

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# CEN17CA294 07/26/2017 1530 CDT Regis# N421CA Harrold, SD Apt: N/a
Acft Mk/Mdl AIR TRACTOR INC AT 502B-B Acft SN 502B-2672 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending
Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 137
Opr Name: CUSTOM AIR INC Opr dba: Aircraft Fire: NONE
AW Cert: SPR

Summary

The pilot of an agricultural airplane reported that he planned to apply an herbicide and test the spray system at maximum pressure at a specified airspeed. He added that a ground tractor was also in the field applying the same chemical. During the flight, he saw the tractor and passed over it between about 50 and 100 ft above ground level (agl). While spraying at 10 ft agl, he noted pressure, output, airspeed, and ground speed. At the end of the field, he climbed and made a left, 180° turn for another pass. The pilot reported that he "lost focus" outside of the airplane while looking at the spray results, and when he noticed the tractor, it was too late; the airplane's wheel collided with the tractor. Examination of the airplane revealed substantial damage to the fuselage.

The tractor driver reported that he heard someone call him on the radio and that he answered the pilot on the radio and saw the airplane coming "directly at him, very low." The tractor driver heard and felt the impact and was knocked from his seat by the collision. The tractor driver then called his supervisor for help. The tractor driver added that his supervisor and another ground sprayer had been "buzzed" by the pilot before.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's improper attempt at a low-pass maneuver, which resulted in a collision with a tractor.

Events

1. Maneuvering-low-alt flying - Collision with terr/obj (non-CFIT)
2. Maneuvering-low-alt flying - Miscellaneous/other

Findings - Cause/Factor

1. Environmental issues-Physical environment-Object/animal/substance-Ground vehicle-Effect on operation - C
2. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Altitude-Not attained/maintained - C
3. Personnel issues-Miscellaneous-Intentional act-(general)-Pilot - C
4. Personnel issues-Action/decision-Action-Incorrect action selection-Pilot - C

Narrative

The pilot of an agricultural airplane reported that he planned to apply a herbicide and test the spray system at maximum pressure at a specified airspeed. He added that a ground tractor was also in the field applying the same chemical. During the flight, he saw the tractor and passed over it at 50 to 100 ft. While spraying at 10 ft agl, he noted pressure, output, airspeed, and ground speed. At the end of the field, he climbed and made a left 180-degree turn for another pass. The pilot reported that he "lost focus" outside of the airplane, while looking at the spray results and when he noticed the tractor, it was too late; the airplane's wheel collided with the tractor. Examination of the airplane found substantial damage to the fuselage.

The driver of the tractor reported that he heard someone call him on the radio, he answered the pilot on the radio and saw the airplane coming "directly at him, very low." The tractor operator heard and felt the impact and was knocked from his seat by the collision. The tractor driver then called his supervisor for help. The tractor driver added that his supervisor and another ground sprayer had been "buzzed" by the pilot before.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# WPR18FA046	12/09/2017 1633 PST	Regis# N248SB	San Diego, CA	Apt: Montgomery-gibbs Executive MYF
Acft Mk/Mdl BEECH A36-UNDESIGNAT		Acft SN E-2931	Acft Dmg: DESTROYED	Rpt Status: Prelim Prob Caus: Pending
			Fatal 2 Ser Inj 2	Flt Conducted Under: FAR 091
Opr Name:		Opr dba:		Aircraft Fire: GRD

Events

1. Enroute-climb to cruise - Loss of engine power (total)
-

Narrative

On December 9, 2017 about 1633 Pacific standard time, a Beech A36, N248SB, was destroyed when it impacted a residential house following an emergency landing near Montgomery - Gibbs Executive Airport (MYF), San Diego, California. The pilot and one passenger sustained serious injuries. Two other passengers were fatally injured. The airplane was registered to Altitude Aviation Inc. and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Visual meteorological conditions prevailed for the flight, and a visual flight rules plan was filed for the cross-country flight to Los Angeles, California. The flight originated from MYF about 1630.

The pilot reported that about 1.5 miles west of the airport, at 700 ft above ground level, the engine experienced a complete loss of power. He executed a steep 180° turn to the right and performed the emergency procedure for loss of engine power. Engine power was not regained and he executed a forced landing to a nearby field. During landing, the pilot applied brakes, but due to an insufficient stopping distance, the airplane impacted and traveled through a fence before colliding with the residence. A post-crash fire ensued.

A witness located about 0.15 miles from the accident site recorded a video that showed the airplane in a steep right bank. The landing gear was extended and visible. The airplane briefly disappeared from the line of sight and a second later, it touched down in the middle of a school yard.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# WPR18LA043	12/04/2017 720 PST	Regis# N251E	Rio Oso, CA		
Acft Mk/Mdl BEECH A36-UNDESIGNAT		Acft SN E-1962	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim	Prob Caus: Pending
			Fatal 0	Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: BEAU BERRY		Opr dba:			Aircraft Fire: IFLT

Events

1. Enroute-cruise - Fire/smoke (non-impact)
-

Narrative

On December 4, 2017, about 0720 Pacific standard time, a Beech A36, N251E, made an emergency landing to an open field near Rio Oso, California, after the pilot noted an onboard fire. The airplane was registered to a private individual and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91. The airline transport pilot, the sole occupant, received minor injuries; the airplane sustained substantial damage to its undercarriage. The flight departed Mc Clellan Air Field (MCC), Sacramento, California, at an undetermined time. The flight was scheduled to terminate at Yuba County Airport (MYV), Marysville, California. Visual meteorological conditions prevailed for the flight and no flight plan had been filed.

According to the pilot, he was at 1,500 ft and starting his descent to MYV, when he saw a flickering light underneath the instrument panel below him. He realized that it was a fire, decreased engine power, and made a forced landing to a field. The pilot reported that he intentionally left the landing gear in the retracted position. The airplane touched down in a plowed field, and came to rest about 250 ft from its initial touch down point, and had rotated 150o to the left. The pilot stated that after he exited the airplane, it burst into flames.

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Accident Rpt# ERA16FA064	12/11/2015 1422 EST	Regis# N72054	Farmington, PA	Apt: Nemaocolin Airport PA88
Acft Mk/Mdl BEECH A36-UNDESIGNAT		Acft SN E-2181	Acft Dmg: DESTROYED	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL IO-550-B78		Acft TT 4449	Fatal 3 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: CARLSON TERRY A		Opr dba:		Aircraft Fire: GRD
				AW Cert: STN

Events

1. Prior to flight - Miscellaneous/other
3. Approach-VFR pattern base - Loss of control in flight

Narrative

HISTORY OF FLIGHT

On December 11, 2015, about 1422 eastern standard time, a Beech A36, N72054, was destroyed when it impacted trees and terrain shortly after takeoff from Nemaocolin Airport (PA88), Farmington, Pennsylvania. The private pilot and two passengers were fatally injured. The airplane was privately owned and operated under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed, and an instrument flight rules flight plan was filed for the personal flight, which was destined for Montgomery County Airport (GAI), Gaithersburg, Maryland.

PA88 was located on the property of the Nemaocolin Woodland Resort. A witness who was staying at the resort, who viewed the airplane from his hotel room which was located on the northwest side of the runway reported that, after takeoff from runway 23, the airplane's landing gear retracted, and the airplane appeared to be departing the area; however, the airplane continued to turn as if entering the downwind leg of the traffic pattern. The landing gear extended, and the airplane began to descend. The airplane continued to descend in a turn consistent with a left base for runway 23; the witness then lost sight of the airplane behind terrain. Shortly after, he observed smoke. Another witness who was standing about 2,500 ft southeast of the runway saw the airplane pass overhead with the landing gear down. He stated that the airplane was "pretty low" and that the engine sounded normal. He saw the airplane bank to the left, and then he lost sight of it behind buildings; he then heard an impact and saw flames and smoke.

An onboard GPS recorded data for the accident flight. The recording began at 1415:57 near the airport parking area. The airplane subsequently taxied to the end of runway 23 for takeoff. Recorded GPS altitude at this time was about 1,975 ft. The takeoff roll began at 1420:18. At 1421:00, at a GPS altitude of 2,184 ft and about 2,500 ft from the departure end of the runway, the airplane began a left, climbing turn. The turn continued, and the airplane reached a maximum recorded altitude of 2,457 ft at 1421:36. At this time, its position was consistent with a left downwind for runway 23. The airplane descended as it continued the downwind leg, then began a left turn about 1422. Shortly thereafter, the airplane descended through 2,150 ft at 69 knots groundspeed. The last recorded data point was at 1422:22.

Figure 1. Plotted GPS Data - Complete Accident Flight.

Figure 2. Plotted GPS Data - End of Accident Flight.

About 1423, landscaping personnel called the resort's security dispatch and reported the accident. Security personnel arrived to find the airplane fully engulfed in flames and one passenger laying outside of the airplane on the golf course.

The passenger, who was severely burned during the accident, had egressed from the airplane by himself and was pulled from the accident site by resort guests. He advised first responders that his father (who was flying the airplane) and his friend were onboard the airplane. He remembered taking off from the runway, the door opening and feeling wind, and then being surrounded by flames. He was transported to a burn center and succumbed to his injuries about 2 days later.

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PERSONNEL INFORMATION

According to Federal Aviation Administration (FAA), and pilot records, the pilot held a private pilot certificate with ratings for airplane single-engine land and instrument airplane, and a commercial pilot certificate with ratings for helicopter and instrument helicopter. His most recent application for an FAA third-class medical certificate was dated February 22, 2014. The pilot had accrued about 3,261 total hours of flight experience, of which 2,663 hours were in the accident airplane make and model.

AIRCRAFT INFORMATION

According to FAA airworthiness records and airplane maintenance records, the airplane was manufactured in 1984. The airplane's most recent annual inspection was completed on November 11, 2015. At the time of the inspection, the airplane had accrued about 4,448.5 total hours of operation, and the engine had accrued about 1,158.8 total hours of operation since major overhaul.

METEOROLOGICAL INFORMATION

The 1435 reported weather at Garrett County Airport (2G4), Oakland, Maryland, located 17 nautical miles southeast of the accident site, included wind from 250° at 11 knots gusting to 19 knots, 10 miles visibility, broken clouds at 1,300 ft, temperature 11°C, dew point 8°C, and an altimeter setting of 29.95 inches of mercury.

AIRPORT INFORMATION

PA88 was located about 1 mile east of Farmington, Pennsylvania. It was classified by the FAA as a privately owned, private-use airport. The airport elevation was 2,010 ft above mean sea level and the asphalt runway was configured in a 5/23 orientation. The runway measured 3,980 ft long by 49 ft wide. The runway 23 threshold was displaced 935 ft due to trees off the approach end of the runway. The runway was equipped with medium intensity runway edge lights, and a precision approach path indicator system which, at the time of the accident, was disabled.

FLIGHT RECORDERS

The accident airplane was equipped with a handheld Garmin GPSMAP 39x/49x series GPS.

The unit had suffered extreme thermal damage, but an internal examination revealed the non-volatile memory chip was intact, and data from the accident flight was extracted.

WRECKAGE AND IMPACT INFORMATION

The airplane came to rest in a heavily wooded area located next to a golf course.

Examination of the accident site revealed that the airplane had broken apart after striking trees in a left-wing-down, nose-low attitude. During the impact sequence, the main cabin portion of the airplane traveled about 152 ft before impacting the forest floor and coming to rest, facing the opposite direction of travel, with the aft fuselage and empennage lying behind it in an inverted position. The engine, left outboard wing, right wing flap, right main landing gear, and engine cowlings were all separated from their mounting positions and were strewn throughout the accident site. Further examination also revealed the presence of propeller strikes on broken tree branches and tree trunks that littered the ground, along with areas of burned underbrush and fire-damaged trees.

Examination of the wreckage revealed that the landing gear was in the down position, and all major portions of the airplane's structure were present at the accident site. No evidence of any preimpact failure of the airplane structure was discovered.

Examination of the flight control system revealed no evidence of any preimpact failure or malfunction, and flight control continuity was established from the

flight control surfaces to the rudder pedals and control wheels through breaks in the system consistent with overstress failure.

Examination of the fuel system revealed that all four fuel caps were closed and locked, and the fuel selector valve was in the left main tank position.

Examination of the propeller and engine also revealed no evidence of any preimpact failure or malfunction that would have precluded normal operation. The propeller remained attached to the propeller flange and exhibited a circumferential fracture just aft of the propeller flange. All three blades exhibited S-bending, twisting, and chordwise scratching. Oil was present in the rocker boxes and oil sump, and the oil filter was absent of debris. Crankshaft and valve train continuity was confirmed, and compression and suction were observed on all six cylinders.

Examination of the interior of the cylinders with a lighted borescope did not reveal evidence of any preimpact damage to the piston domes, cylinder walls, or valves. Both magnetos were functional and produced spark at all towers.

Examination of the remains of the utility doors, which were located on the aft right side of the fuselage, and the forward cabin door, which was located on the forward right side of the fuselage, revealed that most of the door structures had been burned away. Further examination revealed that the locking mechanisms were present and did not show any evidence of malfunction or failure.

Examination of the forward cabin door revealed that the upper latching mechanism (hook) was not fully extended, and the slot in the upper fuselage frame that the hook engaged when the door was closed showed no evidence of tear-outs. Further examination also revealed that the door handle mechanism was not fully in the locked position; the lower aft latch pin, which rode in a guide inside the lower aft portion of the forward cabin door and engaged a receptacle in the lower door sill, was missing.

MEDICAL AND PATHOLOGICAL INFORMATION

According to FAA airman medical records, during his last medical examination, the pilot reported that he had no chronic medical conditions and was on no medications.

According to the report of the autopsy performed by Cyril H. Wecht and Pathology Associates, Inc., Pittsburgh, Pennsylvania, the cause of death was multiple blunt force injuries and the manner of death was accident. The autopsy identified minimal coronary artery disease with about 10-15% stenosis. The heart weight was not provided, but the right ventricular wall was described as 0.4-cm thick, the left ventricular wall as 1.5-cm thick, and the septum as 1.3-cm thick. Average for these thicknesses is 0.3 cm, 1.23 cm, and 1.23 cm, respectively. The remainder of the examination was unremarkable.

Toxicology testing performed at the request of the medical examiner by NMS Labs identified caffeine and 0.310 ug/ml of amphetamine in the pilot's blood.

Toxicology testing performed by the FAA's Bioaeronautical Sciences Research Laboratory, Oklahoma City, Oklahoma, identified amphetamine at 0.347 ug/ml in blood and 1.828 ug/ml in urine, as well as phenylpropanolamine in urine, but not in blood.

Amphetamine is a Schedule-II controlled substance that stimulates the central nervous system. It is available by prescription for the treatment of attention deficit disorder and narcolepsy. It carries a boxed warning about its potential for abuse and has warnings about an increased risk of sudden death and the potential for mental health and behavioral changes. Commonly marketed names include Adderall, Dexedrine, and Vyvanse. After a single 30 mg oral dose, early blood levels averaged 0.111 ug/ml and average blood levels in adults using the long acting prescription orally for a week were about 0.065 ug/ml. Generally, levels above 0.2 are the result of misusing amphetamine to maximize its psychoactive effects.

Amphetamine is also prepared and used as a street drug, often by snorting, inhaling, or injecting. Street preparations may begin with phenylpropanolamine, which may then contaminate the final product.

In the early phase, amphetamine misusers may experience a combination of euphoria, excitation, exhilaration, rapid flight of ideas, increased libido, rapid speech, motor restlessness, hallucinations, delusions, psychosis, insomnia, reduced fatigue or drowsiness, increased alertness, a heightened sense of well-being, stereotyped behavior, feelings of increased physical strength, and poor impulse control. Heart rate, blood pressure, and respiratory rate increase, and they may have palpitations, dry mouth, abdominal cramps, twitching, dilated pupils, faster reaction times, and increased strength. As the initial effects wear off, users commonly experience dysphoria, restlessness, agitation, and nervousness; they may experience paranoia, violence, aggression, a lack of

coordination, delusions, psychosis, and drug craving.

Phenylpropanolamine is a sympathomimetic also in the amphetamine class that was once available in over-the-counter preparations for treating colds. However, it also increases heart rate and blood pressure, and its availability in the United States was discontinued in 2000. It remains available as a veterinary medicine.

ADDITIONAL INFORMATION

Materials Laboratory Examination

On May 4, 2016, the latching mechanism for the door of the airplane was examined in the NTSB Materials Laboratory. Deposits were observed on the external surfaces of the latching mechanism that were consistent with soot and other combustion products. Using a 5x to 50x stereo-zoom microscope, the fracture surfaces were examined. The fracture surface features were consistent with overstress related to incipient melting.

Pilot's Operating Handbook - Forward Cabin Door

The airplane's pilot's operating handbook (POH) stated that, when closed, the spring-loaded outside cabin door handle would fit into a recess to create a flat, aerodynamically clean surface. It could be locked from the outside with a key to secure the airplane.

The door could be opened from the outside by lifting the handle out of the recess and pulling until the door opened.

When closing the door from the inside of the airplane, the door handle was moved to the open position. In this position, the latch handle would be free to move about 1 inch in either direction before engagement of the locking mechanism. The door could then be grasped and firmly pulled closed, and the handle could then be fully rotated counterclockwise into the locked position. When the door was properly locked, the door latch handle would be free to move about 1 inch in either direction.

The POH noted that, when checking the door latch handle, "do not move it far enough to engage the doorlatch release mechanism." The POH also advised to press firmly at the top rear corner of the door and that, if any movement of the door was detected, to completely open the door, and close it again by following the instructions.

When exiting the airplane, the door could be opened from the inside by depressing the lock button, and rotating the handle clockwise.

The "BEFORE TAKEOFF" checklist contained in the POH included the item, "Doors and Windows - SECURE."

According to the POH, if the cabin door was not properly latched, it could unlatch in flight. This could occur during or just after takeoff. The door would trail open approximately 3 inches and result in a reduced rate of climb, but the flight characteristics of the airplane would otherwise not be affected. The procedure for an unlatched door in flight was to "Return to the field in a normal manner."

Beechcraft Mandatory Service Bulletin

In 1993, Beechcraft had received reports of the third latch pin (lower aft latch pin) on the cabin door retracting in flight due to misrigging and/or vibration. When the latch pin retracted, it would force the entire door latching mechanism to reverse, allowing the cabin door to open.

As a result, in September 1993, Beechcraft released Mandatory Service Bulletin No. 2457, which required that Kit 36-4007 be installed to modify the cabin door by adding a third latch pin overcenter mechanism, modify the bellcrank assembly for the third latch pin, and replace the original third latch pin guide assembly with a redesigned one to reduce the possibility of a cabin door opening in flight.

Comparison of the accident airplane's internal door locking mechanism to an exemplar internal door locking mechanism revealed that the door had not been modified in accordance with the mandatory service bulletin. Review of the airplane maintenance records also did not indicate that the mandatory service bulletin had been accomplished.

The pilot's spouse advised that they had the "door light" come on a few times before the accident, and that the door was hard to latch.

Review of the POH indicated that the annunciator panel in the airplane contained three annunciators placarded "LOW BUS VOLTS", "START", and "AFT DOOR." No indication of an annunciator being mounted in the panel for the forward cabin door was discovered.

Air Speed Information

Review of the GPS data showed that the airplane's groundspeed dropped to 69 knots prior to its rapid descent. Calculations using the wind vector solutions function of an E6-B flight computer indicated that the true airspeed of the airplane at that point, would have been about 79 knots, which was below the published stall speed in the Beechcraft Bonanza Pilot's Operating Handbook (POH) for banked turns in excess of about 45°.

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Accident Rpt# WPR16LA078 03/02/2016 1300 PST Regis# N63555 Palm Springs, CA Apt: Palm Springs International PSP
Acft Mk/Mdl BOEING A75N1(PT17) Acft SN 75-8014 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL MOTORS INC WR-670-6N Acft TT 9021 Fatal 0 Ser Inj 1 Flt Conducted Under: FAR 091
Opr Name: PALM SPRINGS AIR MUSEUM INC Opr dba: Aircraft Fire: NONE
AW Cert: STN

Summary

The airline transport pilot reported that, shortly after takeoff on the local sightseeing flight, the engine experienced a partial loss of power about 400 ft above ground level. The pilot initiated a turn back to the airport and subsequently landed hard on the runway, substantially damaging the airplane. During the postaccident engine examination, an obstruction was found in one end of the fuel hose between the gascolator to the carburetor. The firesleeve on the hose was removed, which revealed that the hose entered the fitting at a slight angle that was not visible with the firesleeve in place. To facilitate further examination, the hose was cut close to the obstruction. The inner surface of the hose appeared cut and curled into the hose near the fitting, consistent with the improper assembly of the hose and fitting. It is likely that the curled piece of hose acted as a flapper valve that either restricted or cut off fuel flow to the carburetor. The high demand for fuel during takeoff depleted the supply of fuel in the carburetor and resulted in the loss of power. Although maintenance log entries indicated that the last replacement of the fuel hoses occurred 49 years before the accident, given the condition of the hoses, it is likely that a subsequent replacement was performed but not documented.

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Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: Improper assembly of a fuel hose, which restricted the fuel supply to the carburetor and resulted in a loss of engine power during the initial climb after takeoff.

Events

1. Takeoff - Loss of engine power (partial)
2. Emergency descent - Loss of engine power (partial)
3. Landing-flare/touchdown - Hard landing

Findings - Cause/Factor

1. Aircraft-Aircraft systems-Fuel system-Fuel distribution-Incorrect service/maintenance - C

Narrative

On March 2, 2016, about 1300 Pacific standard time, a Boeing A75N1 (PT17), N63555, touched down hard during a forced landing following a loss of engine power during the initial climb at Palm Springs International Airport, Palm Springs, California. The airline transport pilot sustained minor injuries and the passenger was seriously injured. The airplane was substantially damaged. Palm Springs Air Museum Inc. was operating the airplane under the provisions of 14 Code of Federal Regulations Part 91. The local sightseeing flight was originating at the time. Visual meteorological conditions prevailed, and no flight plan had been filed.

The pilot reported that the engine lost power passing through 400 ft after takeoff from runway 31L. He saw houses and other obstacles straight ahead and decided to turn around to land on runway 13R. The airplane landed hard on the runway centerline but came to rest aligned about 300 left of the runway heading.

During the initial examination, the forward end of the fuselage sustained crush damage around the front cockpit. The throttle lever in the cockpit would not move due to the damage; all linkages were connected from the cockpit to the carburetor. The mixture lever in the cockpit would not move due to the damage; all linkages were connected from the cockpit to the carburetor. Examination of the wreckage established flight control continuity for all flight controls. Portions of the bottom cylinders, numbers four and five, fractured and separated. A clear blue fluid, consistent with the smell of Avgas, was drained from the gascolator, and a water paste test had no reaction indicating that water contamination was not present. All fittings that could be reached were tight. A black fluid consistent with motor oil was evident on the dipstick. There was no external evidence of catastrophic mechanical malfunction.

A follow-up examination revealed that the exhaust tube coloration was light brown in color.

The air filter was clean. There was no discoloration in the intake tube at the filter.

The crankshaft was rotated using the propeller; there were no metallic sounds or binding. All valves except for the damaged bottom two cylinders moved approximately the same amount of lift in firing order. The gears in the accessory case turned freely. Thumb compression was obtained on all cylinders in firing

order except for the two damaged bottom cylinders.

The carburetor was removed and disassembled. The floats were metal; the bowl contained no fluid. The accelerator pump operated without resistance. The throttle lever would not move; the housing was crushed; the butterfly valve was almost vertical (fully open). The mixture lever moved freely from stop to stop.

The carburetor heat arm was crushed at the box, and the rod end at the bellcrank fractured and separated along a jagged and angular plane. The fuel line was removed from the gascolator to the carburetor and nothing drained out from the line. The line was connected back to the gascolator and the fuel selector valve was turned on; blue fluid came out of the line. The line was removed again and an obstruction was seen near one end of the line. The firesleeve was removed on the hose. The hose went into the fitting at a slight angle that was not visible with the firesleeve in place. The line was cut close to the obstruction. The inner surface of the hose appeared cut and curled into the hose at the fitting.

An entry in the maintenance logbooks dated October 20, 1967, recorded that all new gas lines were made. There were no entries after that to indicate any work was performed on the gas line hoses.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# ERA17CA221	06/29/2017 1820 EDT	Regis# N53396	Miami, FL	Apt: Miami Executive Airport TMB
Acft Mk/Mdl CESSNA 152-NO SERIES		Acft SN 15283543	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-235-L2C		Acft TT 16760	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: DEAN INTERNATIONAL, INC.		Opr dba: DEAN INTERNATIONAL FLIGHT SCHOOL	Aircraft Fire: NONE	AW Cert: STU

Summary

The student pilot performed three landings earlier that day with his flight instructor and then was signed off for his first solo flight. The student departed and remained in the traffic pattern, and the airplane bounced during the first landing. After bouncing three times, the nose landing gear fork and wheel assembly separated, and the propeller impacted the runway.

The airplane sustained substantial damage to the engine mount and firewall. The operator reported that there were no preimpact mechanical failures or malfunctions of the airplane that would have precluded normal operation.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The student pilot's improper landing flare, which resulted in a bounced landing.

Events

1. Landing-flare/touchdown - Abnormal runway contact
2. Landing - Hard landing
3. Landing - Landing gear collapse

Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Landing flare-Not attained/maintained - C
2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Student/instructed pilot - C

Narrative

The student pilot performed three landings earlier that day with his flight instructor, then was signed off for his first solo flight. The student departed and remained in the traffic pattern, and the airplane bounced during the first landing. After bouncing three times, the nose landing gear fork and wheel assembly separated, and the propeller impacted the runway. The airplane sustained substantial damage to the engine mount and firewall. The operator reported that there were no preimpact mechanical failures or malfunctions of the airplane that would have precluded normal operation.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA284	05/05/2017 1430	Regis# N9268A	Taos, NM	Apt: Taos Rgnl SKX
Acft Mk/Mdl CESSNA 170-A		Acft SN 19029	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL O-300			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: SERENDIPITY FLYING CLUB		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Summary

The pilot of the tailwheel-equipped airplane reported that, during the landing in a crosswind, a strong wind gust lifted the right wing. Subsequently, the airplane exited the left side of the runway, traveled down an embankment, and came to rest nose down.

The airplane sustained substantial damage to the left wing.

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

A review of recorded data from the automated weather observation station located on the airport revealed that, about 15 minutes before the accident, the wind was from 280ø at 11 knots, gusting to 17 knots. The pilot landed on runway 22.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's failure to maintain directional control while landing in gusting crosswind conditions.

Events

1. Landing-flare/touchdown - Other weather encounter
2. Landing - Loss of control on ground
3. Landing - Runway excursion
4. Landing - Nose over/nose down

Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Directional control-Not attained/maintained - C
2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
3. Environmental issues-Conditions/weather/phenomena-Wind-Gusts-Effect on operation
4. Environmental issues-Physical environment-Terrain-(general)-Effect on equipment
5. Environmental issues-Conditions/weather/phenomena-Wind-Crosswind-Effect on operation

Narrative

The pilot of the tailwheel-equipped airplane reported that, during the landing touchdown in a crosswind, a strong wind gust lifted the right wing. Subsequently, the airplane exited the left side of the runway, traveled down an embankment, and came to rest nose down.

The airplane sustained substantial damage to the left wing.

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

A review of recorded data from the automated weather observation station located on the airport reported that, about 15 minutes before the accident, the wind was from 280ø at 11 knots, gusting to 17 knots. The pilot landed on runway 22.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA399	07/07/2017 1400 CDT	Regis# N2811C	Pine Bluff, AR	Apt: Grider Field PBF
Acft Mk/Mdl CESSNA 170B-UNDESIGNAT		Acft SN 26354	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL O300D		Acft TT 3524	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: JAMES C. BEYER		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

1. Landing-landing roll - Loss of control on ground

Narrative

The pilot of the tailwheel-equipped airplane reported that during the landing roll, the tailwheel shimmied so he held full aft elevator input until the airplane slowed. He then "slightly" released the back pressure when the airplane suddenly swerved to the right. The pilot was unable to correct the turn and the airplane ground looped. The left main landing gear collapsed, and the left wing impacted the ground.

The airplane sustained substantial damage to the fuselage.

The pilot reported 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# CEN18LA051	12/09/2017 950 CST	Regis# N8856B	Algona, IA	Apt: Algona Municipal Airport AXA
Acft Mk/Mdl CESSNA 172		Acft SN 36556	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR O-300 SER			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: GREG W. SHEPPARD		Opr dba:		Aircraft Fire: NONE

Events

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

Narrative

On December 9, 2017, about 0950 central standard time, a Cessna 172, N8856B, collided with a ditch during a forced landing after a complete loss of engine power during initial climb from the Algona Municipal Airport (AXA), Algona, Iowa. The pilot, student pilot, and passenger were not injured; and the airplane sustained substantial damage. The airplane was owned and being operated by a private individual as a 14 Code of Federal Regulation Part 91 instructional flight. Visual meteorological conditions existed near the accident site at the time of the flight, and a flight plan was not filed. The flight departed AXA about 0945 and was en route to the Eagle Grove Municipal Airport (EAG), Eagle Grove, Iowa.

At 0935, the surface weather observation at AXA was wind 330 degrees at 22 knots, gusting to 28 knots; 10 miles visibility; skies overcast at 2,600 feet; temperature -6 degrees C; dew point -8 degrees C; altimeter 30.06 inches of mercury.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA476	08/04/2017 1923 CDT	Regis# N8226U	Drexel, MO	Apt: N/a
Acft Mk/Mdl CESSNA 172-F		Acft SN 17252126	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR O-300-D			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: RICHLEY, ROBERT C.		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Summary

The pilot reported that, during the initial climb, the airplane aerodynamically stalled and impacted terrain.

The airplane sustained substantial damage to the left wing.

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

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's failure to maintain adequate airspeed and his exceedance of the airplane's critical angle of attack, which resulted in an aerodynamic stall.

Events

1. Takeoff - Aerodynamic stall/spin
2. Takeoff - Collision with terr/obj (non-CFIT)

Findings - Cause/Factor

1. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
2. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Angle of attack-Capability exceeded - C
3. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Airspeed-Not attained/maintained - C

Narrative

The pilot reported that, during the initial climb, the airplane aerodynamically stalled and impacted terrain.

The airplane sustained substantial damage to the left wing.

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# GAA17CA373	06/25/2017 1130 PDT	Regis# N79938	Roseburg, OR	Apt: Roseburg Rgnl RBG
Acft Mk/Mdl CESSNA 172-K		Acft SN 17258265	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320		Acft TT 6111	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: LEVIN, ROBERT G.		Opr dba: WESTERN OREGON FLIGHT SERVICES	Aircraft Fire: NONE	AW Cert: STN

Summary

The pilot reported that he was in the pattern performing touch-and-go landings. During a left descending turn from downwind to base, about ten large birds came into view below the airplane's nose. He recalled that they appeared quickly and that he was unable to take evasive action. He heard and felt a strike, followed by "an appreciable drag on the left side." He also saw visible damage to the left wing. The pilot landed the airplane without further incident. The airplane sustained substantial damage to the left wing ribs and leading edge.

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

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: An in-flight collision with a bird during the approach.

Events

1. Enroute - Birdstrike

Findings - Cause/Factor

1. Environmental issues-Physical environment-Object/animal/substance-Animal(s)/bird(s)-Ability to respond/compensate - C

Narrative

The pilot reported that he was in the pattern performing touch and go landings. During a left descending turn from downwind to base, about ten large birds came into view below the nose of the airplane. He recalled that they appeared quickly and he was unable to take evasive action. He heard and felt a strike, followed by, "an appreciable drag on the left side." He also saw visible damage to the left wing. The pilot landed the airplane without further incident. The airplane sustained substantial damage to the left wing ribs and leading edge.

The 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# GAA17CA556	09/16/2017 1320 CDT	Regis# N5146R	Gallatin, TN	Apt: Sumner County Rgnl M33
Acft Mk/Mdl CESSNA 172-M		Acft SN 17263383	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320-E2D		Acft TT 8954	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: NASHVILLE FLIGHT SCHOOL LLC		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Summary

The student pilot reported that, while attempting a touch-and-go landing, the airplane bounced. He added that he "worked the yoke" to stabilize the airplane, but the airplane bounced a second time and veered off the runway to the left.

The airplane sustained substantial damage to the firewall.

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

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The student pilot's improper landing flare, which resulted in a bounced landing.

Events

1. Landing - Abnormal runway contact
2. Landing - Loss of control in flight
3. Landing - Attempted remediation/recovery
4. Landing - Runway excursion

Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Landing flare-Not attained/maintained - C
2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Student/instructed pilot - C

Narrative

The student pilot reported that, while attempting a touch-and-go landing, the airplane bounced. He added that, he "worked the yoke" to stabilize the airplane, but the airplane bounced a second time and veered off the runway to the left.

Subsequently, the airplane sustained substantial damage to the firewall.

The student 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# GAA18CA005	10/08/2017 1415 CDT	Regis# N9664Q	Black River Fal, WI	Apt: Black River Falls Area BCK
Acft Mk/Mdl CESSNA 172-M		Acft SN 17265748	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320-E2D		Acft TT 5979	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: JEFFREY CASPER		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Summary

The pilot reported that, during landing in a gusting crosswind, the airplane landed on the left wheel first. He added that "all of a sudden it was like a huge gust of wind took the plane and just threw it to the right." The propeller struck the runway, and the airplane then exited the runway to the right and came to rest inverted.

The airplane sustained substantial damage to the left wing.

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

A review of recorded data from the automated weather observation station located on the airport revealed that, about the time of the accident, the wind was from 190ø at 9 knots, gusting to 17 knots. The airplane landed on runway 26.

The Pilot's Operating Handbook contained a section titled, "Crosswind Landing," which stated, in part: "The maximum allowable crosswind velocity is dependent upon pilot capability rather than aircraft limitations. With average pilot technique, direct crosswinds of 15 knots can be handled with safety."

Cause Narrative

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

Events

1. Landing - Other weather encounter
2. Landing - Loss of control on ground
3. Landing - Runway excursion
4. Landing - Nose over/nose down

Findings - Cause/Factor

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

Narrative

The pilot reported that, during landing in a gusting crosswind, the airplane landed on the left wheel first. He added that "all of a sudden it was like a huge gust of wind took the plane and just threw it to the right". The propeller struck the runway; the airplane exited the runway to the right and came to rest inverted.

The airplane sustained substantial damage to the left wing.

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

A review of recorded data from the automated weather observation station located on the airport reported that, about the time of the accident, the wind was from 190ø at 9 knots, gusting 17 knots. The airplane landed on runway 26.

The pilot's operating handbook contains a section titled "Crosswind Landing". It stated in part:

"The maximum allowable crosswind velocity is dependent upon pilot capability rather than aircraft limitations. With average pilot technique, direct crosswinds of 15 knots can be handled with safety."

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA394	07/02/2017	1530 LCL	Regis# N80328	Tamuning, GU	Apt: Guam Intl GUM
Acft Mk/Mdl CESSNA 172-M			Acft SN 17266522	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320-E2D			Acft TT 13864	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: MICRONECIAN AVIATION SYSTEM			Opr dba:		Aircraft Fire: NONE
					AW Cert: STN

Summary

The pilot reported that the airplane approached the runway with a "steep angle [and] high descent rate." He added that the airplane "touched the ground before flaring" and that the airplane porpoised on the runway. Subsequently, the nosewheel tire popped, and the strut partially collapsed. The pilot reported that he stopped the airplane on the runway and radioed for assistance.

The firewall and fuselage sustained substantial damage.

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

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's improper landing flare, which resulted in a porpoised landing.

Events

1. Landing-flare/touchdown - Abnormal runway contact
2. Landing-landing roll - Landing gear collapse

Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Landing flare-Incorrect use/operation - C
2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C

Narrative

The pilot reported that, the airplane approached the runway with a "steep angle [and] high descent rate." He added that the airplane "touched the ground before flaring" and the airplane porpoised on the runway. Subsequently, the nose wheel tire popped and strut partially collapsed. The pilot reported that he stopped the airplane on the runway and radioed for assistance.

The firewall and fuselage sustained substantial damage.

The 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# GAA17CA276	05/12/2017 1530	Regis# N9390E	Monument Valley, UT	Apt: Monument Valley UT25
Acft Mk/Mdl CESSNA 172-N		Acft SN 17272243	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320-H2AD		Acft TT 10794	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: AMERICAN AVIATION INC.		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Summary

The pilot reported that, during landing, the airplane ballooned into the air, and he executed a go-around. After ballooning, the airplane descended, and the empennage impacted a fence.

The airplane sustained substantial damage to the empennage.

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

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's improper landing flare, which resulted in a bounced landing.

Events

1. Landing - Loss of control on ground
2. Landing-aborted after touchdown - Collision with terr/obj (non-CFIT)

Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Landing flare-Not attained/maintained - C
2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
3. Environmental issues-Physical environment-Object/animal/substance-Fence/fence post-Contributed to outcome

Narrative

The pilot reported that during landing the airplane ballooned up into the air, and he executed a go-around. After ballooning, the airplane descended and the empennage impacted a fence.

The airplane sustained substantial damage to the empennage.

The 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# GAA17CA411B	07/16/2017 1526 PDT	Regis# N5396E	San Diego, CA	Apt: Montgomery-gibbs Executive MYF
Acft Mk/Mdl CESSNA 172-N		Acft SN 17271842	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320-H2AD		Acft TT 12711	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: PLUS ONE FLYERS INC.		Opr dba:		Aircraft Fire: NONE
				AW Cert: SPE

Summary

The pilot of the tandem-seat, tailwheel-equipped airplane reported that, while taxiing to the runway and seated in the rear seat, he had "poor [forward] visibility" and that the airplane's propeller collided with the left wing of a stationary airplane on the taxiway. The pilot reported that he "broke and turned" as soon as he saw the stationary airplane, but "it was too late."

The pilot of the stationary airplane reported that he had stopped on the taxiway due to the run-up area ahead being fully occupied with multiple airplanes waiting to depart. He added that his "first awareness" of the tailwheel airplane was the sound of a "loud bang."

The stationary airplane's left wing and aileron sustained substantial damage. The tailwheel airplane sustained minor damage to the propeller.

The pilots reported that there were no preaccident mechanical malfunctions or failures with their respective airplanes that would have precluded normal operation.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The other pilot's failure to maintain separation from a stationary airplane during the taxi to the runway.

Events

1. Taxi-to runway - Ground collision

Findings - Cause/Factor

1. Personnel issues-Psychological-Attention/monitoring-Monitoring other aircraft-Pilot of other aircraft - C
2. Environmental issues-Physical environment-Object/animal/substance-Aircraft-Effect on operation - C

Narrative

The pilot of the tandem seat, tailwheel-equipped airplane reported that, while taxiing to the runway, and seated in the rear seat, he had "poor [forward] visibility" and the airplane's propeller collided with the left wing of a stationary airplane on the taxiway. The pilot reported that he had "broke and turned" as soon as he saw the stationary airplane, but "it was too late."

The pilot of the stationary airplane reported that he had stopped on the taxiway due to the run-up area ahead being fully occupied with multiple airplane's awaiting to depart. He added that, his "first awareness" of the tailwheel airplane was the sound of a "loud bang."

The stationary airplane's left wing and aileron sustained substantial damage. The tailwheel airplane sustained minor damage to the propeller.

The pilot's reported that there were 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# GAA17CA573	09/22/2017 1000 PDT	Regis# N520KS	Chino, CA	Apt: Chino CNO
Acft Mk/Mdl CESSNA 172-S		Acft SN 172S9734	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-360-L2A		Acft TT 8073	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: HANSEO USA LLC		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Summary

The flight instructor reported that, while the student pilot was flying on downwind, he noticed a bird approaching the airplane. He added that he took the flight controls from the student and banked left, but the airplane struck the bird. The airplane landed without further incident.

The airplane sustained substantial damage to the left wing.

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

The Federal Aviation Administration Airport Facility Diagram page for the airport stated, in part: "Birds and wildlife on and invof [in vicinity of] arpt."

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: An in-flight collision with a bird while on downwind.

Events

1. Approach-VFR pattern downwind - Birdstrike

Findings - Cause/Factor

1. Environmental issues-Physical environment-Object/animal/substance-Animal(s)/bird(s)-Ability to respond/compensate - C

Narrative

The flight instructor reported that, while the student pilot was flying on downwind, he noticed a bird approaching the airplane. He added that he took the flight controls from the student, banked left, but the airplane struck the bird. The airplane landed without further incident.

The airplane sustained substantial damage to the left wing.

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

The Federal Aviation Administration Airport Facility Diagram page for the airport in part stated: "Birds and wildlife on and invof [in vicinity of] arpt."

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA479	07/29/2017 1030 PDT	Regis# N1129K	Santa Ana, CA	Apt: N/a
Acft Mk/Mdl CESSNA 172-S		Acft SN 172S10315	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-360-L2A		Acft TT 4500	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: ORANGE COUNTY FLIGHT CENTER		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Summary

The Federal Aviation Administration aviation safety inspector reported that, during a preflight inspection, the student pilot and designated pilot examiner observed propeller damage. Further inspection by maintenance personnel revealed substantial damage to the firewall and fuselage consistent with a hard landing. The airplane was flown by numerous renter pilots before the damage was found, and none of them claimed responsibility for the damage. The time of the accident and the identification of the pilot(s) are unknown.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: A hard landing and propeller strike for reasons that could not be determined based on the available evidence.

Events

1. Landing-flare/touchdown - Hard landing
2. Landing-flare/touchdown - Abnormal runway contact

Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Landing flare-Not attained/maintained - C
2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Other/unknown - C

Narrative

The Federal Aviation Administration Aviation Safety Inspector reported that, during a preflight inspection, the student pilot and designated pilot examiner observed propeller damage during their preflight inspection. Subsequently, a further inspection by maintenance personnel revealed substantial damage to the firewall and fuselage. The airplane was flown by numerous renter pilots prior to the damage being found, and none of them claimed responsibility for the damage.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA18CA085 12/14/2017 1300 CDT Regis# N524ND Park Rapids, MN Apt: Park Rapids Muni-konshok Field PKD
Acft Mk/Mdl CESSNA 172-S Acft SN 172S10979 Acft Dmg: SUBSTANTIAL Rpt Status: Prelim Prob Caus: Pending
Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: UNIVERSITY OF NORTH DAKOTA Opr dba: Aircraft Fire: NONE

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# WPR18LA047	12/07/2017 1600 PST	Regis# N2351U	Auburn, WA	Apt: Auburn Muni S50
Acft Mk/Mdl CESSNA 172D-D		Acft SN 17249951	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL O-300			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: LUIS JIMENEZ		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

2. Approach-VFR pattern final - Loss of control in flight

Narrative

On December 7, 2017, about 1600 Pacific standard time, a Cessna 172D, N2351U, experienced a loss of aileron control during landing at the Auburn Municipal Airport (S50), Auburn, Washington. The private pilot, sole occupant of the airplane, was not injured. The airplane sustained substantial damage to the right wing and fuselage. The airplane was registered to Mercer Aviation Group LLC, Mercer Island, Washington, and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Visual meteorological conditions prevailed and no flight plan was filed for the local flight which originated from S50 at 1530.

In a written statement, the pilot reported that after turning onto final for runway 16, the nose of the airplane veered sharply to the left without any control input. The pilot stated that he counteracted the movement by applying right rudder and the airplane veered to the right as he noticed that he had no response from aileron control input. The pilot further reported that he tried to stabilize the airplane with rudder inputs and aborted the landing sequence by applying power. As the application of power was applied, he noticed that the lack of response from the ailerons became more pronounced and decided to reduce throttle and land. Subsequently the airplane landed on the runway surface about 450 off runway heading. The airplane exited the right side of the runway and impacted a water retention pond adjacent to the runway, where it came to rest nose low.

The wreckage was recovered to a secure location for further examination.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# ERA17CA114	02/18/2017 1315 EST	Regis# N738DS	Statesville, NC	Apt: Statesville Rgnl SVH
Acft Mk/Mdl CESSNA 172N-N		Acft SN 17269901	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320 SERIES		Acft TT 10509	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: RALPH VALERIO		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Summary

The student pilot was on the second leg of a solo cross-county training flight. During the landing flare at the destination airport, he landed the airplane "hard," and it bounced twice before he was able to regain control. He taxied back to the beginning of the runway and conducted a run-up. Noting no anomalies, he taxied onto the runway and started the takeoff roll. During the takeoff, he pulled back on the yoke "too far," and the airplane climbed between 30 and 40 ft before entering an aerodynamic stall and colliding with the ground. The nose landing gear collapsed, and the propeller struck the ground, which resulted in substantial damage to the fuselage.

The pilot reported that there were no preimpact mechanical anomalies with the airplane that would have precluded normal operation. It could not be determined whether the airplane incurred damage during the hard landing that would have impacted the pilot's ability to maintain pitch control during the subsequent takeoff; therefore, the reason for the loss of control could not be determined.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: A loss of airplane control during takeoff for reasons that could not be determined based on the available information.

Events

1. Takeoff - Loss of control in flight
2. Takeoff - Aerodynamic stall/spin

Findings - Cause/Factor

1. Not determined-Not determined-(general)-(general)-Unknown/Not determined - C
2. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-(general)-Not attained/maintained - C

Narrative

The student pilot was on the second leg of a solo cross county training flight. During the flare at the destination airport, he landed the airplane "hard" and it bounced twice before he was able to regained control. He taxied back to the beginning of the runway and conducted a run-up. Noting no anomalies, he taxied onto the runway and started the takeoff roll. During the takeoff, he pulled back on the yoke "too far" and the airplane climbed between 30 and 40 feet before entering an aerodynamic stall and colliding with the ground. The nose gear collapsed and the propeller struck the ground, resulting in substantial damage to the fuselage. The pilot reported that there were no mechanical anomalies with the airplane before the landing. It could not be determined whether the airplane incurred damage during the hard landing that would have impacted the pilot's ability to maintain pitch control during takeoff.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# WPR17LA112	05/26/2017	2015 PDT	Regis# N6832D	El Monte, CA	Apt: San Gabriel Valley EMT
Acft Mk/Mdl CESSNA 175-UNDESIGNAT			Acft SN 55751	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-360-A1A				Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: BELSAZAR URIARTE			Opr dba:		Aircraft Fire: NONE

Events

1. Landing-flare/touchdown - Loss of control on ground
-

Narrative

On May 26, 2017, about 2015 Pacific daylight time, a Cessna 175, N6832D, sustained substantial damage after it veered from the runway and impacted trees at San Gabriel Valley Airport (EMT), El Monte, California. The airplane was registered to a private party and operated by the pilot as a 14 Code of Federal Regulations Part 91 local instructional flight. The certified flight instructor (CFI), student pilot receiving instruction and passenger sustained minor injuries. The flight departed EMT, about 1900. Visual meteorological conditions prevailed and no flight plan had been filed.

In written statements, it was reported that the flight had successfully completed multiple touch and go landings prior to the accident. On the eighth landing, with the student pilot at the controls, just before touchdown, the airplane drifted to the right of the runway. As the airplane touched down, the CFI applied full left rudder input. The nose of the airplane yawed to the right. The student pilot applied full power and the airplane became airborne again with the stall horn briefly sounding. The flight instructor pushed the nose down, but the control had no travel. The airplane banked to the left and right as the flight instructor continued to try and regain control. The airplane subsequently settled back to the ground and impacted a drainage channel and trees. The airplane sustained substantial damage to the wings, fuselage, and firewall.

After the wreckage was recovered, the flight control system was examined. Aileron control cable continuity was established from the control yokes to the left and right aileron bell cranks. The aileron control chains remained on the yoke sprockets and the interconnect pulleys operated normally. Flap control cable continuity was established from the manual flap handle to the flap bell cranks. Flap impact witness marks on the left side of the fuselage confirmed the flaps were extended 30o at the time of impact. The elevator push/pull tube remained attached to the base of the control yoke. The cables were continuous to the aft elevator bell crank. The elevator trim tab cables were continuous from the control wheel to the right horizontal stabilizer root area. Rudder control cable continuity was established from the rudder pedals to the rudder horn. The rudder return springs were in place and operated normally.

A review of the aircraft maintenance logbook indicated that during the last annual inspection, which was accomplished on May 18, 2017, all inspection panels were opened and all pulleys, rod ends and hinges were lubed.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA532	09/11/2017	2003 CDT	Regis# N34413	Harrisonville, MO	Apt: Lawrence Smith Memorial LRY
Acft Mk/Mdl CESSNA 177-B			Acft SN 17701791	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-360-A1F6D			Acft TT 4372	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: FORD, JOHN S.			Opr dba:		Aircraft Fire: NONE
					AW Cert: STN

Summary

The pilot reported that, during takeoff, he heard a "bang," and "it felt as though the airplane hit a brick wall." He added that, during the climb, he examined the engine instruments, which appeared normal. About 800 ft above ground level, he looked out the left pilot window and observed that the fixed left main landing gear was "oddly positioned up next to [the] seat/door." The pilot reported that he contacted air traffic control, declared an emergency, and performed a "gear up" landing at the destination airport.

The airplane sustained substantial damage to the left stabilizer.

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

After the accident, the following was added to the Airport Facility Directory: "Deer and other wildlife on and in vicinity of airport." It is likely the airplane hit a deer on the runway.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: A collision with a deer on the runway during the takeoff roll.

Events

1. Takeoff - Wildlife encounter (non-bird)

Findings - Cause/Factor

1. Environmental issues-Physical environment-Object/animal/substance-Animal(s)/bird(s)-Ability to respond/compensate - C

Narrative

The pilot reported that, during takeoff, he heard a "bang" and "it felt as though the airplane hit a brick wall [deer]". He added that, during the climb, he examined the engine instruments, which appeared normal. About 800 ft above ground, he looked out the left pilot side window and observed the fixed left main landing gear was "oddly positioned up next to [the] seat/door". The pilot reported that he contacted air traffic control, declared an emergency, and performed a "gear up" landing at the destination airport.

The airplane sustained substantial damage to the left stabilizer.

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# GAA18CA052	10/28/2017	1000 AKD	Regis# N2661Q	Skwentna, AK	Apt: N/a
Acft Mk/Mdl CESSNA 182-K			Acft SN 18257861	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR O-520 SERIES			Acft TT 3567	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: STEWART S. SMITH			Opr dba:		Aircraft Fire: NONE
					AW Cert: STN

Events

1. Landing - Nose over/nose down

Narrative

The pilot reported that, while landing on an unimproved snow covered airstrip, he touched down in a configuration on the main landing gear "for a soft field landing". He added that, at about 10-15 miles per hour, he allowed the nose wheel to settle in the snow. Subsequently, the nose wheel broke through the crusted layer of snow and the airplane "lurched" forward coming to rest inverted.

The airplane sustained substantial damage to the vertical stabilizer.

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# GAA17CA525	09/04/2017 1000 CDT	Regis# N6849M	Lockwood, MO	Apt: Woodfield Airpark Inc MU27
Acft Mk/Mdl CESSNA 182-P		Acft SN 18263860	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR O-470-S		Acft TT 3895	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: DAVID A. KRAHN		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Summary

The pilot reported that the airplane touched down on the first third of the wet, grass runway at 80 mph with 10ø of flaps extended. He added that, about two-thirds of the way down the runway, the airplane "hit a bump and became airborne." As the airplane touched down for the second time, he felt as though he was running out of room and applied the brakes. Subsequently, the end of the runway was approaching fast, and he attempted to turn the airplane, but it continued to slide off the runway because "the brakes were locked."

The airplane sustained substantial damage to the firewall.

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

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's unstabilized approach and failure to go around, which resulted in a runway overrun on a wet, grass runway.

Events

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

Findings - Cause/Factor

1. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
2. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Descent/approach/glide path-Incorrect use/operation - C
3. Personnel issues-Action/decision-Info processing/decision-Decision making/judgment-Pilot - C
4. Environmental issues-Physical environment-Runway/land/takeoff/taxi surface-Wet surface-Ability to respond/compensate

Narrative

The pilot reported that, the airplane touched down on the first 1/3 of the wet grass runway, at 80 mph with 10ø of flaps extended. He added, that about 2/3 of the way down the runway the airplane "hit a bump and became airborne again." As the airplane touched down for the second time, he felt as though he was running out of room and applied the brakes. Subsequently, the end of the runway was approaching fast and he attempted to turn the airplane, but continued to slide off the runway, "as the brakes were locked."

The airplane sustained substantial damage to the firewall.

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# GAA18CA058	11/27/2017 1200 CST	Regis# N8128M	Black River Fal, WI	Apt: Black River Falls Area BCK
Acft Mk/Mdl CESSNA 182-P		Acft SN 18264544	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR O-470S			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: BRAD DOBBS		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

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

Narrative

The solo student pilot in the high-performance airplane reported that, during approach, the airplane descended through turbulence. He added that the automated weather observation system reported wind "variable between 110 and 160", and he was landing on runway 8, so he "crabbed to the right". During the landing flare, he aligned the airplane with the runway centerline and "was quickly pushed left". The student added full power to go around and, about 30-50 ft off the ground, "a gust of wind caused [him] to bank/turn left" and the airplane impacted the ground.

The airplane sustained substantial damage to the fuselage and right wing.

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

The Federal Aviation Administration inspector reported that the student pilot did not possess a high-performance endorsement.

A review of recorded data from the automated weather observation station located on the airport reported that, about 5 minutes before the accident, the wind was from 140ø at 8 knots, wind variable from 110ø to 170ø. The airplane landed on runway 8.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA492 08/12/2017 1315 CDT Regis# N147DD Quitman, MS Apt: Clarke County 23M
Acft Mk/Mdl CESSNA 182-T Acft SN 18282367 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-540-AB1A5 Acft TT 271 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: JOHN M. CHANCELLOR Opr dba: Aircraft Fire: NONE
AW Cert: STN

Summary

The solo student pilot in the high-performance airplane reported that, before takeoff, he observed a "dead still" flag and windsock, indicating "no wind." He added that, during the takeoff roll, a wind gust pushed the airplane off the runway to the left. He added that he attempted to recover by reducing power, but the airplane impacted a ditch, the nose landing gear collapsed, and the airplane nosed over. He further added that the wind gust occurred after the airplane had "cleared" a large hill to the west of the runway.

The airplane sustained substantial damage to the wings, fuselage, and empennage.

The student pilot reported that there were no preaccident mechanical failures or malfunctions with the airplane that would have precluded normal operation. A weather reporting station about 18 miles north of the airport reported that, between 1100 and 1320, the wind increased from calm to 8 knots, and no gusts were reported. The wind came predominately from the southwest. The airplane departed from runway 16, and the airport is located in an area of low rolling hills.

The Federal Aviation Administration's Pilot's Handbook of Aeronautical Knowledge, FAA-H-8083-25B, contained a section titled, "Effect of Obstructions on Wind," which stated, in part:

"Obstructions on the ground affect the flow of wind and can be an unseen danger. Ground topography and large buildings can break up the flow of the wind and create wind gusts that change rapidly in direction and speed. These obstructions range from man-made structures, like hangars, to large natural obstructions, such as mountains, bluffs, or canyons. It is especially important to be vigilant when flying in or out of airports that have large buildings or natural obstructions located near the runway.

The intensity of the turbulence associated with ground obstructions depends on the size of the obstacle and the primary velocity of the wind. This can affect the takeoff and landing performance of any aircraft and can present a very serious hazard."

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The student pilot's failure to maintain directional control during takeoff in gusting wind conditions after passing a large hill.

Events

1. Takeoff - Other weather encounter
2. Takeoff - Loss of control on ground
3. Takeoff - Attempted remediation/recovery
4. Takeoff - Collision with terr/obj (non-CFIT)

Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Directional control-Not attained/maintained - C
2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Student/instructed pilot - C
3. Environmental issues-Conditions/weather/phenomena-Wind-Gusts-Effect on operation
4. Environmental issues-Physical environment-Terrain-(general)-Effect on operation

Narrative

The solo student pilot, in the high-performance airplane, reported that prior to takeoff, he observed a "dead still" flag and windsock, indicating "no wind." He added that, during the takeoff roll, a gust of wind pushed the airplane off the runway to the left. He added that he attempted to recover by reducing power, but the airplane impacted a ditch; the nose landing gear collapsed, and the airplane nosed over. He further added that the wind gust occurred after the airplane had "cleared" a large hill to the west of the runway.

The airplane sustained substantial damage to the wings, fuselage, and empennage.

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

A weather reporting station, about 18 miles north of the airport, reported between 1100 and 1320, the wind increased from calm to 8 knots, decreased after 1400, and no gusts were reported. The wind came predominately from the southwest. The airplane departed on runway 16, and the airport is located in an area of low rolling hills.

The Federal Aviation Administration's Pilot's Handbook of Aeronautical Knowledge, FAA-H-8083-25B, contains a section titled "Effect of Obstructions on Wind" which stated in part:

Another atmospheric hazard exists that can create problems for pilots. Obstructions on the ground affect the flow of wind and can be an unseen danger. Ground topography and large buildings can break up the flow of the wind and create wind gusts that change rapidly in direction and speed. These obstructions range from man-made structures, like hangars, to large natural obstructions, such as mountains, bluffs, or canyons. It is especially important to be vigilant when flying in or out of airports that have large buildings or natural obstructions located near the runway.

The intensity of the turbulence associated with ground obstructions depends on the size of the obstacle and the primary velocity of the wind. This can affect the takeoff and landing performance of any aircraft and can present a very serious hazard.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA415	07/17/2017 1120 CDT	Regis# N4432C	Leavenworth, KS	Apt: Sherman Aaf FLV
Acft Mk/Mdl CESSNA 195-B		Acft SN 16017	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl JACOBS R755B SERIES		Acft TT 3554	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: HUGH L. MILLS JR		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Summary

The pilot of the tailwheel airplane reported that he made a normal approach to an asphalt runway. During the landing roll, the tail started to move to the left, and he corrected with left rudder application, but he recalled that "I may have unintentionally put pressure on the left toe brake." The airplane veered to the left and exited the left side of the runway. The airplane entered a drainage culvert and ground looped to the left. The right main landing gear (MLG) collapsed, and the right wing tip struck the ground.

The airplane sustained substantial damage to the right MLG attachment point.

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

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's inadvertent toe brake application during the landing roll, which resulted in a runway excursion and a ground loop.

Events

1. Landing-landing roll - Loss of control on ground
2. Landing-landing roll - Runway excursion
3. Landing-landing roll - Collision with terr/obj (non-CFIT)

Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Directional control-Not attained/maintained - C
2. Personnel issues-Task performance-Use of equip/info-Use of equip/system-Pilot - C
3. Aircraft-Aircraft systems-Landing gear system-Brake-Unintentional use/operation - C

Narrative

The pilot of the tailwheel airplane reported that he made a normal approach to an asphalt runway.

During the landing roll, the tail started to move to the left and he corrected with left rudder application, but he recalled that, "I may have unintentionally put pressure on the left toe brake." The airplane veered to the left and exited the left side of the runway. The airplane entered a drainage culvert and ground looped to the left. The right main landing gear collapsed, and the right wing tip struck the ground.

The airplane sustained substantial damage to the right main landing gear attachment point.

The 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# GAA17CA388 07/03/2017 1032 AKD Regis# N9620M Hope, AK Apt: N/a
Acft Mk/Mdl CESSNA 207-A Acft SN 20700711 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR IO-520-F Acft TT 23833 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: ALASKA AIR TAXI LLC Opr dba: Aircraft Fire: NONE
AW Cert: STN

Summary

According to the pilot, he was flying the second airplane in a flight of two about 1 mile behind the lead airplane. The lead airplane pilot reported to him, via the airplane's radio, that he had encountered decreasing visibility and that he was making a 180° left turn to exit the area. The pilot recalled that, after losing sight of the lead airplane, he made a shallow climbing right turn and noticed that the terrain was rising. He recalled that he entered the clouds for a few seconds and "at that moment I ran into the trees which I never saw coming."

The airplane sustained substantial damage to both wings.

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

The pilot reported that the temperature was 60°F with 8 miles visibility and 1,500-ft ceilings.

The nearest METAR was about 1 mile away and reported that the temperature was 54°F, dew point was 52°F, visibility was 8 statute miles with light rain, and ceiling was broken at 500 ft and overcast at 1,500 ft.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's inadvertent flight into instrument meteorological conditions and subsequent controlled flight into terrain.

Events

1. Maneuvering-low-alt flying - Loss of visual reference
2. Maneuvering-low-alt flying - Low altitude operation/event
3. Maneuvering-low-alt flying - VFR encounter with IMC
4. Enroute - Controlled flight into terr/obj (CFIT)

Findings - Cause/Factor

1. Personnel issues-Action/decision-Info processing/decision-Identification/recognition-Pilot - C
2. Environmental issues-Conditions/weather/phenomena-Ceiling/visibility/precip-Low visibility-Effect on personnel - C
3. Environmental issues-Conditions/weather/phenomena-Ceiling/visibility/precip-Clouds-Effect on personnel - C
4. Environmental issues-Physical environment-Object/animal/substance-Tree(s)-Effect on operation

Narrative

According to the pilot, he was flying the second airplane in a flight of two, about one mile behind the lead airplane. The lead airplane pilot reported to him, via the airplane's radio, that he encountered decreasing visibility, and that he was making a 180° turn to the left to exit the area.

The pilot recalled that after losing sight of the lead airplane, he made a shallow climbing turn to the right and noticed that the terrain was rising. He recalled that he entered the clouds for a few seconds and, "At that moment I ran into the trees which I never saw coming."

The airplane sustained substantial damage to both wings.

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

The pilot reported that the temperature was 60° Fahrenheit with 8 miles visibility and 1,500-foot ceilings.

The nearest METAR was about 1 mile away and reported that the temperature was 54° Fahrenheit and the dew point was 52° Fahrenheit. The visibility was 8 statute miles with light rain. The ceiling was broken at 500 feet and overcast at 1,500 feet.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA531 09/12/2017 1039 CDT Regis# N9595X Kinsley, KS Apt: Kinsley Muni 33K
Acft Mk/Mdl CESSNA 210-B Acft SN 21057895 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR IO-470 SERIES Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: PRUE, EDMUND B. Opr dba: Aircraft Fire: NONE
AW Cert: STN

Summary

During a telephone interview with the National Transportation Safety Board (NTSB) investigator-in-charge, the pilot reported that he "landed around 80 knots" and "didn't get the flaps down" before landing. He further reported that the airplane "didn't want to stop" and that it then "ran off the runway." During the runway excursion, the nosewheel collapsed, and the airplane nosed over.

The fuselage, wings, and vertical stabilizer sustained substantial damage.

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

An automated weather observation station located 28 nautical miles west from the accident site reported, about the time of the accident, wind from 170ø at 7 knots. The landing was on runway 36.

The pilot did not submit the NTSB Form 6120.1 Pilot/Operator Aircraft Accident/Incident Report.

A witness reported that he was at the airport in a hangar and noticed that the accident airplane was "high, fast, and downwind." He added that he observed the airplane overrun the runway and nose over into the grass.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's decision to continue an unstabilized approach for landing in tailwind conditions, which resulted in a runway overrun and a nose-over.

Events

1. Approach-VFR pattern final - Other weather encounter
2. Landing-landing roll - Loss of control on ground
3. Landing-landing roll - Runway excursion
4. Landing-landing roll - Landing gear collapse
5. Landing-landing roll - Nose over/nose down
6. Landing-landing roll - Collision with terr/obj (non-CFIT)

Findings - Cause/Factor

1. Personnel issues-Action/decision-Info processing/decision-Decision making/judgment-Pilot - C
2. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Descent/approach/glide path-Incorrect use/operation - C
3. Environmental issues-Conditions/weather/phenomena-Wind-Tailwind-Decision related to condition

Narrative

During a telephone interview with the NTSB investigator-in-charge, the pilot reported that, he "landed around 80 knots" and "didn't get the flaps down" before landing. He further reported that, the airplane "didn't want to stop" and it then "ran off the runway." During the runway excursion, the nose wheel collapsed, and the airplane nosed over.

The fuselage, wings, and vertical stabilizer sustained substantial damage.

The pilot did not report that there were any preaccident mechanical malfunctions or failures with the airplane that would have precluded normal operation.

An automated weather observation station, about the time of the accident, 28 nautical miles west from the accident site, reported wind from 170ø at 7 knots. The landing was on runway 36.

The pilot failed to submit the NTSB Form 6120.1 Pilot/ Operator Aircraft Accident/ Incident Report.

A witness reported that he was at the airport in a hangar, and noticed that the accident airplane was "high, fast, and down wind." He added that he observed the airplane overrun the runway and nose over into the grass.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA474	07/08/2017	1400 AKD	Regis# N9664X	Bettles, AK	Apt: N/a
Acft Mk/Mdl CESSNA 210-B			Acft SN 21057964	Acft Dmg: DESTROYED	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR IO-470S			Acft TT 5550	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: MARTIN FINCO			Opr dba:		Aircraft Fire: NONE
					AW Cert: STN

Summary

The pilot reported that he overflowed a remote airstrip, which was bounded by a lake on the approach end. He added that he circled back to land and that, during final approach, he encountered "glassy water and bright sun." Subsequently, the airplane landed short of the runway in the lake, sunk in more than 500 ft of water, and was not recovered.

The Federal Aviation Administration aviation safety inspector who interviewed the pilot reported that he stated that the sun and the reflection off the lake gave him the impression that the airplane was higher than it was.

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

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's failure to maintain an appropriate glidepath during the approach to the runway over glassy water and in glaring sun conditions.

Events

1. Approach-VFR pattern final - Loss of visual reference
2. Approach-VFR pattern final - Loss of control in flight
3. Approach-VFR pattern final - Collision with terr/obj (non-CFIT)

Findings - Cause/Factor

1. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
2. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Descent/approach/glide path-Not attained/maintained - C
3. Environmental issues-Physical environment-Runway/land/takeoff/taxi surface-Glassy surface-Effect on personnel
4. Environmental issues-Conditions/weather/phenomena-Light condition-Bright light-Effect on personnel

Narrative

The pilot reported that he overflowed a remote airstrip, which was bounded by a lake on the approach end. He added that he circled back to land, and during final approach he encountered "glassy water and bright sun." Subsequently, the airplane landed short of the runway in the lake and sunk.

The Federal Aviation Administration Aviation Safety Inspector who interviewed the pilot, reported that he stated, the sun and the reflection off the lake gave him the impression that the airplane was higher than it was.

The airplane sunk in more than 500 ft. of water and was not recovered.

The 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# GAA17CA539	09/16/2017	1630 AKD	Regis# N123LR	Talkeetna, AK	Apt: N/a
Acft Mk/Mdl CESSNA A185-E			Acft SN 185-1589	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL IO-550D2B			Acft TT 3852	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: BRADLEY SZUTZ			Opr dba:		Aircraft Fire: NONE
					AW Cert: STN

Summary

The pilot of the tailwheel-equipped airplane reported that, during landing, after a stabilized approach, the airplane touched down on the main landing gear (MLG) first for a wheel landing. The airplane bounced twice, and shortly before the tail settled on the ground, the "crosswind increased causing the aircraft to weathervane to the left." He added that he increased left aileron and right rudder to keep the airplane on the gravel airstrip; however, the "wind gust then all but stopped as the tailwheel settled to the ground causing the aircraft to turn rapidly to the right." He further added that he increased left rudder and brake, but the MLG started to depart the gravel airstrip and enter the softer shoulder. The "tail swung to the left of the aircraft direction of travel," and he was unable to correct the continued tightening right turn. Subsequently, the airplane rolled onto the left wing and left horizontal stabilizer and came to rest on the MLG.

The airplane sustained substantial damage to the left wing and left horizontal stabilizer.

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

The pilot reported the wind at the accident site, about the time of the accident, as variable, gusting to 10 knots. The pilot landed to the northeast.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's failure to maintain directional control while landing in gusting wind conditions.

Events

1. Landing - Loss of control on ground
2. Landing - Dragged wing/rotor/float/other

Findings - Cause/Factor

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

Narrative

The pilot of the tailwheel-equipped airplane reported that, during landing, after a stabilized approach, the airplane touched down on the main gear first for a wheel landing. The airplane bounced twice and shortly before the tail settled on the ground, the "crosswind increased causing the aircraft to weathervane to the left." He added that, he increased left aileron and right rudder to keep the airplane on the gravel airstrip; however, the "wind gust then all but stopped as the tailwheel settled to the ground causing the aircraft to turn rapidly to the right." He further added that, he increased left rudder and brake, but the main gear started to depart the gravel airstrip and enter the softer shoulder. The "tail swung to the left of the aircraft direction of travel" and he was unable to correct the continued tightening right turn. Subsequently, the airplane rolled onto the left wing and left horizontal stabilizer and came to rest on the main landing gear.

The airplane sustained substantial damage to the left wing and left horizontal stabilizer

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

The pilot reported the wind at the accident site, about the time of the accident, as variable at 0 to gusting 10 knots. The pilot landed to the northeast.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA270	05/09/2017 1330 PDT	Regis# N185RX	Columbia, CA	Apt: Columbia O22
Acft Mk/Mdl CESSNA A185-F		Acft SN 18504118	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL MOTORS IO-520-D		Acft TT 3508	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: JOHN L. HIRONS		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Summary

The pilot of the tailwheel-equipped airplane reported that, during the landing roll and while he transitioned from rudder control to brakes, "a gust of wind hit my [the airplane's] tail." The airplane veered off the runway to the left, the right main landing gear collapsed, and the right wing impacted the ground.

The airplane sustained substantial damage to the right wing.

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

The automated weather observation system at the accident airport reported that, about the time of the accident, the wind was from 250ø at 6 knots. The pilot landed on runway 35.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's failure to maintain directional control in tailwind and crosswind conditions.

Events

1. Landing-landing roll - Loss of control on ground
2. Landing-landing roll - Runway excursion
3. Landing-landing roll - Landing gear collapse
4. Landing-landing roll - Collision with terr/obj (non-CFIT)

Findings - Cause/Factor

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

Narrative

The pilot of the tailwheel-equipped airplane reported that, during the landing roll and while he transitioned from rudder control to brakes, "a gust of wind hit my [the airplane's] tail". The airplane veered off the runway to the left, the right main landing gear collapsed, and the right wing impacted the ground.

The airplane sustained substantial damage to the right wing.

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

The automated weather observation system at the accident airport reported that, about the time of the accident, the wind was from 250ø at 6 knots. The pilot landed on runway 35.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# CEN15LA015 10/15/2014 1725 CDT Regis# N731QV West Memphis, AR Apt: West Memphis Muni AWM
Acft Mk/Mdl CESSNA P210N-N Acft SN P21000534 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR TSIO-520 SER Acft TT 4196 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: GOODMAN JACK A Opr dba: Aircraft Fire: NONE

Events

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

Narrative

On October 15, 2014, about 1725 central daylight time, a Cessna P210N airplane, N731QV, sustained substantial damage following a forced landing and impact with terrain after a reported loss of engine power during initial climb out from West Memphis Municipal Airport (AWM), West Memphis, Arkansas. The pilot, who was the registered owner and sole occupant of the airplane, was not injured. Visual meteorological conditions prevailed for the local flight, which was being operated as a personal flight in accordance with 14 Code of Federal Regulations Part 91, and no flight plan had been filed.

The pilot reported he was departing for a local training flight. After takeoff, about 10 minutes into the flight while climbing through 4,500 feet MSL, the manifold pressure dropped and the pilot made a turn to return to AWM. Smoke was observed coming from under the engine cowl and the engine stopped while on short final about 800 feet AGL. The airplane impacted power lines before landing in a grassy area short of the runway and on airport property.

A JPI EDM-830 engine data module was recovered and subsequently downloaded by a recorder specialist and the NTSB's Vehicle Recorder Laboratory. Data indicated the flight took off about 1714 and about six minutes after takeoff engine RPM began to fluctuate and one minute later the exhaust gas temperatures increased. By 1723, engine RPM decreased, voltage decreased, and manifold pressure increased.

The airplane was powered by a six-cylinder Continental Motors IO-550-P6B, serial number 1006549, that was assembled at the Continental Motors factory on May 9, 2012, as a new IO-550-P6B. The engine was shipped to Vitatoc Industries, Inc. on May 14, 2012, where the engine was modified utilizing Vitatoc Supplemental Type Certificate (STC) SA02918CH, converting the engine to a turbo-normalized induction system. According to the maintenance records, the modified engine was installed on the accident airplane on August 7, 2012 (the tachometer time was not reported).

The electric boost pump was removed and replaced on April 5, 2014. After the fuel boost pump was replaced, the operator reported he attempted to start the engine after running the boost pump. The crankshaft/propeller rotated but came to an abrupt stop and could not be rotated through (a condition consistent with hydraulic lock). The operator reported that the starter could not rotate the propeller through on consecutive attempts. The operator left the aircraft and returned a couple days later with a battery charger. The engine started on the first attempt without need for battery charging. The operator continued to operate the airplane with no anomalies up until the time of the accident.

Hydraulic lock is most common in reciprocating engines and occurs when the amount of liquid introduced into the cylinder is greater than the available volume when the piston head is at the top of its stroke. It typically results in breaking or bending of the connecting rod, but can also damage the pistons and crankshaft. When an engine experiences hydraulic lock, damage to the engine connecting rods, crankshaft, piston heads, bearings, etc., might not be apparent without an engine inspection.

The engine was removed and taken to the Continental Motors facility in Mobile, Alabama, for examination. Holes were observed in the top of the crankcase. Disassembly of the engine revealed all of the crankshaft's connecting rod journals and connecting rods displayed signs of thermal distress and discoloration associated with engine operation without sufficient lubricating oil. There were no signs of an oil leak on any of the engine's components; however, the remote oil filter lines were removed by maintenance personnel for crate shipment and were not observed as part of the examination. Disassembly of the engine revealed that all six cylinder bays sustained mechanical damage. The damage observed was consistent with an engine oil starvation event. However, all bearing saddles were in place and there was no sign of bearing slip or matting surface fretting. All the oil galleys were free from obstructions. In addition to the oil starvation event, the No. 2 piston was fractured into numerous pieces. The face of the piston was fractured into multiple pieces. The No. 2 connecting rod, piston pin, and fractured piston pieces were sent to the NTSB Materials Laboratory for further evaluation.

The No. 2 piston pieces examined at the NTSB's Material Laboratory comprised the entire head and estimate 50% of the skirt. The majority of both pin bosses were also present. The entire upper compression ring was also received. Visual and magnified optical examinations revealed features and patterns indicative of overstress separation on all of the received piston fractures. Some of the pieces were darkly colored consistent with baked on oil deposit while other mating

pieces were clean. The crown of the piston was clean and had small valve dents corresponding to the intake and exhaust valve locations.

The No. 2 piston pin was intact, but the aluminum pin plugs were mechanically damaged. The No. 2 connecting rod was fractured through both main bearing straps. The fracture features were partially obscured by post fracture mechanical damage but the visible fracture features were consistent with bending overstress separations. The adjacent area of the rod displayed surface coloration and oxide formation consistent with exposure to very high temperatures. The bearing surface of the rod showed heavy flow and smearing of the material.

The engine and component examinations did not identify any anomalies that would have precipitated an oil starvation event and the subsequent engine failure.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA462 07/30/2017 1030 EDT Regis# N9682S Butler, PA Apt: Butler County/k W Scholter Fie BTP
Acft Mk/Mdl CHAMPION 7ECA-NO SERIES Acft SN 469 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-235-C1 Acft TT 2247 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: LARRY H. TEAL Opr dba: Aircraft Fire: NONE
AW Cert: STA

Summary

The pilot of the tailwheel-equipped airplane reported that, during the landing roll in crosswind conditions, while correcting to maintain the runway centerline, the "upwind wing lifted," and the airplane swerved off the runway to the left. During the runway excursion, the left wing lift strut impacted a runway sign.

The left wing sustained substantial damage.

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

An automated weather observation station at the accident airport reported, about the time of the accident, wind from 150ø at 3 knots. The pilot reported that the landing was on runway 8.

Cause Narrative

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

Events

1. Landing-landing roll - Other weather encounter
2. Landing-landing roll - Loss of control on ground
3. Landing-landing roll - Runway excursion
4. Landing-landing roll - Collision with terr/obj (non-CFIT)

Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Directional control-Not attained/maintained - C
2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
3. Environmental issues-Physical environment-Object/animal/substance-Sign/marker-Contributed to outcome
4. Environmental issues-Conditions/weather/phenomena-Wind-Crosswind-Effect on operation

Narrative

The pilot of the tailwheel-equipped airplane reported that, during the landing roll in crosswind conditions, while correcting to maintain the runway centerline, the "upwind wing lifted" and the airplane swerved off the runway to the left. During the runway excursion, the left wing lift strut impacted a runway sign.

The left wing sustained substantial damage.

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

An automated weather observation station, about the time of the accident, at the accident airport, reported wind from 150ø at 3 knots. The pilot reported that the landing was on runway 8.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# ERA17LA109	02/19/2017 1215 EST	Regis# N99716	Dawsonville, GA	Apt: N/a
Acft Mk/Mdl ERCOUPE 415-C		Acft SN 2339	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR C-75-12		Acft TT 1880	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: DAVID DUNN		Opr dba:		Aircraft Fire: NONE

Events

2. Landing - Collision during takeoff/land
3. Landing - Collision during takeoff/land

Narrative

On February 19, 2017, about 1215 eastern standard time, an Ercoupe 415-C, N99716, was substantially damaged during a precautionary landing to a road near Dawsonville, Georgia. The private pilot sustained minor injuries. Visual meteorological conditions prevailed, and a visual flight rules flight plan had been filed for the personal flight that was operated under the provisions of 14 Code of Federal Regulations Part 91. The flight departed from Jackson County Airport (JCA), Jefferson, Georgia, about 1100, with the intended destination of Barwick LaFayette Airport (9A5), LaFayette, Georgia.

According to the pilot, he had recently purchased the airplane and was flying it back to his home airport. In the day and a half prior to the accident flight, the pilot cleaned oil from underneath the airplane three separate times. When he examined the engine to determine where the oil was leaking from, he only noted oil coming from the crankcase breather tube. In addition, on the afternoon prior to the accident, he checked the oil level after a morning flight and noted the oil level was down "7 ounces" from 3.5 quarts.

Then, prior to the accident flight, he added 1/2 quart of oil to bring the oil level up between 3.5 and 4 quarts. About 30 minutes after he departed, the pilot noticed the oil pressure was dropping. He reduced engine power and turned the airplane toward Lee Gilmer Memorial Airport (GVL), Gainesville, Georgia. He watched the oil pressure continue decrease and decided to perform a precautionary landing on a road. During the landing, the left main landing gear and nose landing gear contacted a grass area to the left of the road. The airplane skidded across the road until it impacted a tree and came to rest in a ditch. The pilot then egressed from the airplane with minor injuries.

During an interview with a Federal Aviation Administration (FAA) inspector, the pilot stated that the oil pressure never went to zero and the engine was not running erratically when he made the decision to reduce engine power and perform a precautionary landing. The only indication of an issue was the loss of oil pressure and that there were no issues with oil temperature.

According to FAA records, the airplane was manufactured in 1955 and was powered by a Continental Motors C75 series, 75-horsepower engine. According to airplane maintenance logbooks, an annual inspection was performed on September 4, 2016, at a total time in service of 1,880 hours. In addition, the most recent recorded oil change occurred at that time and the oil screen was cleaned with no metallic debris noted. According to the engine manufacturer, the maximum engine oil sump capacity was 4.5 quarts. In addition, the minimum idling oil pressure was 10 psi and the oil pressure at cruise was between 30 psi and 35 psi.

Examination of the airplane by an FAA inspector revealed that both wings sustained substantial damage and fuel was noted leaking from the wings. Examination of the engine revealed a hole in the oil sump consistent with impact damage, and oil was noted coming from the crankcase breather tube. In addition, oil was noted on the bottom of the airplane from the nose to the empennage.

Additional examination of the engine was performed at a salvage facility in Griffin, Georgia, under the supervision of an FAA inspector. The oil level was noted at 3.5 quarts before the engine run. The engine was started with no hesitation and was able to maintain an oil pressure of 45 psi. The engine was operated for about 10 minutes at various power settings. To duplicate the loss of oil pressure, 1 quart of oil was added to the engine, bringing the level up to 4.5 quarts, and it was restarted. The engine operated, the oil pressure was noted as 45 psi, however, after about 5 minutes, the oil pressure began to decrease slowly. The oil pressure settled at 25 psi for a few seconds, then gradually increased back to 45 psi, and remained there until the engine was shutdown.

According to an academic paper written by an engineer at Massachusetts Institute of Technology titled "Engine Lubrication Oil Aeration," it stated that "if the oil level is too high there is a possibility of interaction between the sump oil and the rotating crankshaft that can cause air bubbles to become entrained in the oil and increase the aeration level."

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA566 09/30/2017 1530 CDT Regis# N260BA Hampshire, IL Apt: Sky Soaring 55LL
Acft Mk/Mdl LET L 23 SUPER BLANIK-NO Acft SN 928010 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending
Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: SKY SOARING INC Opr dba: Aircraft Fire: NONE
AW Cert: STN

Summary

The glider pilot reported that, while in the base leg in the traffic pattern, the glider was "fast and too high." He added that, during the landing, he landed long, the glider ran off the end of the runway, and the left wing struck a storage trailer parked on the left.

The glider sustained substantial damage to the left wing and fuselage.

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

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's improper landing flare and subsequent failure to maintain directional control during landing.

Events

1. Landing - Landing area overshoot
2. Landing - Collision with terr/obj (non-CFIT)

Findings - Cause/Factor

1. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
2. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Directional control-Not attained/maintained - C
3. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Landing flare-Not attained/maintained - C
4. Environmental issues-Physical environment-Object/animal/substance-Residence/building-Contributed to outcome

Narrative

The glider pilot reported that, during the base leg in the traffic pattern, the glider was "fast and too high." He added that, during the landing, he landed long, ran off the end of the runway, and the left wing struck a storage trailer parked on the left.

The glider sustained substantial damage to the left wing and fuselage.

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

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA498 08/21/2017 1345 CDT Regis# N2861K Perryville, MO Apt: Perryville Rgnl PCD
Acft Mk/Mdl LUSCOMBE 8-A Acft SN 5588 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL A&C65 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: RIPPEE, THOMAS E. Opr dba: Aircraft Fire: NONE
AW Cert: STN

Summary

The pilot of the tailwheel-equipped airplane reported that, during takeoff, he lost directional control. He added that the airplane veered to the left "abruptly," exited the runway, and struck a vertical approach slope indicator light. The right main landing gear collapsed, and the airplane nosed over.

The airplane sustained substantial damage to the empennage.

The pilot did not submit the National Transportation Safety Board Form 6120.1 Pilot/Operator Aircraft Accident/Incident Report.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's failure to maintain directional control during takeoff.

Events

1. Takeoff - Loss of control on ground
2. Takeoff - Abrupt maneuver
3. Takeoff - Runway excursion
4. Takeoff - Collision with terr/obj (non-CFIT)

Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Directional control-Not attained/maintained - C
2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
3. Environmental issues-Physical environment-Object/animal/substance-Runway/taxi/approach light-Contributed to outcome

Narrative

The pilot of the tailwheel-equipped airplane reported that, during takeoff, he lost directional control. He added that the airplane veered to the left "abruptly", exited the runway, and struck a vertical approach slope indicator (VASI) light. The right main landing gear collapsed and the airplane nosed over.

The airplane sustained substantial damage to the empennage.

The pilot did not submit the NTSB Form 6120.1 Pilot/ Operator Aircraft Accident/ Incident Report.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA18CA087A 12/18/2017 1120 AKS Regis# N61SR Willow, AK Apt: Willow UUO
Acft Mk/Mdl MAULE MX7-180A Acft SN 20016C Acft Dmg: SUBSTANTIAL Rpt Status: Prelim Prob Caus: Pending
Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 135
Opr Name: WARNER, WALT M. Opr dba: Aircraft Fire: NONE

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA560	09/27/2017 1245 EDT	Regis# N38633	Geneseo, NY	Apt: Geneseo D52
Acft Mk/Mdl PIPER J5A-UNDESIGNAT		Acft SN 5-1016	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR O-200			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: PETER BONNEAU		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Summary

The pilot reported that, during a hand propeller start, the tailwheel-equipped airplane was secured by having the passenger stand in front of the horizontal stabilizer. He added that, as he rotated the propeller with the throttle "cracked," the engine started, but "it ran fast enough" to break the passenger's hold. As the airplane began to move forward, he grabbed onto the lower right-wing strut in an attempt to enter the airplane. Subsequently, he let go, the left main landing gear ran over his shoulder, and the airplane stuck maintenance equipment.

The airplane sustained substantial damage to the right wing and fuselage.

During a telephone conversation with the National Transportation Safety Board investigator-in-charge, the pilot reported that the throttle was "cracked a little more than it should have been." He added that he did not use wheel chocks before attempting the start.

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

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's failure to properly secure the airplane before a hand propeller start, which resulted in the airplane moving forward and colliding with maintenance equipment.

Events

1. Standing-engine(s) start-up - Loss of control on ground
2. Standing-engine(s) start-up - Ground collision

Findings - Cause/Factor

1. Personnel issues-Action/decision-Action-Lack of action-Pilot - C
2. Aircraft-Aircraft handling/service-Parking/securing-(general)-Incorrect use/operation - C
3. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Powerplant parameters-Incorrect use/operation
4. Environmental issues-Physical environment-Object/animal/substance-Ground vehicle-Effect on operation

Narrative

The pilot reported that, during a hand propeller start, the tailwheel-equipped airplane was secured by having the passenger stand in front of the horizontal stabilizer. He added that, as he rotated the propeller with the throttle "cracked", the engine started, but "it ran fast enough" to break the passenger's hold. As the airplane began to move forward, he grabbed onto the lower right-wing strut in an attempt to enter the airplane. Subsequently, he let go, the left main landing gear ran over his shoulder, and the airplane stuck maintenance equipment.

The airplane sustained substantial damage to the right wing and fuselage.

During a telephone conversation with the NTSB investigator-in-charge, the pilot reported that, the throttle was "cracked a little more than it should have been." He added that, he did not use wheel chocks before attempting the start.

The pilot did not report that there were any preaccident mechanical malfunctions or failures with the airplane that would have precluded normal operation.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA527	09/06/2017	1130 AKD	Regis# N4088M	Kotzebue, AK	Apt: N/a
Acft Mk/Mdl PIPER PA 12-NO SERIES			Acft SN 12-3003S	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-360			Acft TT 4901	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 135
Opr Name: THOMAS CAMERON			Opr dba:		Aircraft Fire: NONE
					AW Cert: STN

Summary

The pilot reported that, while landing uphill on an unimproved gravel airstrip, the tailwheel-equipped airplane landed "smooth." He added that, while taxiing to the crest of the hill, a wind gust forced the airplane to become airborne. The airplane then drifted to the left, and he attempted to correct with full right aileron and maximum power. The airplane continued to bank left until "the wind forced the tail in a counter clockwise motion," which resulted in the airplane landing on the right main landing gear (MLG). Subsequently, the right MLG collapsed, and the right wing and right horizontal stabilizer struck the ground.

The airplane sustained substantial damage to the right wing lift strut and the right horizontal stabilizer and elevator.

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

The pilot reported the weather at the time of the accident to be wind from 360ø at 20 knots, gusting to 25 knots. The pilot landed on about a 360ø heading.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's failure to maintain directional control while landing on an unimproved airstrip in gusting wind conditions.

Events

1. Landing - Loss of control on ground
2. Landing - Attempted remediation/recovery
3. Landing - Landing gear collapse
4. Landing - Dragged wing/rotor/float/other

Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Directional control-Not attained/maintained - C
2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
3. Environmental issues-Conditions/weather/phenomena-Wind-Gusts-Effect on operation
4. Environmental issues-Physical environment-Runway/land/takeoff/taxi surface-(general)-Effect on equipment

Narrative

The pilot reported that, while landing uphill, on an unimproved gravel airstrip, the tailwheel-equipped airplane landed "smooth." He added that, while taxiing to the crest of the hill, a gust of wind forced the airplane to become airborne. The airplane then drifted to the left and he attempted to correct with full right aileron and maximum power. The airplane continued to bank left until "the wind forced the tail in a counter clockwise motion", which resulted in the airplane landing on the right main landing gear. Subsequently, the right main landing gear collapsed; and the right wing and right horizontal stabilizer struck the ground.

The airplane sustained substantial damage to the right wing lift strut and the right horizontal stabilizer and elevator.

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

The pilot reported the weather at the time of the accident to be, wind from 360ø at 20 knots, gusting to 25 knots. The pilot landed on about a 360ø heading.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA387	06/25/2017 1420 AKD	Regis# N2737M	Chickaloon, AK	Apt: N/a
Acft Mk/Mdl PIPER PA 12-NO SERIES		Acft SN 12-1141	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-235 SERIES		Acft TT 2402	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: WILLIAMS RONALD S		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Summary

The pilot in the tailwheel-equipped airplane reported that he attempted to land on a 600-ft-long turf surface. He overflew the landing site three times to assess its suitability.

During the touchdown, the airplane bounced, and the pilot initiated a go-around. He reduced the flaps to 10ø, turned the carburetor heat off, and applied full throttle; he could not remember the airspeed or trim position.

The airplane did not climb and touched down in a ravine just beyond the initial landing area. The airplane sustained substantial damage to the forward left side of the fuselage.

In the National Transportation Safety Board Pilot Aircraft Accident Report, the pilot reported that the accident could have been prevented if he had "More training in high altitude takeoffs and landings. More training in go-around techniques in bush planes."

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

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's improper landing flare on a turf runway, which necessitated a go-around during which he failed to establish a climb.

Events

1. Landing-flare/touchdown - Abnormal runway contact
2. Landing-aborted after touchdown - Attempted remediation/recovery
3. Initial climb - Collision during takeoff/land

Findings - Cause/Factor

1. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
2. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Climb rate-Not attained/maintained - C
3. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Descent/approach/glide path-Not attained/maintained - C
4. Environmental issues-Physical environment-Runway/land/takeoff/taxi surface-Soft surface-Effect on equipment

Narrative

The pilot in the tail wheel airplane reported that he attempted to land on a 600-ft. turf surface. He overflew the landing site three times to assess its suitability.

During the touchdown, the airplane bounced, and the pilot initiated a go-around. He reduced the flaps to 10ø, turned the carburetor heat off, and applied full throttle, but he could not remember the airspeed or trim position.

The airplane did not climb and touched down in a ravine just beyond the initial landing area. The airplane sustained substantial damage to the forward left side of the fuselage.

Per the National Transportation Safety Board Pilot Aircraft Accident Report, the pilot reported that the accident could have been prevented if he had, "More training in high altitude take offs and landings. More training in go-around techniques in bush planes."

The 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# GAA18CA087B 12/18/2017 1120 AKS Regis# N1562A Willow, AK Apt: Willow UUO
Acft Mk/Mdl PIPER PA 20-150 Acft SN 20-768 Acft Dmg: SUBSTANTIAL Rpt Status: Prelim Prob Caus: Pending
Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: EMERSON, BRYAN T. Opr dba: Aircraft Fire: NONE

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA416	07/18/2017 1820 EDT	Regis# N9807D	Breckenridge, MI	Apt: Ron's Private Strip PVT
Acft Mk/Mdl PIPER PA 22		Acft SN 22-6694	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320		Acft TT 2526	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: RONALD L. SCHULTZ		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Summary

The pilot reported that he was practicing short-field, touch-and-go landings on the private grass airstrip. The final leg of the approach was over a cornfield and a road perpendicular to the approach end of the airstrip.

During final, the main landing gear (MLG) struck corn stalks that were about 6-ft tall. The airplane then landed short and struck the road. The right MLG collapsed, and the airplane slid across the road and onto the grass airstrip. The airplane's nose dug into the grass and dirt, and the airplane nosed over. The airplane sustained substantial damage to the right-wing strut and the rudder.

The pilot reported that "this accident was pilot error" and that he believed that he became "fixated on the beginning of the grass and was oblivious to the height of the corn."

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

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's loss of situational awareness during the approach over a corn field, which resulted in collision with corn stalks.

Events

1. Approach - Collision with terr/obj (non-CFIT)
2. Landing-flare/touchdown - Landing gear collapse
3. Landing-flare/touchdown - Nose over/nose down

Findings - Cause/Factor

1. Personnel issues-Psychological-Perception/orientation/illusion-Situational awareness-Pilot - C
2. Environmental issues-Physical environment-Object/animal/substance-(general)-Effect on equipment - C
3. Environmental issues-Physical environment-Runway/land/takeoff/taxi surface-Soft surface-Contributed to outcome

Narrative

The pilot reported that he was practicing short-field, touch and go landings on the private grass airstrip. The final leg of the approach was over a cornfield and a road perpendicular to the approach end of the airstrip.

During final, the main landing gear struck corn stalks that were about 6-feet tall, the airplane landed short and struck the road. The right main landing gear collapsed, and the airplane slid across the road and onto the grass airstrip. The nose of the airplane dug into the grass and dirt, and the airplane nosed over.

The airplane sustained substantial damage to the right-wing strut and the rudder.

The pilot reported that, "This accident was pilot error" and that, "I believe that I fixated on the beginning of the grass and was oblivious to the height of the corn."

The 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# ERA17CA039	11/08/2016 1610 EST	Regis# N7682P	Houlton, ME	Apt: Houlton Intl HUL
Acft Mk/Mdl PIPER PA 24-250-250		Acft SN 24-2891	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-540 SERIES		Acft TT 5617	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: WESLEY TIDD		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Summary

The private pilot had recently purchased the airplane; he and a flight instructor were conducting a local familiarization flight. After about 1 hour of flying with the left inboard fuel tank selected, he returned to the airport traffic pattern and performed two additional takeoffs. While on the left downwind leg of the traffic pattern, the engine experienced a total loss of power. The pilot checked that the fuel pump was on while the flight instructor attempted to determine why the engine lost power. The flight instructor then took control of the airplane and turned toward the runway. The airplane contacted the tops of some trees and landed on uneven terrain covered with tall grass and brush about 500 ft short of the runway, which resulted in substantial damage to the firewall, fuselage, and wings. Before exiting the airplane, the pilot moved the fuel selector to the "off" position.

A Federal Aviation Administration inspector examined the wreckage and found that the left inboard fuel tank was absent of fuel, while the right inboard fuel tank was full. The pilot reported no preimpact mechanical malfunctions or failures with the airplane that would have precluded normal operation. When asked how the accident could have been prevented, the pilot stated, "switched to the other fuel tank."

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: A total loss of engine power due to fuel starvation, which resulted from the pilot's mismanagement of the available fuel.

Events

1. Approach-VFR pattern downwind - Fuel starvation
2. Approach-VFR pattern downwind - Loss of engine power (total)

Findings - Cause/Factor

1. Aircraft-Aircraft systems-Fuel system-Fuel selector/shutoff valve-Not used/operated - C
2. Personnel issues-Task performance-Use of equip/info-Use of equip/system-Pilot - C
3. Aircraft-Fluids/misc hardware-Fluids-Fuel-Fluid level - C
4. Aircraft-Fluids/misc hardware-Fluids-Fuel-Fluid management - C
5. Environmental issues-Physical environment-Terrain-(general)-Contributed to outcome

Narrative

The private pilot had recently purchased the airplane; he and a flight instructor were conducting a local familiarization flight. After about one hour of flying with the left inboard fuel tank selected, he returned to the airport traffic pattern and performed two additional takeoffs. While on the left downwind leg of the traffic pattern, the engine experienced a total loss of power. The pilot checked that the fuel pump was on while the flight instructor attempted to determine why the engine lost power. The flight instructor then took control of the airplane and turned towards the runway. The airplane contacted the tops of some trees and landed on uneven terrain covered with tall grass and brush about 500 feet short of the runway, resulting in substantial damage to the firewall, fuselage, and wings. Before exiting the airplane, the pilot moved the fuel selector to the off position. A Federal Aviation Administration inspector examined the wreckage and found that the left inboard fuel tank was absent of fuel, while the right inboard fuel tank was full. The pilot reported no preimpact mechanical malfunctions or failures with the airplane that would have precluded normal operation. When asked how the accident could have been prevented, the pilot stated, "switched to the other fuel tank."

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# ERA17CA218	06/29/2017 1300 EDT	Regis# N6977W	Honesdale, PA	Apt: Cherry Ridge N30
Acft Mk/Mdl PIPER PA 28-140-140		Acft SN 28-21175	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320 SERIES		Acft TT 6457	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: GREBLEIN CRAIG A		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Summary

The pilot reported that, during the landing flare, a wind gust "picked up" the right wing and "spun" the airplane to the left. The airplane veered off the left side of the runway and came to rest in a ditch.

The airplane sustained substantial damage to the forward portion of the fuselage. The pilot reported that there were no preaccident mechanical failures or malfunctions of the airplane that would have precluded normal operation. An automated weather observation system located about 13 nautical miles from the accident site reported that, about the time of the accident, a right 70ø, 8-knot crosswind wind prevailed.

Cause Narrative

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

Events

1. Landing-flare/touchdown - Loss of control on ground

Findings - Cause/Factor

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

Narrative

The pilot reported that during the landing flare a gust of wind "picked up" the right wing and "spun" the airplane to the left. The airplane veered off the left side of the runway and came to rest in a ditch. The airplane sustained substantial damage to the forward portion of the fuselage. The pilot reported that there were no preaccident mechanical failures or malfunctions of the airplane that would have precluded normal operation. An automated weather observation system located about 13 nautical miles from the accident site reported that about the time of the accident, a right 70ø crosswind wind at 8 knots prevailed.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# ERA17CA186 05/21/2017 1955 EDT Regis# N8304F Bristow, VA Apt: Manassas Rgnl/harry P Davis Fi HEF
Acft Mk/Mdl PIPER PA 28-181 Acft SN 28-8390012 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-360-A4M Acft TT 6204 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: DULLES AVIATION INC Opr dba: Aircraft Fire: NONE
AW Cert: STN

Summary

The flight instructor was working with the private pilot on his flight review. Before the flight, the pilot checked the fuel and observed that the fuel level in both fuel tanks was below the tabs and that the right fuel tank had less fuel in it than the left fuel tank. After departing and maneuvering in the local area, the pilot and the flight instructor returned to the airport, landed, then taxied back for another takeoff. After completing two traffic pattern circuits, on the third takeoff, the engine stopped producing power at 800 ft mean sea level (msl) on the upwind leg of the traffic pattern. The pilot lowered the airplane's nose, and the engine started running again. The flight instructor then took over control of the airplane as they started on the right crosswind leg for the runway, and at 900 ft msl, the engine lost power again. After deciding that the airplane did not have sufficient altitude to reach the runway, the flight instructor advised the air traffic control tower that they were going to attempt a landing in a field near the airport. She then checked the mixture, throttle, and ignition, without results, but neither she nor the private pilot attempted to switch from the right fuel tank to the left fuel tank. During the off-airport landing, the airplane went through an electric fence and spun around about 180°. The nose landing gear sheared off, which resulted in substantial damage to the airframe. Examination of the engine revealed no evidence of any preimpact mechanical failures or malfunctions that would have precluded normal operation. Examination and draining of the fuel system revealed that the fuel strainer bowl, the line from the fuel strainer to the carburetor, and the carburetor float bowl were absent of fuel. The right fuel tank also contained only about 1 pint of fuel, whereas the left fuel tank contained about 3 gallons of fuel. Review of flight school records revealed that the airplane had flown 4.7 hours since it was last refueled. When asked, the flight instructor advised that she had not observed the pilot as he performed his preflight inspection, did not know when the airplane had last been refueled, and did not remember asking the pilot about the fuel quantity before they departed.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The flight instructor's and pilot's mismanagement of the available fuel, which resulted in exhaustion of the fuel in the selected fuel tank and a subsequent total loss of engine power.

Events

1. Prior to flight - Preflight or dispatch event
2. Approach-VFR pattern downwind - Loss of engine power (total)
3. Emergency descent - Off-field or emergency landing
4. Landing - Collision with terr/obj (non-CFIT)

Findings - Cause/Factor

1. Aircraft-Fluids/misc hardware-Fluids-Fuel-Fluid management - C
2. Personnel issues-Task performance-Use of equip/info-Use of equip/system-Pilot - C
3. Personnel issues-Task performance-Use of equip/info-Use of equip/system-Instructor/check pilot - C
4. Personnel issues-Action/decision-Info processing/decision-Decision making/judgment-Pilot
5. Personnel issues-Action/decision-Info processing/decision-Decision making/judgment-Instructor/check pilot
6. Environmental issues-Physical environment-Object/animal/substance-Tree(s)-Contributed to outcome

Narrative

The flight instructor was working with the private pilot on his flight review. Prior to the flight, the pilot checked the fuel and observed that the fuel level in both fuel tanks was below the tabs, and that the right fuel tank had less fuel in it than the left fuel tank. After departing, maneuvering in the local area, the pilot and the flight instructor returned to the airport, landed, then taxied back for another takeoff. After completing two traffic pattern circuits, on the third takeoff the engine stopped producing power at 800 ft. msl, on the upwind leg of the traffic pattern. The private pilot lowered the airplane's nose and the engine started running again. The flight instructor then took over control of the airplane as they started on the right crosswind leg for the runway, and at 900 ft. msl, the engine lost power again. After deciding that the airplane did not have enough altitude, to make the runway, she advised the air traffic control tower that they were going to attempt a landing in a field near the airport. She then checked the mixture, throttle, and ignition, without result, but neither she nor the private pilot, attempted to switch from the right fuel tank to the left fuel tank.

During the off-airport landing, the airplane went through an electric fence, spun around about 180 degrees. The nose landing gear sheared off, resulting in substantial damage to the airframe. Examination of the engine revealed no evidence of any preimpact mechanical failures or malfunctions that would have precluded normal operation. Examination and draining of the fuel system, revealed that the fuel strainer bowl, the line from the fuel strainer to the carburetor, and the carburetor float bowl were absent of fuel. The right fuel tank also contained only about 1 pint of fuel, while the left fuel tank contained about 3 gallons of

fuel. Review of flight school records revealed that the airplane had flown 4.7 hours since it was last refueled. When asked, the flight instructor advised that she had not observed the private pilot as he performed his preflight inspection, did not know when the airplane had last been refueled, and did not remember asking the private pilot about the fuel quantity before they departed.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA565	09/26/2017	1000 AKD	Regis# N109T	Holy Cross, AK	Apt: N/a
Acft Mk/Mdl PIPER PA18-150			Acft SN 18-2223	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320-B2B			Acft TT 9208	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: BRETT HARRIS			Opr dba: ALASKA PIKE SAFARIS		Aircraft Fire: NONE
					AW Cert: STN

Summary

The pilot reported that, during the landing roll on an unimproved airstrip, the tailwheel-equipped airplane "hit a hole" and came to rest inverted. The airplane sustained substantial damage to the empennage. The pilot reported that there were no preaccident mechanical failures or malfunctions with the airplane that would have precluded normal operation.

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's selection of unsuitable terrain for landing, which resulted in a nose-over.

Events

1. Landing - Nose over/nose down

Findings - Cause/Factor

1. Personnel issues-Action/decision-Info processing/decision-Decision making/judgment-Pilot - C
2. Environmental issues-Physical environment-Runway/land/takeoff/taxi surface-(general)-Decision related to condition - C
3. Environmental issues-Physical environment-Terrain-Rough terrain-Effect on operation - C

Narrative

The pilot reported that, during the landing roll, on an unimproved airstrip, the tailwheel-equipped airplane "hit a hole" and came to rest inverted.

The airplane sustained substantial damage to the empennage.

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# GAA18CA090	12/18/2017	1300 AKS	Regis# N4805Z	Skwentna, AK	Apt: N/a
Acft Mk/Mdl PIPER PA22-108			Acft SN 22-8372	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
				Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: SAM BREWER			Opr dba:		Aircraft Fire: NONE

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# ERA17LA057	11/23/2016 1803 EST	Regis# N41565	Columbus, GA	Apt: Columbus Airport CSG
Acft Mk/Mdl PIPER PA28-140		Acft SN 28-7425260	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320-E3D		Acft TT 6118	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: DAVID A. HALL		Opr dba:		Aircraft Fire: NONE
				AW Cert: NON

Events

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

Narrative

On November 23, 2016, at 1803 eastern standard time, a Piper PA-28-140, N41565, was substantially damaged during a forced landing after takeoff from Columbus Airport (CSG), Columbus, Georgia. The flight instructor and a private pilot receiving instruction were not injured. The airplane was registered to a corporation and was operated by the flight instructor under the provisions of 14 Code of Federal Regulations Part 91 as an instructional flight. Night, visual meteorological conditions prevailed at the time, and no flight plan was filed. The local flight was originating at the time of the accident.

The flight instructor reported that ground operations were normal, and 18 gallons of fuel were observed in each wing tank. The engine started normally, and the magneto checks were within limits. During the initial climb after takeoff, about 1 mile past the departure end of runway 24, the engine vibrated and experienced a total loss of power. The flight instructor assumed the controls and confirmed the fuel selector position, checked the fuel boost pump on, and turned on the carburetor heat. The pilot turned off the carburetor heat after the engine did not respond. The engine did not regain power and the airplane continued straight-ahead until it settled into the trees. The airplane fell for about 4-5 seconds and then came to an abrupt stop. After securing the engine and fuel system, the pilots exited the airplane and were met by first responders.

An inspector with the Federal Aviation Administration (FAA) responded to the accident site and examined the wreckage. Structural damage to the wings and fuselage was confirmed. Initial examination of the engine and fuel system did not reveal evidence of a mechanical malfunction. The fuel tanks were breached during the impact sequence and contained no fuel. The fuel strainer was dry and free of contaminants.

Follow-up examinations of the engine were performed by the FAA inspector and the NTSB investigator-in-charge. Impact damage to the forward section of the engine prevented rotation of the crankshaft; therefore, internal continuity of the engine was not confirmed. A visual examination of the exterior of the engine revealed no holes in the crankcase or evidence of crankcase rupture. The engine contained oil.

The carburetor was removed for examination. The accelerator pump operated normally and squirted fuel. The throttle linkage was intact. The carburetor inlet fuel screen was clean and unobstructed. The carburetor bowl was free of contamination.

The top spark plugs were removed for examination. The No. 2 sparkplug exhibited normal wear when compared to a Champion Check-A-Plug chart. The electrode was coated with a thin layer of black soot. The other plugs were normal in wear and color. The ignition leads were undamaged. The magnetos remained securely attached to the engine. Visual examination of the interior of the cylinders showed normal piston deposits and no damage.

The recorded weather at CSG, at 1751, included calm wind, temperature 66ø F, and dew point 46ø F. Review of an FAA Carburetor Icing Chart for the given temperature and dew point revealed that the conditions were conducive to serious icing at glide power.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# ERA17LA005	10/01/2016 1020 CDT	Regis# N499TG	Laurel, MS	Apt: Hesler-noble Field LUL
Acft Mk/Mdl PIPER PA28-140		Acft SN 28-7425318	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320-E3D		Acft TT 6366	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: PRICE MICHAEL S		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

1. Approach-VFR go-around - Loss of engine power (total)

Narrative

On October 1, 2016, about 1020 central daylight time, a Piper PA28-140, N499TG, was substantially damaged during a forced landing after a total loss of engine power while executing a go-around at the Hesler-Noble Airport (LUL), Laurel, Mississippi. The student pilot, who also the registered owner/operator of the airplane was not injured. No flight plan was filed for the flight that originated at the Hattiesburg-Laurel Regional Airport (PIB), Hattiesburg-Laurel, Mississippi, about 1000. Visual meteorological conditions prevailed for the personal flight conducted under the provisions of 14 Code of Federal Regulations Part 91.

The student pilot stated that he departed with full fuel and flew to LUL to practice takeoffs and landings. Before attempting the first landing, he checked that the mixture was full-rich, and the electric fuel pump and carburetor heat were turned on. The student pilot reduced power and extended the flaps; however, he realized the airplane was too high and elected to go-around. The student pilot applied full power, retracted the flaps and turned off the carburetor heat. At that point, the engine started running rough and experienced a total loss of power. The student pilot turned the carburetor heat back on, re-checked that the electric fuel pump was still on, and switched fuel tanks, but engine power was not restored. The student pilot made a forced landing to a field adjacent to the airport. During the landing roll, the left main landing gear entered a large hole resulting in substantial damage to the left wing and an engine mount. The left main landing gear and nose-wheel were also damaged.

Postaccident accident examination of the airplane revealed sufficient fuel in each wing tank. Fuel samples taken from each wing and gascolator were absent of water and debris. An attempt was made to start the engine on the airframe utilizing the airplane's own fuel system; however, when the fuel boost pump was turned on to start the engine, it was not registering any pressure and an odor of fuel was noted. Further examination revealed the carburetor had flooded and was leaking due to a stuck float. The carburetor was removed and disassembled. No anomalies were noted with the needle and seat and there were no signs of the float rubbing or binding. The carburetor was reassembled and reinstalled on the engine. When the fuel boost pump was turned back on, it registered a pressure of 7 psi. The engine was then started and ran to a maximum 1,800 rpm due to the broken engine mount. The magnetos and carburetor heat were tested and no anomalies were noted.

The student pilot reported a total of 90 hours, of which, 60 hours were in the Piper PA-28-140. His last Federal Aviation Administration (FAA) third-class medical was issued on September 30, 2016.

The student pilot also reported that the engine was manufactured in 1978. At the time of the accident, the engine and carburetor had been operated for about 1,520 total hours.

Weather reported at the LUL, at 1035, was calm wind, clear skies, and visibility greater than 10 miles. The temperature was 68 degrees F and the dew point was 59 degrees F.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA487	08/14/2017 758 MST	Regis# N915PA	Chandler, AZ	Apt: Chandler Muni CHD
Acft Mk/Mdl PIPER PA28-181		Acft SN 2843304	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-360-A4M		Acft TT 18932	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: TRANSPAC AVIATION ACADEMY		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Summary

The solo student pilot reported that, after completing three takeoffs and landings unassisted with his flight instructor, he took off for his first solo. He added that, during the first solo landing, the airplane "floated" in ground effect for about 4 to 5 seconds, and he added rudder to align the airplane with the runway centerline. He further added that the airplane's nosewheel was "not straight when it touched [down]" on the runway. Subsequently, the student pilot applied brake to maintain directional control and then applied power to abort the landing, but the airplane veered off the runway to the right. He then reduced power to idle and stopped the airplane in the grass next to the runway and awaited instructions from air traffic control.

The left wing sustained substantial damage.

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

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The student pilot's failure to maintain directional control during landing.

Events

1. Landing-landing roll - Loss of control on ground
2. Landing-landing roll - Attempted remediation/recovery
3. Landing-landing roll - Runway excursion

Findings - Cause/Factor

1. Personnel issues-Task performance-Use of equip/info-Aircraft control-Student/instructed pilot - C
2. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Directional control-Not attained/maintained - C

Narrative

The solo student pilot reported that, after completing three takeoffs and landings unassisted with his flight instructor, he took off for his first solo. He added that, during the first landing, the airplane "floated" in ground effect for about 4 to 5 seconds, and he added rudder to align the airplane with the runway centerline. He further added that the airplane's nose wheel was "not straight when it touched [down]" on the runway. Subsequently, the student pilot applied brake to maintain directional and then applied power to abort the landing, but the airplane veered off the runway to the right. He then reduced power to idle and stopped the airplane in the grass next the runway and awaited instructions from air traffic control.

The left wing sustained substantial damage during the runway excursion.

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# GAA17CA446	07/16/2017 1330 EDT	Regis# N41827	Franklin, VA	Apt: Franklin Muni-john Beverly Ros FKN
Acft Mk/Mdl PIPER PA46-350P		Acft SN 4636308	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING TIO-540AE2A		Acft TT 2603	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: DW MILLER CONSTRUCTION INC		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Summary

The pilot reported that, during a day, visual meteorological conditions flight, just after touchdown, a deer jumped out onto the runway. He added that he made a "hard left turn" into soft grass next to the runway, and as the airplane was almost stopped, the nosewheel collapsed.

The engine mounts and firewall sustained substantial damage.

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

The Federal Aviation Administration Chart Supplement for the airport stated, in part: "Deer on and [in the vicinity of] airport."

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: A collision with a deer during the landing roll, which resulted in a runway excursion.

Events

1. Landing-flare/touchdown - Wildlife encounter (non-bird)
2. Landing-landing roll - Runway excursion
3. Landing-landing roll - Landing gear collapse

Findings - Cause/Factor

1. Environmental issues-Physical environment-Object/animal/substance-Animal(s)/bird(s)-Ability to respond/compensate - C
2. Environmental issues-Physical environment-Runway/land/takeoff/taxi surface-Soft surface-Contributed to outcome

Narrative

The pilot reported that, during a day visual metrological condition flight, just after touch down, a deer jumped out onto the runway. He added that he made a "hard left turn," into soft grass next to the runway, and as the airplane was almost stopped, the nose wheel collapsed.

The engine mounts and firewall sustained substantial damage.

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

The Federal Aviation Administration Chart Supplement for the airport stated in part: "Deer on and invof [in the vicinity of] airport."

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# CEN18LA038	11/26/2017 1430 CST	Regis# N11188	Palmyra, WI	Apt: Palmyra Muni 88C
Acft Mk/Mdl PIPER / LAUDEMAN J3C 65		Acft SN 9400L	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR C-85-12		Acft TT 1205	Fatal 0 Ser Inj 2	Flt Conducted Under: FAR 091
Opr Name: FLYING HAWKS INC		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

1. Approach-VFR pattern downwind - Loss of engine power (total)
-

Narrative

On November 26, 2017, about 1430 central standard time, a Piper J3C-65 airplane, N11188, was substantially damaged during a forced landing at Palmyra Municipal Airport (88C), Palmyra, Wisconsin. The airline transport pilot and passenger were seriously injured. The airplane was registered to and operated by Flying Hawks Inc. 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 without a flight plan about 1400.

The pilot stated that he performed a normal takeoff and then flew west to a nearby area to practice maneuvers. After completing these maneuvers and returning to 88C, the pilot noticed a loss of engine power while on downwind to Runway 27. The pilot and passenger attempted unsuccessfully to restore engine power and then turned the airplane toward Runway 27. During the forced landing, the airplane struck a tree about 1/3 mile prior to the runway threshold and nosed over.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# ERA17LA168	04/27/2017 1330 EDT	Regis# N728CB	Newton, NC	Apt: N/a
Acft Mk/Mdl ROBINSON R44-II		Acft SN 12899	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-540-AE1A5		Acft TT 1917	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: CHESAPEAKE BAY HELICOPTERS		Opr dba:		Aircraft Fire: NONE

Events

1. Maneuvering-low-alt flying - Loss of tail rotor effectiveness

Narrative

On April 27, 2017, about 1330 eastern daylight time, a Robinson R44 II, N728CB, operated by Chesapeake Bay Helicopters, was substantially damaged during a collision with terrain while maneuvering near Newton, North Carolina. The commercial pilot and crewmember sustained minor injuries. The local aerial observation flight was conducted under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed, and a company flight plan was filed for the flight that originated from Concord Regional Airport (JQF), Concord, North Carolina, about 1225.

The pilot reported that he was performing a pipeline patrol at 500 ft above ground level and an airspeed of 70 knots. During the patrol, the crew observed a right-of-way infraction and circled the location at the same airspeed and altitude. While extending the circling pattern, the pilot felt a shudder in the controls while at the same time, the nose of the helicopter yawed right and the helicopter began to spin. He immediately lowered the nose in an attempt to increase forward motion, but the rate of spin increased. He then attempted to set up for an autorotation and avoid residences and utility wires. The helicopter subsequently impacted the ground and the pilot was able to shut down the engine and exit the helicopter.

The crewmember reported that while on pipeline patrol, they circled to photograph construction work. While circling, the helicopter lost control and spun two or three times before impacting the ground.

Examination of the wreckage revealed substantial damage to the helicopter. Tail rotor driveshaft continuity was confirmed from the tail rotor blades to the main rotor. Continuity was also confirmed from the left anti-torque pedal to the tail rotor. A section of right anti-torque pedal control tube was found bent and separated. The separated section of control tube was retained for metallurgical examination, which revealed that the separation was consistent with overstress due to impact forces. No preimpact mechanical malfunctions were identified.

The helicopter's most recent 100-hour inspection was completed on March 10, 2017. At that time, the airframe and engine had accumulated 1,873.6 total hours of operation. The helicopter had flown an additional 43.6 hours from the time of the inspection, until the accident flight.

The recorded wind at an airport located about 10 miles northwest of the accident site, at 1253, was from 190° at 8 knots.

Review of GPS data provided by the operator revealed that after completion of the first left circuit and the beginning of the second left circuit, the helicopter's ground speed slowed to about 1 mph at a GPS altitude of 1,223 ft (about 500 ft above ground level). At that time, the GPS track was indicating a northerly course, with an approximate 8-knot tailwind. The track subsequently indicated transition from a left circuit to a right turn.

The Federal Aviation Administration issued advisory circular (AC)-90-95, Unanticipated Right Yaw in Helicopters during February 1995. The AC stated that the loss of tail rotor effectiveness (LTE) was a critical, low-speed aerodynamic flight characteristic which could result in an uncommanded right yaw rate that did not subside of its own accord and, if not corrected, could result in the loss of aircraft control. It also stated, "LTE is not related to a maintenance malfunction and may occur in varying degrees in all single main rotor helicopters at airspeeds less than 30 knots."

Paragraph 9 of the AC covered reducing the onset of LTE. It stated:

"In order to reduce the onset of LTE, the pilot should: ... c. When maneuvering between hover and 30 knots: (1) Avoid tailwinds. If loss of translational lift occurs, it will result in an increased high power demand and an additional anti-torque requirement. (2) Avoid out of ground effect (OGE) hover and high power demand situations, such as low speed downwind turns. (3) Be especially aware of wind direction and velocity when hovering in winds of about 8 - 12 knots (especially OGE). There are no strong indicators to the pilot of a reduction of translation lift... (6) Stay vigilant to power and wind conditions."

Paragraph 10 of the AC addressed recovery techniques. It stated:

"a. If a sudden unanticipated right yaw occurs, the pilot should perform the following:

(1) Apply full left pedal. Simultaneously, move cyclic forward to increase speed. If altitude permits, reduce power. (2) As recovery is effected, adjust controls for normal forward flight. b. Collective pitch reduction will aid in arresting the yaw rate but may cause an increase in the rate of descent. Any large, rapid increase in collective to prevent ground or obstacle contact may further increase the yaw rate and decrease rotor rpm. c. The amount of collective reduction should be based on the height above obstructions or surface, gross weight of the aircraft, and the existing atmospheric conditions. d. If the rotation cannot be stopped and ground contact is imminent, an autorotation may be the best course of action. The pilot should maintain full left pedal until rotation stops, then adjust to maintain heading."

Additionally, Robinson Safety Notice SN-34 addressed aerial survey and photography flights, and provided cautions about such flights below 30 knots airspeed.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA376	06/30/2017 1356 PDT	Regis# N8361N	Kelso, WA	Apt: N/a
Acft Mk/Mdl ROBINSON HELICOPTER R22		Acft SN 2901	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320		Acft TT 7725	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: HILLSBORO AERO ACADEMY		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Summary

The flight instructor reported that he was providing instruction to a student pilot in the helicopter during a cross-country flight. During the flight, the instructor asked the student to perform a "land as soon as possible" emergency procedure.

The student pilot approached the hillside landing site from the south. The wind was out of the west about 8 to 10 knots, which resulted in a left crosswind for the landing. The student pilot reported that, during the approach, the instructor told him he "needed more left pedal." The helicopter descended and decelerated below effective translational lift (ETL). According to the Federal Aviation Administration's (FAA) 8083-21A, the Helicopter Flying Handbook, pg. 2-20, para. 2, ETL occurs between 16 and 24 knots.

The student pilot reported that, "We descended below ETL, maybe 10 feet off the ground and still descending. By this point we were what I perceived to be straight, and the instructor took the controls. From what I could tell, he used forward cyclic and left pedal immediately. It was too late."

The flight instructor reported that, "As we came closer to our landing spot and began to slow down, I felt that the nose of the helicopter was not pointed far enough into the wind (we were out of trim). I took the flight controls right as we slowed below ETL. The helicopter started to develop a hard right yaw and I immediately gave full forward cyclic."

The helicopter developed an uncontrollable rapid right yaw and spun about two revolutions. The helicopter touched down on the skids and rolled onto its left side. The helicopter sustained substantial damage to the tail rotor drive shaft and the main and tail rotor blades.

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

According to the FAA's Helicopter Flying Handbook (FAA-8083-21A), the Helicopter Instructor's Flying Handbook (FAA-8083-4), and Advisory Circular (AC) 90-95, "Unanticipated Rapid Right Yaw in Helicopters," the loss of tail rotor effectiveness (LTE) is a "critical, low-speed aerodynamic flight characteristic which can result in an uncommanded rapid yaw rate which does not subside of its own accord and, if not corrected, can result in the loss of aircraft control." AC 90-95 defined flight characteristics and wind azimuths associated with LTE and stated that the tail rotor vortex ring state occurs during left crosswinds when the relative wind azimuth is from 210° to 330° and that "winds within this region will result in the development of the vortex ring state of the tail rotor." AC 90-95 also stated that, for all wind azimuths, the loss of ETL is associated with LTE as it "results in increased power demands and additional anti-torque requirements."

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The flight instructor's delayed remedial action, which resulted in a loss of helicopter control due to a loss of tail rotor effectiveness.

Events

1. Landing - Loss of tail rotor effectiveness
2. Landing - Collision with terr/obj (non-CFIT)

Findings - Cause/Factor

1. Personnel issues-Action/decision-Action-Delayed action-Instructor/check pilot - C
2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Instructor/check pilot - C
3. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Prop/rotor parameters-Capability exceeded - C

Narrative

The helicopter flight instructor reported that he was providing instruction to a student pilot during a cross country flight. During the flight, the instructor asked the student to perform a land as soon as possible emergency procedure.

The student pilot approached the hillside, landing site from the south. The wind was out of the west and the helicopter descended and decelerated below effective translational lift (ETL). According to the FAA 8083-21A, The Helicopter Flying Handbook, pg. 2-20, para. 2, ETL occurs between 16 and 24 knots.

The student pilot reported that, "We descended below ETL, maybe 10 feet off the ground and still descending. By this point we were what I perceived to be

straight, and the instructor took the controls. From what I could tell, he used forward cyclic and left pedal immediately. It was too late."

The instructor reported that, "I took the flight controls right as we slowed below ETL. The helicopter started to develop a hard right yaw and I immediately gave full forward cyclic."

The helicopter developed an uncontrollable rapid right yaw and spun about two revolutions. The helicopter touched down on the skids and rolled on to its left side. The helicopter sustained substantial damage to the tail rotor drive shaft, the main and tail rotor blades.

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

According to the Federal Aviation Administration Helicopter Flying Handbook (FAA-8083-21A) and The Helicopter Instructors Flying Handbook (FAA-8083-4) and Advisory Circular (AC) 90-95 Unanticipated rapid right yaw:

Loss of Tail Rotor Effectiveness (LTE) is a critical; low-speed aerodynamic flight characteristic which can result in an uncommanded rapid yaw rate which does not subside of its own accord and, if not corrected, can result in the loss of aircraft control.

AC 90-95 Section 7.d.3. (page 7) defines flight characteristics and wind azimuths associated with LTE. It states that tail rotor vortex ring state occurs when the wind is out of (210° to 330°).

1. Winds within this region will result in the development of the vortex ring state of the tail rotor.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA406	07/10/2017 1245 UTC	Regis# N2336J	Wilkes-barre, PA	Apt: Wilkes-barre Wyoming Valley WBW
Acft Mk/Mdl ROBINSON HELICOPTER R22-BETA	Acft SN 2168	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual	Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320-J2A	Acft TT 6973	Fatal 0	Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: VALLEY AVIATION INC	Opr dba: VALLEY AVIATION	Aircraft Fire: NONE	AW Cert: STN	

Summary

The flight instructor reported that he was teaching his student to hover in the helicopter. The helicopter was in a 2-ft hover and began drifting to the left. The left rear skid contacted the ground, and the helicopter rolled left. The student pilot pulled up on the collective, and the instructor attempted to push the collective down. A dynamic rollover occurred, and the helicopter rolled onto its left side.

The flight instructor reported that wind gusts may have been a factor in the accident.

According to the METAR that the flight instructor was monitoring about the time of the accident, the wind was from 210ø at 8 knots. The METAR reported no wind gusts and no convective activity that day.

The helicopter sustained substantial damage to the tailboom and the main rotor system.

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

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The flight instructor's delayed remedial action to maintain helicopter altitude during hover flight instruction, and the student pilot's incorrect collective application, which resulted in a dynamic rollover.

Events

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

Findings - Cause/Factor

1. Personnel issues-Action/decision-Action-Delayed action-Instructor/check pilot - C
2. Personnel issues-Action/decision-Action-Incorrect action selection-Student/instructed pilot - C
3. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Altitude-Not attained/maintained - C

Narrative

The helicopter flight instructor reported that he was teaching his student to hover.

The helicopter was at a 2-foot hover and began drifting to the left. The left rear skid contacted the ground and a left roll ensued. The student pilot pulled up on the collective, and the instructor attempted to push the collective down. A dynamic rollover occurred, and the helicopter rolled onto its left side.

The flight instructor reported that wind gusts may have been a factor in the accident.

According to the METAR that was being monitored by the flight instructor about the time of the accident, the wind was from 210ø at 8 knots. No wind gusts and no convective activity was reported via METAR that day.

The helicopter sustained substantial damage to the tailboom and the main rotor system.

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

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# WPR18LA041	11/30/2017 1540 PST	Regis# N47WH	Truckee, CA		
Acft Mk/Mdl ROBINSON HELICOPTER COMPANY		Acft SN 3525	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim	Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-360 SERIES			Fatal 0	Ser Inj 2	Flt Conducted Under: FAR 091
Opr Name: TUMBLEWEED LEASING CO INC		Opr dba:			Aircraft Fire: NONE

Events

1. Autorotation - Fuel starvation

Narrative

On November 30, 2017, at 1540 Pacific standard time, a Robinson Helicopter Company R22, N47WH, landed hard and came to rest on its side at the Truckee-Tahoe Airport (TRK), Truckee, California. The helicopter was operated by the owner under the provisions of 14 Code of Federal Regulations Part 91. The flight instructor and commercial helicopter-rated pilot/owner, received serious injuries. The helicopter sustained substantial damage to the fuselage and tail boom. Visual meteorological conditions prevailed for the local area training flight and no flight plan had been filed.

Witnesses at the airport had watched the helicopter practicing pattern work east of runway 29. They saw the helicopter turn onto its base leg at a normal altitude and then enter a rapid descent toward the runway. The witnesses observed the helicopter flare about 30 yards from the runway and impact the ground, tail rotor first, followed by the main body of the helicopter. The main rotor blades sheared the tail boom and the helicopter came to rest on its side. One of the witnesses is a airplane flight instructor, but thought the helicopter was possibly executing an autorotation.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA398	07/07/2017 1615 CDT	Regis# N62FA	Pocahontas, IL	Apt: N/a
Acft Mk/Mdl ROBINSON HELICOPTER COMPANY R44	Acft SN 11176	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual	Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-540 SER	Acft TT 1858	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 137	
Opr Name: JMX HELICOPTERS LLC	Opr dba:	Aircraft Fire: NONE		AW Cert: SPR

Summary

The pilot reported that the helicopter was positioned on top of a platform that was located on top of the agricultural chemical truck while he was waiting for the ground crew to reload the helicopter. During the reload, he misinterpreted the ground crew members hand and arm signal and initiated the takeoff. He quickly realized that the filler hose was still attached when the helicopter yawed right and simultaneously banked left.

He attempted a right pedal turn to avoid tail rotor contact with the truck, and he tried to position the helicopter as far from the truck as possible. However, when the helicopter descended, the main rotor blades struck the truck, and the helicopter came to rest on its left side. The helicopter sustained substantial damage to the tail rotor drive system and the main rotor system.

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

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The helicopter pilot's miscommunication with the ground crewmember during reloading operations, which resulted in a takeoff with the filler hose attached to the helicopter and subsequent impact with a truck.

Events

1. Standing-engine(s) operating - Aircraft loading event
2. Standing-engine(s) operating - Comm system mal/failure
3. Takeoff - Attempted remediation/recovery
4. Takeoff - Collision with terr/obj (non-CFIT)

Findings - Cause/Factor

1. Personnel issues-Task performance-Communication (personnel)-Accuracy of communication-Pilot - C
2. Personnel issues-Action/decision-Action-Incorrect action selection-Pilot - C
3. Environmental issues-Physical environment-Object/animal/substance-Ground vehicle-Effect on operation - C

Narrative

The helicopter pilot reported that the helicopter was positioned on top of a platform that was located on top of the agricultural chemical truck. And he was waiting for the ground crew to reload the helicopter.

During the reload, he misinterpreted the ground crew members hand and arm signal, and initiated the takeoff. He quickly realized that the filler hose was still attached when the helicopter yawed right and simultaneously banked left.

He attempted a right pedal turn to avoid tail rotor contact with the truck, and he tried to position the helicopter as far from the truck as possible. However, when the helicopter descended, the main rotor blades struck the truck and the helicopter came to rest on its left side. The helicopter sustained substantial damage to the tail rotor drive system, and the main rotor system.

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

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA18CA089 12/13/2017 1600 EST Regis# N441ML Heath, OH Apt: Newark-heath VTA
Acft Mk/Mdl ROBINSON HELICOPTER COMPANY Acft SN 10465 Acft Dmg: SUBSTANTIAL Rpt Status: Prelim Prob Caus: Pending
Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: MARK P. CHEPLOWITZ Opr dba: Aircraft Fire: NONE

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA383	07/04/2017 1545 EDT	Regis# N3025J	Easton, PA	Apt: Braden Airpark N43
Acft Mk/Mdl ROBINSON HELICOPTER COMPANY	Acft SN 11801	Acft Dmg: SUBSTANTIAL	Fatal 0	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-540-AE1A5		Ser Inj 0	Flt Conducted Under: FAR 091	
Opr Name: CARL TOLINO	Opr dba:		Aircraft Fire: NONE	
			AW Cert: STN	

Summary

The helicopter pilot reported that, during liftoff, the tail rotor chip warning light illuminated "and distracted me for a moment." The helicopter drifted to the right, the right skid contacted the ground, and the helicopter rolled over onto its right side. The helicopter sustained substantial damage to the tail rotor drive shaft, the horizontal stabilizer, and the main rotor blades.

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

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's distraction during liftoff due to the tail rotor chip warning light illuminating, which resulted in the helicopter drifting right, the skid touching down, and a dynamic roll-over.

Events

1. Takeoff - Dynamic rollover
2. Takeoff - Collision during takeoff/land
3. Takeoff - Collision with terr/obj (non-CFIT)

Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Directional control-Not attained/maintained - C
2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
3. Personnel issues-Psychological-Attention/monitoring-Attention-Pilot - C

Narrative

The helicopter pilot reported that during lift off, the tail rotor chip warning light illuminated, "and distracted me for a moment." The helicopter drifted to the right, the right skid contacted the ground, and the helicopter rolled over on to its right side. The helicopter sustained substantial damage to the tail rotor drive shaft, the horizontal stabilizer and the main rotor blades.

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

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA483	08/09/2017 1200 CDT	Regis# N4986S	Cairo, IL	Apt: Cairo Rgnl CIR
Acft Mk/Mdl ROCKWELL INTERNATIONAL 114-B	Acft SN 14019	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending	
Eng Mk/Mdl LYCOMING IO-540	Acft TT 2520	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091	
Opr Name: ROSS, STEVE M.	Opr dba:	Aircraft Fire: NONE		AW Cert: STN

Summary

The airplane touched down during landing with the landing gear retracted and skidded to a stop in grass about 140 ft past the end of the runway threshold. The pilot reported during a telephone conversation with the National Transportation Safety Board (NTSB) investigator-in-charge that, "it was a simple gear-up landing, I forgot to put the [landing gear] switch down." He added that he was not wearing noise canceling headphones, and he reported that there were no preaccident mechanical malfunctions or failures with the airplane that would have precluded normal operation.

The left wing sustained substantial damage.

The pilot reported in the NTSB Pilot/Operator Aircraft Accident/Incident Report, "no accident, as specified by NTSB for gear up landing, is admitted."

Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's failure to extend the landing gear before landing, which resulted in a gear-up landing and a runway overrun.

Events

1. Landing - Landing gear not configured
2. Landing-landing roll - Runway excursion

Findings - Cause/Factor

1. Aircraft-Aircraft systems-Landing gear system-Landing gear selector-Not used/operated - C
2. Personnel issues-Action/decision-Action-Forgotten action/omission-Pilot - C

Narrative

The airplane touched down during landing with the landing gear retraced and skidded to a stop in grass about 140 ft. past the end of the runway threshold. The pilot reported during a telephone conversation with the NTSB investigator-in-charge that, "it was a simple gear-up landing, I forgot to put the [landing gear] switch down." He added that he was not wearing noise canceling headphones and did not report any preaccident mechanical malfunctions or failures with the airplane that would have precluded normal operation.

The left wing sustained substantial damage.

The pilot reported in the NTSB Pilot/ Operator Aircraft Accident/ Incident Report, "no accident, as specified by NTSB for gear up landing, is admitted."

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# CEN18FA050	12/10/2017 1450 EST	Regis# N7529S	Miami, FL	Apt: Miami Executive TMB
Acft Mk/Mdl SMITH AEROSTAR 601		Acft SN 61-0161-082	Acft Dmg: DESTROYED	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-540-S1A5			Fatal 1 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: ROLLO CARMAN W		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

2. Approach - Loss of control in flight

Narrative

On December 10, 2018, at 1450 eastern standard time, a Smith Aerostar 601 airplane, N7529S, collided with the terrain shortly after taking off from the Miami Executive Airport (TMB), Miami, Florida. The pilot was fatally injured, and the airplane was destroyed by impact forces. 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. Visual meteorological conditions prevailed for the flight, which was not operating on a flight plan. The flight originated from TMB just prior to the accident.

An employee of the flight school where the airplane was tied-down, stated the pilot arrived at the flight school about 1000 and began to preflight the airplane. About 1030 he stated that he needed fuel and he fueled the airplane himself adding 105.2 gallons of 100LL. It is unknown how much fuel was put in each of the three fuel tanks. Shortly thereafter, the pilot taxied the airplane to the ramp in front of the flight school hangar. The pilot kept a tool box in the hangar, and the employee stated the pilot was working on the airplane when he noticed fuel leaking from under the airplane. The employee stated that the pilot made a comment that he should have fixed that before he fueled the airplane. Both the employee and another witness stated that fuel was leaking from the aft fuselage belly area. They stated the pilot had several 5-gallon orange buckets under the airplane to catch the fuel. Neither witness saw how much fuel was in the buckets or what the pilot did with the fuel. The following day it was noted that there was a 12 ft by 16 ft stain on the asphalt ramp where the airplane had been parking. One of the witnesses stated that the stain was from the fuel that was leaking out of the airplane.

A video camera at the airport was reviewed by a Federal Aviation Administration (FAA) inspector. The video showed the airplane in front of the hangar at 1135. The pilot was seen walking back and forth from the airplane into the hangar where his toolbox was stored. At 1324 the airplane was pushed back from the hangar. At 1331, the airplane was started, and it was taxied out at 1400.

According to air traffic control, the pilot initiated a takeoff on runway 31 at 1428. The airplane became airborne and for some unknown reason, the pilot aborted the takeoff, landing the airplane back on the runway. The airplane was taxied back to the approach end of runway 31 and a second takeoff was made. Witnesses in an airplane waiting to takeoff on runway 31 stated they were second in line to takeoff behind the accident airplane. They did not notice anything unusual until they heard a pilot declare an emergency. One of the pilots reported the air traffic controller cleared the pilot to land on any runway, then cleared him to land on runway 9R. They reported the airplane was between 400 ft and 800 ft above the ground and in a left bank, appearing to be turning back toward runway 9R. They stated they thought the pilot was going to make it back to the runway, but then the left bank kept increasing past 90° and the nose suddenly dropped. One of the pilots likened the maneuver to a stall spin/Vmc roll/snap roll type maneuver.

The airplane impacted a corn field about 0.9 miles east of the approach end of runway 9R.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# ANC18LA011	11/25/2017 1455 CST	Regis# N739KW	Oloh, MS	Apt: N/a
Acft Mk/Mdl TEXTRON AVIATION 172-N		Acft SN 17270613	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320 SERIES			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: MATTHEW D. MCCARLIE		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

1. Enroute-cruise - Loss of engine power (partial)

Narrative

On November 25, 2017, about 1455 central standard time, a Textron Aviation (formerly Cessna) 172N airplane, N739KW, sustained substantial damage following a partial loss of engine power and forced landing about two miles south of Oloh, Mississippi. The certificated private pilot in the left front seat and the passenger in the front right seat sustained no injury, and the passenger in the left rear seat sustained minor injuries. The airplane was registered to a private individual and was operated by the pilot as a 14 Code of Federal Regulations Part 91 visual flight rules personal flight. Visual meteorological conditions were present at the time of the accident and no flight plan was filed. The airplane departed from the McComb-Pike County Airport, McComb, Mississippi, about 1405.

The pilot reported that the purpose of the flight was for sightseeing with the two passengers. After departing the McComb-Pike County Airport, the pilot was flying enroute to the Hattiesburg Bobby L. Chain Airport, Hattiesburg, Mississippi. At 3,500 feet mean sea level with the power at about 85 percent, the mixture leaned out slightly, and with the engine gas temperatures observed at normal, the engine produced a "very rapid metallic banging/clang noise" along with an instant loss of engine RPM. The pilot immediately applied the carburetor heat and checked the engine oil pressure, the engine oil temperature, and the engine gas temperature and noticed all gauges were in the normal operating range.

According to the pilot, the engine was creating a "violent shaking" of the entire airframe. After about 20 seconds of the carburetor heat applied, the pilot applied full mixture and started adjusting the throttle to see if he could obtain more power. He reported that with more power applied, the shaking became more violent along with a loss of engine RPM. The pilot realized that the power the engine was producing at this point was not sufficient to hold altitude. He then reduced the power and the shaking subsequently reduced, but the shaking did not stop.

The pilot assessed his current location, and the distance from the destination airport and determined that the airplane would be unable to glide the full distance. The pilot also assessed turning back to another airport and determined that the airplane would be unable to make this distance. The pilot decided to conduct a landing to a nearby open field. He reported at this point, the engine was just above idle, but still not producing sufficient power to hold existing altitude or assist in gliding to an airport.

As the pilot was deciding which field he was going to land to, he made wide, slow turns holding as much altitude as possible. The pilot selected a flat field and steeped his turn for an emergency landing profile. Once the airplane descended and the pilot was committed to landing at the field, he realized there were large power lines traversing across the approach end of the field. Once over the power lines, the pilot "slipped" the airplane to lose as much altitude as quickly as possible. He reported the "slip" got the airplane on the ground faster, but also increased the airspeed.

Once on the ground, the pilot attempted to apply the brakes on the damp grass but realized the airplane was going too fast and was not going to stop by the end of the field. At the end of the field, the pilot observed various trees and a small driveway size opening. Using the rudder authority he had left, the pilot maneuvered the airplane to the right, placing the fuselage into the opening. As the airplane skid towards the tree line, the airplane traveled through a barbed wire fence, and the right wing impacted a tree, turning the airplane to the right about 90 degrees. The left wing dug into the ground, stopping the forward movement of the airplane. The airplane came to rest on the nose wheel and the left main landing gear, with the empennage elevated in the air. The pilot performed a shutdown and the three occupants egressed without further incident.

A Federal Aviation Administration (FAA) aviation safety inspector (ASI) responded to the accident site. During a postaccident on scene inspection of the accident airplane, a fuel sample was obtained, and no contamination was found. The FAA ASI reported that both fuel cells in each wing remained intact with no ruptures observed and the fuel quantity was unable to be verified due to the extreme positioning of both wings.

The airplane sustained substantial damage to both wings and the fuselage. The airplane was recovered and transported to a secure location for a future examination of the airframe and engine.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# ANC18FA012	12/10/2017	1105 HST	Regis# N732DF	Maunaloa, HI	Apt: N/a
Acft Mk/Mdl TEXTRON AVIATION U206-G			Acft SN U20604662	Acft Dmg: DESTROYED	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL MOTORS IO-520 SERIES				Fatal 2 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: WILLIAM F. VOGT			Opr dba:		Aircraft Fire: GRD
					AW Cert: STN

Events

1. Approach - Unknown or undetermined

Narrative

On December 10, 2017, about 1105 Hawaiian standard time, a wheel-equipped Textron Aviation (formerly Cessna) U206G airplane, N732DF, impacted remote hills in Maunaloa, Hawaii about 4 miles southwest of the Molokai Airport, Kaunakakai, Hawaii while performing an instrument flight rules (IFR) approach. The instrument-rated private pilot and sole passenger sustained fatal injuries, and the airplane was destroyed. The airplane was registered to and operated by the pilot as a 14 Code of Federal Regulations Part 91 visual flight rules (VFR) personal flight that transitioned to an instrument flight rules (IFR) flight. Instrument meteorological conditions were reported at the Molokai Airport at the time of the accident and no flight plan was filed. The flight originated from the Daniel K. Inouye International Airport, Honolulu, Hawaii, about 1030.

In a conversation on December 12, the Molokai Police Department reported to the National Transportation Safety Board (NTSB) investigator-in-charge (IIC) that the purpose of the personal flight was for travel from the island of Oahu, to the island of Molokai in Hawaii. After departing from the Daniel K. Inouye International Airport, the pilot flew VFR as he traveled to the west side of Molokai, where he transitioned to IFR in coordination with the Federal Aviation Administration (FAA) Honolulu Center Radar Approach Control Center (ZHN) for the VOR-A (very high frequency omni directional radio range) circling instrument approach to runway 5 at the Molokai Airport with an IFR clearance. The Molokai Airport tower air traffic controller reported to the pilot that the airport was IFR and the pilot responded that he had received the automatic terminal information service (ATIS) "juliet."

While conducting the circling instrument approach, the air traffic controller observed the airplane south of course at a 6-mile final and advised the pilot of this status. The pilot responded that he was correcting, but was maneuvering to remain clear of clouds. The airplane then disappeared from the radar display system and the air control controller transmitted to the pilot with no response. ZHN was notified within 3 minutes of losing contact with the airplane and an alert notice (ALNOT) was issued approximately 15 minutes later. The air traffic controller notified local first responders on Molokai. No emergency locator transmitter (ELT) signal was received by U.S. Air Force or U.S. Coast Guard assets.

The Molokai Fire Department arrived at the accident site at 1213 and the Molokai Police Department arrived at the accident site at 1230. The accident site was located in remote hills on the Molokai Ranch, Maunaloa. The airplane's wreckage was found on the western side of a hill that crested about 100 feet, with about a 50-degree incline, and was populated with low growth vegetation. The wreckage was subsequently incinerated by a postimpact fire.

On December 13, the NTSB IIC, two aviation safety inspectors from the FAA Honolulu Flight Standards District Office, an air safety investigator from Textron Aviation, and the Molokai Police Department traveled to the accident site utilizing off road vehicles. The wreckage is pending recovery and transportation to a secure facility for future examination of the airframe and engine.

The closest official weather observation station is located at the Molokai Airport, about 4 miles northeast of the accident site. At 1103, an Aviation Routine Weather Report (METAR) was reporting, and stated in part: Wind 030 degrees (true) at 8 knots; visibility 6 statute miles; clouds and sky condition, scattered clouds at 1,200 feet and broken clouds at 1,700 feet; temperature 72 degrees F; dew point 70 degrees F; altimeter 30.04 inHg.

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Accident Rpt# GAA18CA046	11/14/2017 1035 EST	Regis# N30SU	Columbus, OH	Apt: Ohio State University OSU
Acft Mk/Mdl TEXTRON AVIATION INC 172-S		Acft SN 172S11625	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-360-L2A		Acft TT 1309	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: OHIO STATE UNIVERSITY AIRPORT		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

1. Landing - Abnormal runway contact
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Narrative

The solo student pilot reported that, during a touch-and-go landing, he landed flat. He added that the airplane porpoised and he heard a "thump". The student pilot performed a go-around, entered the traffic pattern, and landed without further incident.

The airplane sustained substantial damage to the fuselage.

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