contained a chart for stall speeds, which was predicated on the airplane being operated at gross weight and power off, and true airspeeds were provided in mph. Based on a flap position of 10°, the stall speeds at 0°, 20°, and 40° of bank were 54, 56, and 62 mph, respectively.

Sound Spectrum Study

According to a sound spectrum study of the provided takeoff video, the engine was operating about 2,340 rpm, or 360 rpm below the full red line rpm of 2,700 at the time the airplane passed the camera (near the departure end of the runway) during takeoff. The study also indicated that, because the airplane's speed was unknown, it was not possible to accurately determine the engine rpm throughout the takeoff roll.

Speed Study

According to a speed study of the provided takeoff video, the impact occurred 9.25 seconds after the airplane passed the windsock. The average groundspeed from the point where the airplane passed the windsock just before becoming airborne to the accident site was about 47 knots (54 mph).

According to a representative of the propeller manufacturer, based on the temperature at the time of the accident and the airstrip elevation, the required theoretical true airspeed that would have allowed the propeller to achieve 2,700 rpm (full red line rpm) would have been 84 knots. The representative also indicated that, based on the temperature, elevation, and the average groundspeed calculated by the NTSB, the engine rpm was 2,402, the power absorbed (hp) was about 124, and the lbs of thrust was about 462.

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Accident Rpt# GAA17CA448	07/09/2017 1300 EDT	Regis# N80399	Manassas, VA	Apt: Manassas Rgnl/harry P Davis Fi HEF
Acft Mk/Mdl CESSNA 172-M		Acft SN 17266571	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320-E2D		Acft TT 1268	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: AVIATION ADVENTURES LLC.		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

1. Landing - Hard landing
-

Narrative

The solo student pilot was practicing takeoff and landings at the accident airport. On her fifth and final landing, she reported that the control tower advised her to spend minimal time on the runway due to a jet that was No. 2 to land behind her. She added that, she rushed the landing and was too fast to level off during the flare. Subsequently the nose wheel touched down first, and a porpoise ensued. Following the porpoise, she taxied off the runway without incident.

A postaccident examination revealed that the airplane sustained substantial damage to the fuselage.

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

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA18CA078	12/08/2017 1500 PST	Regis# N4801D	Everett, WA	Apt: Snohomish County (paine fld) PAE
Acft Mk/Mdl CESSNA 172-N		Acft SN 17272362	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320 SERIES		Acft TT 11039	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: JOHN FULLER		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

1. Takeoff - Loss of control in flight

Narrative

The pilot reported that, during takeoff following a touch-and-go landing, the engine gauge readings appeared normal, the airplane lifted off the ground about 65 knots, and he applied nose down pressure to stay in ground effect. The pilot reported that the airplane was not showing indications of a climb nor was the airspeed increasing, so he lowered the nose further. He then attempted to climb by pulling back on the yoke and alternately build airspeed by lowering the nose multiple times with negative results. The pilot then reduced power to abort the takeoff. The airplane landed on the remaining runway, overran the end of the runway, and impacted a fence.

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

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

The passenger in the right seat provided a video showing the touch-and-go landing from the right seat looking forward through the windscreen. The instrument panel cannot be seen. During the landing, the airplane touched down about 200 feet beyond the approach end of the 3,004 ft. long runway. The pilot applied takeoff power, the airplane lifted off the runway, and continued in level flight in ground effect. The pitch attitude did not appear excessive, the stall warning horn was not audible, and there were no abnormal sounds from the engine. The pilot then reduced power to abort the takeoff. The airplane touched down near the departure end of the runway, and the camera panned downward for the remainder of the video.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA18CA074	11/30/2017 1745 EST	Regis# N474SP	Bowie, MD	Apt: Freeway W00
Acft Mk/Mdl CESSNA 172-S		Acft SN 172S8020	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-360-L2A		Acft TT 5890	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: GODDARD AIRCRAFT CLUB INC		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

1. Approach-VFR pattern final - Controlled flight into terr/obj (CFIT)

Narrative

The pilot reported that, during approach to land in night conditions, he noticed that the airspeed displayed on a newly installed electronic flight instrument was reading slightly different than the airspeed indicator. He added that his altitude judgement was affected "by the scarcity of observable objects in the landing area, the "black hole" effect, which was likely worsened by the brightness of the [electronic instrument]". When the pilot looked up from the instrument panel, he saw tree branches approaching. The airplane struck the trees and came to rest inverted.

The airplane sustained substantial damage to the fuselage.

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

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA18CA080	11/26/2017 1507 EST	Regis# N452ER	Daytona Beach, FL	Apt: Daytona Beach Intl DAB
Acft Mk/Mdl CESSNA 172-S		Acft SN 172S11586	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-360-L2A		Acft TT 2355	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: EMBRY-RIDDLE AERONAUTICAL UNIVERSITY INC		Opr dba:		Aircraft Fire: NONE AW Cert: STN

Events

1. Landing - Hard landing
-

Narrative

The director of aviation safety at the flight school reported that, the airplane received substantial damage to the fuselage after a hard landing. The airplane, four days prior to finding the damage, had been used by the accident pilot for a flight towards his commercial training. After completing the training flight, no discrepancies were declared.

The flight data management (FDM) from the airplane showed that, the airplane landed flat on the runway, which resulted in subsequent bounces.

The director of aviation safety at the flight school reported that there were no preaccident mechanical failures or malfunctions with the airplane that would have precluded normal operation.

The automated weather observation system at the accident airport reported, about the time of the accident, the wind was from 280ø at 3 knots. The pilot landed on runway 25R.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# CEN18FA088	01/27/2018 120 EST	Regis# N8559U	Williamsport, IN	Apt: N/a
Acft Mk/Mdl CESSNA 172F		Acft SN 17252459	Acft Dmg: DESTROYED	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR 0-300 SER			Fatal 1 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: KENT COOK		Opr dba: KENT COOK AVIATION		Aircraft Fire: NONE
				AW Cert: STN

Events

1. Maneuvering - Unknown or undetermined
-

Narrative

On January 27, 2018, at 0121 eastern standard time, a Cessna 172F, N8559U, collided with trees and terrain while maneuvering near Waynesboro, Indiana. The commercial pilot was fatally injured. The airplane was destroyed. The airplane was registered to a private individual and was being operated by a brokerage firm under the provisions of Title 14 Code of Federal Regulations Part 91 as a ferry flight. Visual meteorological conditions existed near the accident site at the time of the accident. Although no flight plan had been filed, the pilot was receiving flight following services. The flight originated from Rickenbacker International Airport (LCK), Columbus, Ohio, at 2141.

Track data retrieved by NTSB indicates the airplane took off and flew northwest, climbing to around 4,500 feet msl (mean sea level). It continued on a northwest heading to around Tipton, Indiana, then it turned left to a west-southwesterly heading, and remained there until about 25 nm (nautical miles) east-northeast of Danville (DNV), Indiana. It then began a slow descent that continued to about 12 nm east-northeast of DNV, where it made a slight turn to the left, then turned back to the right, then back to the left until track data was lost at about 0121. The last recorded altitude was 1,475 feet msl when the airplane was about 8.8 nm east-northeast of DNV. The airplane average ground speed was about 60-65 knots during the first half of the flight, then dropped to 40-50 knots throughout the remainder of the flight.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# CEN17LA235	06/17/2017 945 CDT	Regis# N6196B	Buffalo, OK	Apt: Mike's Place 96OK
Acft Mk/Mdl CESSNA 182A		Acft SN 34196	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL MOTORS O-470-L		Acft TT 6827	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: MILLER MICHAEL A		Opr dba:		Aircraft Fire: NONE

Events

1. Landing-landing roll - Landing gear collapse
3. Landing-landing roll - Part(s) separation from AC

Narrative

On June 17, 2017, about 0945 central daylight time, a Cessna 182A, N6196B, nosed over after landing on turf runway 17 at Mike's Place Airport (96OK), Buffalo, Oklahoma. The two pilots and one passenger were not injured. The airplane sustained substantial damage. 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 at the time of the accident and no flight plan had been filed. The flight departed Alva Regional Airport (AVK), Alva, Oklahoma, about 0915 and was destined for 96OK.

The pilot reported that the airplane touched down about midfield and the landing was normal until the nose wheel touched down. He heard a loud noise from the nose landing gear area. The airplane nosed over on the runway and came to rest inverted (figure 1).

The landing path consisted of three parallel tire marks on the grass runway. A grease seal ring from the nose wheel assembly was found next to the center tire mark. The center tire mark transitioned into two parallel tracks in the grass; the tracks were about 1 ft wide and extended for about 8 ft in a straight line. About 20 ft later, there was a single track in the runway with about 6 perpendicular slash marks through the track. The nose wheel axle tube was found near the end of the slash marks. The single track continued to the main wreckage.

The responding Federal Aviation Administration (FAA) inspector stated that the airplane sustained substantial damage to both wings, the fuselage, and the vertical stabilizer. The nose wheel was separated from the nose gear fork and the fork separated from the strut. A grease seal ring from the nose wheel assembly and a portion of the nose wheel axle tube were found in the debris path. The nose wheel axle bolt (figure 2) had separated and was not found. There were no preaccident anomalies noted with the recovered components.

A review of the maintenance logbooks revealed that during the most recent annual inspection on April 8, 2017, the wheel bearings were packed. No other recent maintenance had been completed on the landing gear system.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# ANC18LA019	01/14/2018	1445 AKS	Regis# N3607Y	Juneau, AK	Apt: Juneau Intl JNU
Acft Mk/Mdl CESSNA 210-C			Acft SN 21058107	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR IO-470 SERIES				Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: THOMAS HLAVNICKA			Opr dba:		Aircraft Fire: NONE
					AW Cert: STN

Events

1. Landing-landing roll - Landing gear collapse
-

Narrative

On January 14, 2018, about 1445 Alaska standard time, a retractable landing gear-equipped Cessna 210 airplane, N3607Y, sustained substantial damage during landing at Juneau Airport (JNU), Juneau, Alaska. The commercial pilot and passenger sustained no injuries. The airplane was registered to a private individual and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 as a visual flight rules personal flight. Visual meteorological conditions prevailed, and no flight plan was filed. The flight departed Hoonah Airport (HNN), Hoonah, Alaska, at about 1425.

During an interview with the National Transportation Safety Board (NTSB) investigator-in-charge, the pilot stated that while approaching JNU, he selected the landing gear handle to the down position, and the nose gear extended fully but the left and right main landing gears only partially extended, and the green landing gear position indicator light did not illuminate. He then attempted to manually extend the landing gear by use of the emergency hand pump. After a few pumps however, he felt a loss of pressure feedback in the handle and the landing gear failed to fully extend. He selected the flaps to a down position and no flap movement was evident. After landing and towards the end of the landing roll, the left and right main landing gear collapsed, and the right wing tip and right horizontal stabilizer impacted the runway resulting in substantial damage.

The airplane was removed from the runway and secured for further investigation.

The accident airplane was involved in another landing gear collapse event at JNU on July 11, 2015 (NTSB accident number ANC15LA048).

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA18CA115	01/21/2018 230 EST	Regis# N884KM	Sussex, NJ	Apt: Sussex FWN
Acft Mk/Mdl CESSNA 210-D		Acft SN 21058503	Acft Dmg: DESTROYED	Rpt Status: Prelim Prob Caus: Pending
			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: MARVELL SCOTT		Opr dba:		Aircraft Fire: GRD

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# CEN17LA351	09/09/2017 1500 CDT	Regis# N5870M	Mckinney, TX	Apt: Mckinney National KTKI
Acft Mk/Mdl CESSNA 340-UNDESIGNAT		Acft SN 3400058	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR TSIO 520SER		Acft TT 5799	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: HOLUBAR PROPERTIES INC		Opr dba:		Aircraft Fire: NONE

Events

1. Landing-landing roll - Landing gear collapse

Narrative

On September 9, 2017, about 1500 central daylight time, a twin-engine Cessna 340 airplane, N5870M, experienced a gear collapse after landing at the McKinney National Airport (KTKI), McKinney, Texas. The commercial rated pilot and passenger were not injured, and the airplane was substantially damaged. The airplane was registered to and operated by Holubar Properties, Inc., McKinney, Texas, under the provisions of 14 Code of Federal Regulations Part 91 as a cross-country flight. Visual meteorological conditions prevailed at the time.

A Federal Aviation Administration (FAA) inspector reported that the airplane landed on runway 36, and during the rollout, the left main landing gear collapsed. An examination of the airplane noted revealed substantial damage to the airplane's aileron, and the left gear down-lock and bell crank pivot bolt were broken.

A review of the Cessna 340 maintenance manual revealed that the landing gear system is to be disassembled/inspected after 20 years (or 10,000 landings) and every 10 years/5,000 landings after the initial inspection. Additionally, the maintenance manual indicates that the main landing gear bell crank pivot bolt to be inspected for wear, every 3 years (or 500 landings) after an initial inspection at 3 years or 1,000 landings.

A review of the airplane maintenance records did not reveal an entry were the landing gear inspections had been accomplished. The records revealed the airframe had accumulated 5,799.3 hours at the time of the last annual inspection, that was dated September 1, 2016.

The pilot did not return a completed Pilot/Operator Aircraft Accident form (NTSB 6120.1).

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA395A	07/08/2017 1118 PDT	Regis# N1746R	San Jose, CA	Apt: Reid-hillview Of Santa Clara C RHV
Acft Mk/Mdl CESSNA R182-RG		Acft SN R18200543	Acft Dmg: MINOR	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O540			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: RUSSELL N. WELLS		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

1. Taxi - Ground collision

Narrative

The pilot of the Cessna reported that, as he taxied into the runway area between another Cessna and a Siai-Marchetti, his right wing impacted the rudder of the Siai-Marchetti.

The Siai-Marchetti sustained substantial damage to the rudder. The Cessna sustained minor damage to the right wing.

Both pilots reported no preaccident mechanical malfunctions or failures with their respective airplane's that would have precluded normal operation.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# CEN18LA034	11/20/2017 1230 MST	Regis# N3067H	Aurora, CO	Apt: N/a
Acft Mk/Mdl ERCOUPE 415 CD		Acft SN 3692	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR C85 SERIES			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: PILOT		Opr dba:		Aircraft Fire: NONE

Events

1. Maneuvering - Loss of engine power (total)
-

Narrative

On November 20, 2017, about 1230 mountain standard time, an Ercoupe 415-CD airplane, N3067H, had an inflight loss of engine power near Aurora, Colorado. The pilot was uninjured. The airplane sustained substantial damage when it impacted a sign and fence. The airplane was registered to and operated by the pilot as a 14 Code of Federal Regulations Part 91 personal flight. Day visual meteorological conditions prevailed in the area about the time of the accident, and the flight was not operated on a flight plan. The local flight originated from the Centennial Airport (APA), near Denver, Colorado, about 1200.

The pilot indicated in his accident report that the flight departed from runway 17L and he climbed out to the east. He reported that there was no turbulence through 7,000 ft above mean sea level (msl). He performed a "Lazy 8" maneuver over County Line Road and was turning west when the engine lost power. The airplane was at about 7,500 ft msl at the time. The pilot reported that he attempted to restart the engine; however, after several unsuccessful attempts he began to look for a suitable landing area. The pilot noted that the surrounding terrain consisted of hills, and that he elected to land on the nearby County Line Road. The pilot reported that during landing roll he observed a car on the road and attempted to turn the airplane to the right; however, the airplane's right wing impacted a road sign, continued through a barbed wire fence, and came to a stop about 40 yards off the road.

At 1153, the recorded weather at APA was: Wind calm; visibility 10 statute miles; sky condition few clouds at 8,000 ft, few clouds at 12,000 ft, broken clouds 22,000 ft; temperature 16ø C; dew point -14ø C; altimeter 29.84 inches of mercury. The conditions present were not conducive to the formation of carburetor icing.

The pilot subsequently sold the airplane to a party who collects Ercoupes before an examination of the fuel pump could be completed. The Ercoupe collector reported that he removed the mechanical fuel pump from the engine, and as he moved the pump's lever arm up-and-down the pump did not produce a suction at the pump inlet. Additionally, the pump appeared to be very old and exhibited excessive wear on the lever arm that operated on the cam inside the engine. The mechanical fuel pump normally transfers fuel from the main fuel tanks to the fuselage header tank, which in turn provides fuel to the carburetor via gravity. The airplane was not equipped with an electric fuel pump. In the event of a mechanical fuel pump failure, normal engine operation is sustained until the fuselage header tank becomes fully depleted. A fuel gauge, visible to the pilot, was incorporated into the fuselage header fuel tank cap. The fuel system description in the Ercoupe instruction manual indicates that "when the fuselage tank fuel gauge starts dropping, gas is no longer being pumped from wing tanks." An excerpt on the fuel system from the instruction manual is appended to the docket material associated with this investigation.

The pilot's safety recommendations were that it would be good to have a fuel flow indicator or light to show lack of flow from the wing tank to the header tank, it would be good to have a reliable fuel quantity indicator in the header tank, and that it would be good to install an electric back-up fuel pump between the wing tanks and header tank.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA403	07/06/2017	615 CDT	Regis# N45609	Grand Island, NE	Apt: Central Nebraska Regional Airp GRI
Acft Mk/Mdl LUSCOMBE 8-A			Acft SN 2136	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL A65-8			Acft TT 3187	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: JOHN CANNELLA			Opr dba:		Aircraft Fire: NONE
					AW Cert: STN

Events

1. Takeoff - Loss of control on ground

Narrative

The flight instructor reported that during an instructional flight, when the tailwheel-equipped airplane was at rotation for takeoff, it sharply veered to the left. When safe flight was not assured, the flight instructor took over control from the student pilot, and subsequently landed the airplane in the grass area adjacent to the runway.

Postaccident examination revealed substantial damage to the fuselage.

The flight instructor reported no mechanical malfunctions or failures with the airplane that would have precluded normal operation.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# WPR18CA085 02/06/2018 2130 PST Regis# N925JH Newport, OR Apt: KONP
Acft Mk/Mdl MOONEY M20J-NO SERIES Acft SN 24-3329 Acft Dmg: UNK Rpt Status: Prelim Prob Caus: Pending
Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: Opr dba: Aircraft Fire:

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# ERA18LA071	01/27/2018 1615 EST	Regis# N9673W	Meriden, CT	Apt: MMK
Acft Mk/Mdl PIPER PA28-140		Acft SN 28-23137	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320-D2A		Acft TT 2575	Fatal 0 Ser Inj 2	Flt Conducted Under: FAR 091
Opr Name: CIANCIOLO PHILIP F		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

1. Approach - Fuel exhaustion

Narrative

On January 27, 2018, about 1615 eastern standard time, a Piper PA-28-140, N9673W, was substantially damaged during a forced landing while approaching Meriden Markham Municipal Airport (MMK), Meriden, Connecticut. The airline transport pilot and one passenger were seriously injured. The airplane was operated by the pilot under the provisions of 14 Code of Federal Regulations part 91 as a personal flight. Day, visual meteorological conditions prevailed, and no flight plan was filed for flight that originated at Oxford County Regional Airport (81B), Oxford, Maine about 1330.

The pilot reported that he planned to fly from MMK to 81B and return the same day. He departed MMK with 36 gallons of fuel on board and the flight to 81B was uneventful. He did not refuel at 81B. During the return flight, his flight planning showed that he would land with 6 gallons of fuel on board. Just prior to passing Worcester, Massachusetts, while on the right tank, the fuel gauge began to "flicker," then the engine "faltered." He switched to the left tank and the flight continued. Approaching the Hartford, Connecticut area, his passenger suggested that they stop for fuel, but he was confident in his fuel calculations and did not want to pay a higher price for fuel there, so he continued. About 2.5 miles north of MMK, the fuel pressure gauge flickered and the engine subsequently lost power. He looked for a place to land and realized that a nearby pond would be the best option. During the forced landing attempt, the airplane collided with a fence and came to a stop on dry land.

An inspector with the Federal Aviation Administration responded to the accident site and examined the wreckage. The airplane came to rest on an embankment after colliding with a chain link fence. Both wings and the lower, forward fuselage was structurally damaged. The left and right wing fuel tanks were not compromised. The airplane was moved to a level position and no visible fuel was observed in either fuel tank.

The wreckage was retained for further examination.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# ERA16FA215 06/16/2016 830 EDT Regis# N3591P State College, PA Apt: University Park UNV
Acft Mk/Mdl PIPER PA31-325 Acft SN 31-8012081 Acft Dmg: DESTROYED Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING TIO-540 SER Acft TT 16040 Fatal 2 Ser Inj 0 Flt Conducted Under: FAR 135
Opr Name: AERONATIONAL INC Opr dba: Aircraft Fire: GRD

Events

1. Approach-IFR final approach - Controlled flight into terr/obj (CFIT)

Narrative

HISTORY OF FLIGHT

On June 16, 2016, at 0830 eastern daylight time, a Piper PA-31-325, N3591P, was destroyed when it collided with terrain while on approach to University Park Airport (UNV), State College, Pennsylvania. The airline transport pilot and the passenger were fatally injured. The airplane was owned and operated by Aeronational, Inc. Instrument meteorological conditions prevailed, and an instrument flight rules flight plan was filed for the on-demand air taxi flight, which was conducted under the provisions of Title 14 Code of Federal Regulations (CFR) Part 135. The flight departed Washington County Airport (AFJ), Washington, Pennsylvania, about 0800.

According to the operator, the passenger was a regular customer who was routinely flown to UNV. The pilot was familiar with the passenger and the route and had completed the flight numerous times.

Radar and voice communication information from the Federal Aviation Administration (FAA) revealed that, at 0824:35, air traffic control (ATC) provided the pilot with a heading to intercept the final approach course for the instrument landing system RWY 24 approach at UNV and cleared the airplane for the approach. At 0825:30, the pilot was advised that radar services were terminated and was instructed to contact the tower controller at UNV.

At 0825, the pilot contacted the UNV tower controller and announced, "with you on the approach." The tower controller acknowledged the call and issued a landing clearance, which the pilot acknowledged. There were no further communications with the pilot despite multiple attempts by ATC.

At 0843:50, an airport operations ground vehicle operating at the approach end of runway 24 identified smoke in a wooded area about 1 mile northeast of the airport and notified control tower personnel. The source of the smoke was later identified as the accident airplane.

PERSONNEL INFORMATION

The pilot held an airline transport pilot certificate with ratings for airplane single-engine land, multiengine land, and instrument airplane. His most recent FAA first-class medical certificate was issued March 7, 2016, with the limitation, "Not valid for any class after 3/31/2017." The pilot reported 12,400 total hours of flight experience on the date of the examination, 350 hours of which were during the previous 6 months.

Company training records indicated that the pilot had received the training required by the company's operations and training manuals. The pilot had completed the required annual ground training on January 18, 2016. His last airman competency check was completed satisfactorily on January 18, 2016, in the accident airplane. Pilot duty records indicated compliance with the flight and duty time requirements of Title 14 CFR Part 135. The pilot had just returned from 1 week of vacation, and the accident flight was his first flight since returning to duty.

AIRCRAFT INFORMATION

According to FAA records, the airplane was manufactured in 1980. Its most recent annual inspection was completed February 19, 2016, at 15,999.6 total aircraft hours, about 44 hours before the accident.

The airplane was equipped with a King KAP/KFC 200 flight control system (autopilot). According to the operating instructions for the airplane's autopilot system, the system's approach mode captures localizer course and glideslope indications when properly configured by the pilot. The system will capture from either above or below the glideslope. No system limitations were published regarding the altitude above the glideslope from which the system would not capture or the rate of descent above which the system would not capture.

A certification engineer for the autopilot manufacturer stated that a descent rate of 1,000 ft per minute (fpm) was "normal" to capture the glideslope from above. The operator's director of operations said that the autopilot in the accident airplane was unlikely to capture the glideslope from above at descent rates greater than 500 fpm.

It could not be determined if the autopilot was in use during the approach, or which operational modes may have been engaged.

METEOROLOGICAL INFORMATION

At 0853, the weather recorded at UNV included an overcast ceiling at 300 ft, calm wind, and visibility 1 statute mile in mist. The temperature was 17°C and the dew point was 17°C; the altimeter setting was 29.80 inches of mercury. AIRMET Sierra for instrument meteorological conditions and mountain obscuration was in effect for the area surrounding the accident site at the time of the accident.

WRECKAGE AND IMPACT INFORMATION

The accident site was about 1 nautical mile (nm) from the threshold of runway 24 and about 2 nm beyond the final radar return at an elevation of 1,200 ft mean sea level. The wreckage was examined at the accident site, and all major components were accounted for at the scene.

The wreckage path was located in densely wooded terrain and extended about 450 ft on a magnetic heading of 223°. The initial impact points were in treetops about 70 ft above the ground, and tree trunks and branches displayed impact fractures and sharp, angular cuts along the length of the wreckage path. Both wings were fragmented along the path. Both engines and each main landing gear were separated and scattered along the wreckage path.

The fuselage and empennage came to rest upright facing the direction of travel. The instrument panel, cockpit, and cabin area were destroyed by postcrash fire.

Control continuity could not be established due to extensive impact damage; however, parts associated with the wings, flaps, and ailerons were identified. Sheet metal and cabling associated with the empennage, horizontal and vertical stabilizers, and the elevators were identified, and the cable attach points at all primary flight controls were secure.

Examination of the landing gear and components associated with the flap system were consistent with a 15° flap extension and the landing gear in the down and locked position at the time of impact.

The propeller systems were attached to their respective engines, and all propeller blades exhibited similar twisting, bending, leading edge gouging, and chordwise scratching. Several tree branches and trunks displayed deep, angular cuts and paint transfers consistent with propeller blade contact.

The engines were each damaged by impact and postcrash fire. The left engine displayed extensive thermal damage. The magnesium oil sump and the accessories mounted to the accessory section were consumed by fire, and the damage and contamination produced by the fire precluded rotation of the engine. The single-drive, dual magneto was consumed by fire and could not be tested. Borescope examination of the cylinders revealed normal operational deposits and wear and no preimpact anomalies.

The right engine displayed extensive thermal damage. Impact damage to the No. 2 cylinder precluded rotation of the engine. The single-drive, dual magneto was damaged by fire and would not produce spark when rotated. Borescope examination of the cylinders revealed normal operational deposits and wear and no evidence of preimpact anomalies. The No. 2 cylinder was removed, and the engine was rotated by hand at the propeller. Continuity was confirmed from the powertrain through the valvetrain to the accessory section. Compression was confirmed on all cylinders using the thumb method, with the exception of the No. 2 cylinder.

MEDICAL AND PATHOLOGICAL INFORMATION

Forensic DX, Windber, Pennsylvania, performed an autopsy on the pilot. The reported stated the cause of death was thermal injuries.

National Transportation Safety Board - Aircraft Accident/Incident Database

The FAA Bioaeronautical Sciences Research Laboratory, Oklahoma City, Oklahoma, performed toxicological testing on specimens from the pilot, with negative results for ethanol, carbon monoxide, and all tested-for drugs.

According to FAA records, in 2001 the pilot reported a diagnosis of multiple sclerosis (MS) with persistent weakness in his left leg. He received his first special-issuance medical certificate in 2002. A report from the pilot's neurologist dated February 2016 indicated that his neurologic status was unchanged through that date. At his most recent examination for an FAA medical certificate, the pilot reported new diagnoses of diabetes and obstructive sleep apnea, which were managed with diet and the use of bilevel positive airway pressure (BiPAP) treatment, respectively.

ADDITIONAL INFORMATION

Performance Study

An airplane performance study was conducted based on radar data. As the airplane crossed the precision final approach fix (PFAF), 6.7 nm from the runway threshold, the airplane was 800 ft above the glideslope. As the airplane crossed the PENUE locator outer marker (LOM), 5.5 nm from the runway threshold, the airplane was 500 ft above the glideslope. When radar contact was lost 3.2 nm from the threshold, the airplane was about 250 ft above the glideslope.

At PENUE LOM and at the last radar return, the airplane's position and altitude would have correlated to a full-downward deflection of the glideslope indication in the cockpit.

Interpolation of radar data revealed that, during the last 2 minutes of the accident flight, the airplane's rate of descent increased from 400 fpm to greater than 1,700 fpm. During the final minute of the flight, the rate decreased briefly to 1,000 fpm before radar contact was lost.

Company Standard Operating Procedures (SOP)

According to the operator's SOP, Stabilized Approach, "Flight should be stabilized by 1000 feet HAT [Height Above Touchdown] in IMC [instrument meteorological conditions]." and further stipulated, "If an unexpected, sustained rate of descent greater than 1000 feet per minute (fpm) is encountered during the approach, a missed approach should be performed."

FAA Information

According to an FAA Safety Team pamphlet, "Stabilized Approach," a stabilized approach is one in which the pilot establishes and maintains a constant angle glidepath towards a predetermined point on the landing runway.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# ERA18LA070	01/25/2018 1425 EST	Regis# N47863	Marathon, FL	Apt: The Florida Keys Marathon Intl MTH
Acft Mk/Mdl PIPER PA32R-300		Acft SN 32R-7880025	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-540-K1G5		Acft TT 6157	Fatal 0 Ser Inj 4	Flt Conducted Under: FAR 091
Opr Name: ALL PRO AUTO PARTS INC		Opr dba:		Aircraft Fire: GRD
				AW Cert: STN

Events

1. Takeoff - Loss of control in flight

Narrative

On January 25, 2018, about 1425 eastern standard time, a Piper PA-32R-300, N47863, was substantially damaged during collision with terrain following a loss of directional control at takeoff from runway 07 at Florida Keys Marathon International Airport (MTH), Marathon, Florida. The private pilot and three passengers sustained serious injuries. Visual meteorological conditions prevailed, and no flight plan was filed for the personal flight conducted under the provisions of Title 14 Code of Federal Regulations Part 91.

The accident flight was recorded via airport surveillance video. One video revealed the airplane began its takeoff roll from a complete stop, on runway 07 and travelled about 800 ft before the nose wheel lifted from the runway. At liftoff, the nose pitched up steeply and the airplane rolled left immediately, before the it disappeared from the frame. A second video captured the takeoff from a much greater distance. The image in the frame was smaller with poorer resolution. The video revealed a steep pitch and left bank at takeoff. The climb stopped immediately after liftoff, and the airplane maintained approximately the same angle of bank as it departed the runway to its left, entered the trees, and disappeared. Several seconds later, a fireball appeared above the trees about the point where the airplane entered them.

The pilot reported to a Federal Aviation Administration (FAA) inspector that the airplane "was performing well and didn't have any issues." The airplane reached approximately 60 knots on the takeoff roll when the nose wheel lifted from the runway and the airplane began an immediate left turn. He attempted to arrest the turn with rudder and aileron, but the turn continued until the airplane entered the trees.

The pilot held a private pilot certificate with ratings for airplane single engine land and instrument airplane. His most recent FAA third-class medical certificate was issued October 20, 2016. He reported 500 total hours of flight experience on that date.

According to FAA airworthiness and maintenance records, the airplane was manufactured in 1977. Its most recent annual inspection was completed October 20, 2017, at 6,156.86 total aircraft hours. The maintenance records reflected a "50-hour" inspection completed January 16, 2018.

At 1453, the weather reported at MTH included an overcast ceiling at 4,700 ft, 10 miles visibility, and winds from 050ø at 18 knots. The temperature was 22ø C, the dew point was 16ø C, and the altimeter setting was 30.19 inches of mercury.

The wreckage was examined at the accident site by an FAA inspector and all major components were accounted for at the scene. The wings and fuselage were substantially damaged by impact and postcrash fire.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA395B	07/08/2017 1118 PDT	Regis# N26AE	San Jose, CA	Apt: Reid-hillview Of Santa Clara C RHV
Acft Mk/Mdl SIAI-MARCHETTI SF.260B-B		Acft SN 230(2106)	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-540 SERIES			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: SWALLOWS INC.		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

1. Taxi - Ground collision

Narrative

The pilot of the Cessna reported that, as he taxied into the runup area between another Cessna and a Siai-Marchetti, his right wing impacted the rudder of the Siai-Marchetti.

The Siai-Marchetti sustained substantial damage to the rudder. The Cessna sustained minor damage to the right wing.

Both pilot's reported no preaccident mechanical malfunctions or failures with their respective airplane's that would have precluded normal operation.