

National Transportation Safety Board - Aircraft Accident/Incident Database

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

Events

1. Takeoff - Loss of engine power (partial)
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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.

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Accident Rpt# GAA18CA050 11/19/2017 1500 PST Regis# N69656 Rosamond, CA Apt: Rosamond Skypark L00
Acft Mk/Mdl BOEING A75N1(PT17)-UNDESIGN Acft SN 75-4912 Acft Dmg: SUBSTANTIAL Rpt Status: Prelim Prob Caus: Pending
Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: BECK BRENT E Opr dba: Aircraft Fire: NONE

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Accident Rpt# CEN17LA145	03/19/2017 955 CDT	Regis# N1915N	Columbia, IL	Apt: Sackman Field H49
Acft Mk/Mdl CESSNA 120-NO SERIES		Acft SN 12159	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR C85 SERIES		Acft TT 4656	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: AERONCA CHAMP CLUB INC		Opr dba:		Aircraft Fire: NONE

Events

1. Takeoff-rejected takeoff - Runway excursion
2. Takeoff-rejected takeoff - Runway excursion

Narrative

On March 19, 2017, at 0955 central daylight time, a Cessna 120 airplane, N1915N, was substantially damaged during a runway excursion at Sackman Field Airport (H49), Columbia, Illinois. The pilot receiving instruction and the flight instructor were not injured. The airplane was registered to Aeronca Champ Club LLC and operated by a private individual under the provisions of 14 Code of Federal Regulations Part 91 as an instructional flight. Visual meteorological conditions prevailed for the flight that operated without a flight plan. The local flight was originating at the time of the accident.

According to information provided by the flight instructor, the purpose of the flight was to complete a tail-wheel endorsement for the pilot. The accident occurred on the fourth full-length runway departure, after about one hour of total flight time. While taking off from runway 21, the airplane was 2/3 down the length of the runway when the flight instructor assessed that the engine was not developing enough power for a successful takeoff, so he took control of the airplane and began braking. With full brake application and about 700 ft remaining, the airplane slowed down but not enough to remain on the runway. The airplane exited the end of the runway and collided with a drainage ditch, entered a cultivated field and nosed over.

Inspectors from the Federal Aviation Administration responded to the accident site and visually examined the airplane. No anomalies were detected.

On the NTSB Form 6120, the flight instructor suspected carburetor icing as the reason of the loss of engine power. The flight instructor reported that carburetor heat was applied on each landing and after each landing, the carburetor heat was turned off as they taxied for departure.

A review of the Carburetor Icing Probability Chart located in the FAA's Special Airworthiness Information Bulletin CE-09-35, Carburetor Icing Prevention found that the airplane was operating in an area conducive to the formation of serious icing at cruise power.

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Accident Rpt# GAA18CA047 11/08/2017 1615 EST Regis# N76238 Macon, GA Apt: Macon Downtown MAC
Acft Mk/Mdl CESSNA 140-G Acft SN 10641 Acft Dmg: SUBSTANTIAL Rpt Status: Prelim Prob Caus: Pending
Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: GUY FOULKES Opr dba: Aircraft Fire: NONE

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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

Events

1. Landing - Abnormal runway contact

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.

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Accident Rpt# GAA18CA045 11/09/2017 1200 EST Regis# N2138W Trenton, NJ Apt: Trenton Mercer TTN
Acft Mk/Mdl CESSNA 172-S Acft SN 172S9561 Acft Dmg: SUBSTANTIAL Rpt Status: Prelim Prob Caus: Pending
Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: CHRISTIANSEN AVIATION INC Opr dba: Aircraft Fire: NONE

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Accident Rpt# CEN18FA024	11/04/2017 1630	Regis# N251CH	Hatch, NM	Apt: Hatch Municipal Airport E05
Acft Mk/Mdl CESSNA 172N		Acft SN 17271075	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-360-A4M			Fatal 4 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: ANTHONY L. DERAMUS		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

1. Initial climb - Loss of control in flight

Narrative

On November 4, 2017, about 1630 mountain daylight time, a Cessna 172N, N251CH, sustained substantial damage when it impacted terrain near the Hatch Municipal Airport (E05), Hatch, NM. The pilot and three passengers received fatal injuries. The airplane was owned by Caribbean Paradise LLC and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Visual meteorological conditions prevailed at the time of the flight, which was not on a flight plan. The estimated departure time from E05 was between 1630 to 1730, and the destination was the El Paso International Airport (ELP), El Paso, Texas.

The flight departed ELP earlier in the day and landed at E05 about 1300. The pilot and passengers went to a local restaurant in Hatch and had lunch, and they were driven back to the airport around 1600. The exact departure time is unknown and there were no witnesses to the accident. The airplane impacted rugged desert terrain located about 0.56 nautical miles (nm) west of the departure end of runway 29 (4,110 ft by 60 ft, asphalt) at E05. The flight did not return to ELP as expected, and a Federal Aviation Administration (FAA) Alert Notice (ALNOT) was issued. The airplane wreckage was not located until 1700 on November 5, 2017.

At 1635, the surface weather observation at the Las Cruces International Airport (LRU), Las Cruces, New Mexico, located 27 nm south of the accident site, was wind 220 degrees at 15 kts, gusting to 18 kts; 10 miles visibility; skies clear; temperature 23 degrees C; dew point 6 degrees C; altimeter 30.05 inches of mercury.

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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: Prelim Prob Caus: Pending
		Acft TT 10509	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: RALPH VALERIO		Opr dba:		Aircraft Fire: NONE

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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

Events

1. Takeoff - Wildlife encounter (non-bird)
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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.

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Accident Rpt# GAA18CA052	10/28/2017	930 AKD	Regis# N2661Q	Skwentna, AK	Apt: N/a
Acft Mk/Mdl CESSNA 182-K			Acft SN 18257861	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
			Acft TT 3567	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: STEWART S. SMITH			Opr dba:		Aircraft Fire: NONE

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Accident Rpt# ERA18LA002	10/02/2017 1048 AST	Regis# N9021X	San Juan, PR	Apt: Fernando Luis Ribas Dominicci SIG
Acft Mk/Mdl CESSNA 182D-D		Acft SN 18253421	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR O-470 SERIES			Fatal 1 Ser Inj 1	Flt Conducted Under: FAR 091
Opr Name: MULCARE SEAMUS P		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

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

On October 2, 2017, about 1048 Atlantic standard time, a Cessna 182D, N9021X, collided with terrain during landing at Fernando Luis Ribas Dominicci Airport (SIG), San Juan, Puerto Rico. The airplane was substantially damaged. The private pilot was fatally injured, and a pilot-rated passenger was seriously injured. The airplane was registered to and operated by a private individual under the provisions of 14 Code of Federal Regulations part 91. Day, visual meteorological conditions prevailed, and no flight plan was filed for the personal flight. The flight originated at Cyril E. King Airport, Charlotte Amalie, United States Virgin Islands, about 1015.

According to air traffic control, the pilot was cleared to land on runway 9 behind a flight of two Blackhawk helicopters. While on short final for landing, the pilot was given clearance to land after the helicopters had cleared the runway at Bravo 4 intersection. The controller reported that the airplane touched down about 500 feet prior to Bravo 5 intersection, bounced, and came to rest in a grass infield, inverted. First responders were called, and the occupants were taken to a local hospital.

The owner of the airplane reported that the pilot flew the airplane from STT to SIG without his knowledge or permission. The pilot had previously flown the airplane to STT to keep it out of the path of Hurricane Irma.

According to photographs provided by the airport manager, the airplane came to rest inverted in a grass area adjacent to the runway. Structural damage was observed on the fuselage, empennage, and both wings. There was no fire. The wreckage was retained for further examination.

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Accident Rpt# WPR15LA201	06/29/2015 2015 PDT	Regis# N9980T	Oak Harbor, WA	Apt: Aj Eisenberg OKH
Acft Mk/Mdl CESSNA 182D-D		Acft SN 18253080	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR O-470-L			Fatal 0 Ser Inj 1	Flt Conducted Under: FAR 091
Opr Name: ANDREW HIRSCH		Opr dba: JET CITY SKYDIVING CENTER		Aircraft Fire: NONE
				AW Cert: STN

Events

1. Approach-VFR pattern final - Fuel exhaustion

Narrative

On June 29, 2015, about 2015 Pacific daylight time, a Cessna 182D, N9980T, sustained substantial damage during a forced landing following a loss of engine power during an approach for landing at the AJ Eisenberg Airport (OKH) Oak Harbor, Washington. The commercial pilot was seriously injured and the passenger sustained minor injuries. The airplane was registered to Sinclair Aviation LLC., and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed and no flight plan was filed for the skydiving flight. The local flight departed OKH about 1935.

The pilot reported that the engine lost power during the final turn to the runway. Not being able to make the runway, he initiated a forced landing to a field, just south of the airport. During the landing sequence, the airplane struck a tree. The first responder's, on-scene commander, did not observe any fuel leaking from the airplane. Further, another witness, observed only a small amount of fuel dripping from the airplane at the accident site.

Postaccident examination of the airplane at the accident site, by a Federal Aviation Administration inspector, the following morning, revealed that substantial damage was sustained to the wings and fuselage. Further, there was no fuel leaking from the airplane or remaining in the tanks. The ground below the accident site appeared to be dry, and no fuel stains were visible. The wreckage was recovered to a secure location for further examination. According to the airplane's owner, during the recovery, no fuel was observed in the fuel tanks or lines.

Further examination of the airframe and engine by the National Transportation Safety Board, investigator-in-charge, and a representative from Textron Aviation, and Continental Motors, revealed no anomalies with the airframe or engine that would preclude normal operation. Only a small amount of fuel was observed in the carburetor bowl.

A company fuel log indicated that the accident airplane had about 12.6 gallons of useable fuel on board at the start of the day. According to the owner, and the company fuel log, the airplane was refueled on the day of the accident, for an amount of 5.6 gallons, and his review of receipts confirmed this. Therefore, the total amount of fuel on the airplane on the first flight was estimated to be about 18.2 gallons. According to the owner, the average jump flight was usually about 20 minutes in duration, but on the accident day, air traffic control delays were encountered that extended the flights. According to the company fuel log, the accident occurred on the third flight of the day, after the airplane was flown for about 2.1 flight hours.

According to the owner, the average fuel burn of the accident airplane was about 14 gallons an hour. The airplane's Pilot Operating Handbook (POH) fuel burn charts did not replicate the jump profile flown, where the airplane climbs and then descends back to the airfield. However, most of the cruise flight profiles fuel burn rates were lower. The airplane's POH states that 10 gallons of fuel were unusable during all flight conditions. However, in level flight conditions, only 1.5 gallons per tank was unusable. Potentially, 7 additional gallons would have been available, if the airplane was flown in level flight conditions. The fuel consumption for 2.1 flight hours flown the day of the accident was calculated using the company burn rate average and then compared to the accident airplane's total fuel quantity, which included the additional 7 gallons of fuel available in level flight conditions. The airplane's fuel burn rate closely corresponded to the consumption of all the remaining fuel.

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Accident Rpt# CEN17LA376	09/27/2017 1130 EDT	Regis# N70634	Piqua, OH	Apt: Piqua Airport- Hartzell Field I17
Acft Mk/Mdl CESSNA 182M		Acft SN 18259334	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR O-470-R		Acft TT 1811	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: PILOT		Opr dba:		Aircraft Fire: NONE

Events

1. Approach - Loss of engine power (total)
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Narrative

On September 27, 2017, about 1130 eastern daylight time, a Cessna 182M airplane, N70634, impacted a corn field and terrain during a forced landing following a loss of engine power near Piqua, Ohio. The private pilot was uninjured. The airplane sustained substantial firewall damage during the impact. The airplane was registered to and operated by the pilot as a 14 Code of Federal Regulations Part 91 personal flight. Day visual meteorological conditions prevailed in the area about the time of the accident, and the flight was not operated on a flight plan. The flight originated from the Phillipsburg Airport, near Phillipsburg, Ohio, about 1100, and was destined for the Piqua Airport - Hartzell Field (I17), near Piqua, Ohio.

According to the pilot's report, the airplane was approaching I17 when the airplane had a total loss of engine power. The pilot performed a forced landing and the airplane impacted a "standing" cornfield where the substantial damage occurred.

A Federal Aviation Administration inspector, assisted by a mechanic, examined the entire fuel system to include the vents and sumps and found no anomalies. The engine was started and it was operational. The inspector confirmed that the skin panel directly behind the firewall was bent and stringers were bent. In addition, a review of the aircraft records indicated the airplane's last annual inspection was completed about 2 years prior to the accident.

At 1135, the recorded weather, about 11 miles and 2830 from the accident site, at the Darke County Airport, near Versailles, Ohio, was: Wind 3600 at 10 kts; visibility 7 statute miles; sky condition clear; temperature 260 C; dew point; 180 C; altimeter 30.01 inches of mercury.

The temperature and dew point spread were plotted on a carburetor icing probability chart. Their intersection was within the moderate icing at cruise power and serious icing at descent power setting envelope.

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Accident Rpt# CEN16LA229	06/22/2016 1130 CDT	Regis# N9434M	Humansville, MO	Apt: N/a
Acft Mk/Mdl CESSNA 182P-NO SERIES		Acft SN 18264753	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl TELEDYNE CONTINENTAL O-470-S2B		Acft TT 4579	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: TARABETZ SUSAN L		Opr dba:		Aircraft Fire: NONE

Events

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

Narrative

On June 22, 2016, about 1130 central daylight time, a Cessna 182P airplane, N9434M, was substantially damaged following a forced landing near Humansville, Missouri. The commercial rated pilot and passenger sustained minor injuries. The airplane was registered to and operated by a private individual under the provisions of 14 Code of Federal Regulations Part 91 as an air race. Visual meteorological conditions prevailed for the flight. The cross-country flight departed the Dexter B Florence Memorial Field Airport, Arkadelphia, Arkansas, and was en route to the Skyhaven Airport, Warrensburg, Missouri.

The pilot reported that while in cruise flight at 500 ft above ground level (agl) for about 1 hour and 42 minutes, the engine surged and lost partial power. The pilot attempted to restore power by adjusting the throttle, propeller, mixture, and carburetor heat. Unable to restore power, the pilot diverted to the closest airport. The engine did not respond, and the airplane sank through 250 ft agl, so the pilot conducted a forced landing to a field. The landing surface was hard and deeply rutted resulting in the separation of the nose wheel and the airplane nosed over. The fuselage was substantially damaged during the forced landing.

The airplane was examined by the responding Federal Aviation Administration (FAA) inspector and a representative from Textron Aviation, no preimpact anomalies were detected with the airframe. Data from the airplane's JPI engine monitoring system was downloaded by the National Transportation Safety Board laboratory. A review of the data revealed that about 1120, the fuel flow fluctuated. Two minutes later, the fuel flow decayed from about 19 gallons per hour to a final value of 2.7.

A test run of the airplane's engine was conducted by the FAA inspector, with assistance from a local airframe and powerplant mechanic and a representative from the engine manufacturer. A new propeller, engine mounts, throttle cable, and battery were installed on the airplane. An external fuel supply was plumbing into the left wing root. The engine was primed once and started on the first attempt. A magneto check was performed and the propeller pitch cycled. The throttle was advanced to full power and the engine achieved approximately 27 inches of manifold pressure; the tachometer was inoperative, so the maximum rpm could not be determined. The FAA inspector noted that a fuel line from the gascolator to the carburetor had a tight 160° turn, but the fuel line did not appear "kinked" to impede fuel flow. Shop air was applied to the fuel lines and no obstructions were found.

A review of the Carburetor Icing Probability Chart in the Federal Aviation Administration Special Airworthiness Information Bulletin CE-09-35, Carburetor Icing Prevention found that the airplane was operating in an area conducive for the formation of icing at glide and cruise power.

The reason for the loss of engine power could not be determined.

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Accident Rpt# CEN16LA356	08/05/2016 1700 CDT	Regis# N323DC	Waco, TX	Apt: Waco Regional KACT
Acft Mk/Mdl CESSNA P210N		Acft SN P21000384	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL MOTORS TSIO-520-P5		Acft TT 6160	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: JOHN MERAUIGLIA		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

1. Enroute-cruise - Electrical system malf/failure
2. Landing-flare/touchdown - Landing gear collapse

Narrative

On August 5, 2016, about 1700 central daylight time, a Cessna P210N airplane, N323DC, was substantially damaged when the landing gear collapsed during landing on runway 19 (7,107 feet by 150 feet, concrete) at the Waco Regional Airport (ACT), Waco, Texas. The pilot and four passengers onboard were not injured. 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 operated on an instrument flight rules flight plan. The flight originated from the Dallas-Fort Worth International Airport (DFW) about 1630. The intended destination was the Austin-Bergstrom International Airport (AUS), Austin, Texas.

The pilot reported that the airplane electrical system began to indicate a discharge condition during cruise flight. He elected to divert to ACT. The wing flaps and landing gear were lowered before the airplane lost electrical power completely. Landing gear extension seemed to be normal, which included a green down position indicator light and visual verification of the landing gear in the extended position. He executed an uneventful visual approach and landing touchdown. However, after touching down, the landing gear collapsed. The airplane subsequently departed the left side of the runway before coming to rest.

A postaccident examination of the aircraft electrical system revealed that the alternator was not functioning properly and the voltage regulator was inoperative. Examination of the landing gear system revealed that the right main landing gear down lock mechanism had failed. None of the components were provided to the NTSB for further examination, which precluded any determination of the root cause of the failures. The alternator was repaired and the voltage regulator was replaced. The landing gear down lock mechanism was repaired. The airplane was subsequently returned to service and no further anomalies were reported to the NTSB.

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Accident Rpt# CEN17LA144 03/29/2017 2156 EDT Regis# N580PU Fort Wayne, IN Apt: Fort Wayne Intl FWA
Acft Mk/Mdl CIRRUS DESIGN CORP SR20-NO SERIES Acft SN 2039 Acft Dmg: DESTROYED Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR IO-360-ES Acft TT 3144 Fatal 0 Ser Inj 1 Flt Conducted Under: FAR 091
Opr Name: TRUSTEES OF PURDUE UNIVERSITY Opr dba: Aircraft Fire: NONE

Events

1. Landing - Loss of control in flight

Narrative

HISTORY OF FLIGHT

On March 29, 2017, about 2156 eastern daylight time, a Cirrus SR-20, N580PU, was destroyed when it impacted the ground following a loss of control while landing on runway 5 at the Fort Wayne International Airport (FWA), Fort Wayne, Indiana. The flight instructor received minor injuries and the pilot receiving instruction received serious injuries. The pilot receiving instruction held a private pilot certificate. The airplane received extensive damage to the forward fuselage and both wings. The aircraft was registered to the Trustees of Purdue University and operated by the University under the provisions of 14 Code of Federal Regulations Part 91 as an instructional flight. Visual meteorological conditions prevailed for the instructional flight, which operated on a visual flight rules flight plan. The flight originated from the Purdue University Airport (LAF), Lafayette, Indiana about 2100. The intended route of flight would have returned to LAF with interim stops at FWA and the South Bend International Airport (SBN), South Bend, Indiana.

According to the flight instructor's statement, the flight was conducted as part of the University's commercial flight training program. He stated that his student obtained a weather briefing before the flight and the weather was monitored throughout the flight. He stated that although the surface winds were high, the flight progressed from LAF to FWA uneventfully. He stated that during the landing approach the student applied crosswind correction with the right-wing low (into the wind), and the nose of the airplane pointed straight down the runway. The instructor stated that as the student flared for landing the airplane suddenly and severely rolled to the left. He believed that he heard the left wing scrape the runway. He stated that he assumed control of the airplane and simultaneously added full engine power and full right aileron control to attempt a go-around. He stated that the full right aileron input did little to correct the airplane's roll attitude and the wind pushed the airplane to the left of the runway. As the airplane's airspeed increased the instructor was able to level the wings and started to pitch up for the go-around. He stated that he did not feel as if he had the airplane "under control". When the airplane was about 25-50 feet above the ground it rolled right and nose low. The airplane then impacted the ground.

The student reported that they were landing on runway 5 at FWA and had planned to perform 4 touch and go landings at FWA before proceeding to SBN. The winds were strong and from the right of the airplane during final approach. He stated that he positioned the airplane in a crab to correct for the crosswind. The airplane remained in the crab and was stable until over the runway threshold. The final approach airspeed was increased appropriately for the gusts. Upon crossing over the runway numbers, he smoothly reduced power and transitioned the airplane into a slip, keeping the airplane banked into the wind and the rudder opposite to keep the nose aligned with the runway centerline. As he began the flare, a strong gust of wind pushed the airplane toward the left side of the runway. Because of this, a go around was initiated but the left wingtip struck the runway. He stated that the instructor took control of the airplane and the subsequent events happened too fast to remember.

INJURIES TO PERSONS

The flight instructor received lacerations to his hands and face, and other cuts and bruises. The student pilot received a fractured femur and various cuts and bruises.

PERSONNEL INFORMATION

The flight instructor held a commercial pilot certificate with airplane single-engine land, multiengine land, and instrument airplane ratings. He also held a flight instructor certificate with an airplane single-engine rating. According to a report submitted by the operator, the flight instructor had 414 hours total flight experience with 188 hours in the same make and model as the accident airplane. He had 149.8 hours experience as a flight instructor with 73.3 hours as an instructor in the same make and model as the accident airplane. The flight instructor's most recent first class medical certificate was issued on June 3, 2015. No limitations were listed on the medical certificate.

National Transportation Safety Board - Aircraft Accident/Incident Database

The pilot receiving instruction held a private pilot certificate with airplane single-engine land rating. According to a report submitted by the operator, the student had 157.5 hours total flight experience all in the same make and model as the accident airplane. The student's most recent first class medical certificate was issued on July 12, 2016. No limitations were listed on the medical certificate.

AIRCRAFT INFORMATION

The airplane was a Cirrus SR-20, serial number 2039, manufactured in 2010. The airplane was a single-engine monoplane with an airframe constructed predominately of composite materials. The airplane had a fixed tricycle landing gear arrangement. A Continental IO-360-ES engine, serial number 1011589, producing a maximum of 200 horsepower, powered the airplane.

The operator reported that the airplane was maintained under a manufacturer's inspection program and the most recent 50-hour inspection was performed on March 29, 2017. At the time of the inspection the airplane had accumulated 3,144 hours total time in service.

METEOROLOGICAL INFORMATION

At 2154, the recorded weather conditions at FWA were: wind from 100ø at 20 knots, gusting to 26 knots, 10 miles visibility, broken clouds at 10,000 feet above ground level (agl), overcast clouds at 12,000 feet agl, temperature of 9ø C, dew point of -1ø C, and an altimeter setting 30.09 inches of mercury.

At 1954, about 1 hour before departure, the recorded wind at FWA was from 80ø at 18 knots gusting to 25 knots.

At 2054, a few minutes before departure, the recorded wind at FWA was from 90ø at 19 knots, gusting to 26 knots.

A search of official weather briefing sources, such as Lockheed Martin Flight Service (LMFS), Leidos weather briefings, and Direct User Access Terminal Service (DUATS) was done. The pilot under instruction and flight instructor, had received several official weather briefings before the accident flight.

The Terminal Aerodrome Forecast (TAF) that was valid for the time of the accident expected wind from 070 degrees at 16 knots at FWA.

AIRPORT INFORMATION

FWA had three runways, 5/23, 14/32, and 9/27. At the time of the accident, runway 5 was in use and was 11,981 feet long and 150 feet wide.

FLIGHT RECORDERS

The accident airplane was equipped with a Recoverable Data Module (RDM), located in the tail of the airplane. The unit was undamaged and the recorded data was downloaded during the wreckage examination.

WRECKAGE AND IMPACT INFORMATION

The airplane was examined in a hangar after its recovery from the accident site. The airplane had significant damage to the forward fuselage. The engine was separated and only remained attached by control cabling and wiring. The top of the cowl exhibited crush damage to the right top. The windshield was broken out and the top of the windshield had mud and dirt stains. The firewall was crushed rearward into the cabin area. The right wing was broken about midspan and the tip shattered. The wing was broken in the rearward/downward direction. The left wing was broken about midspan and the leading edge was twisted downward. The pitot tube mounted on the lower surface of the left wing near the tip had its lower rear end partially ground off indicative of runway contact. The cabin section of the fuselage from about 2 feet aft of the firewall to the tail surfaces was intact. The tail surfaces were intact but the lower rudder fairing exhibited mud staining and crushing of the fairing indicative of ground contact. No preimpact structural defects were noted.

Flight control system continuity checks were performed with the following results:

Elevator cable continuity was confirmed from the elevator control surface forward to the elevator bellcrank located in the forward cabin console. Crushing damage to the forward fuselage resulted in the cables having slack. Due to the cable slack, movement of the yokes did not result in movement at the elevator;

however, movement of the yoke did result in movement of the bellcrank to which the cables were attached.

Rudder control cable continuity was verified from the rudder forward to the rudder pedals. Crush damage resulted in slack in the rudder cables as well, however, pulling on the cables in the aft fuselage access resulted in both movement of the rudder surface and movement of the rudder pedals.

Aileron cable continuity was verified by pulling on the cables in the center console, which resulted in movement of the aileron actuators in the wings. The link between the aileron control surface and the actuator mounted on the rear spar was disconnected due to impact damage. This was true for both the right and left ailerons. Continuity from the yokes to the cables located in the center console was verified by movement of the yokes which resulted in movement of the cables in the center console.

Continuity of the left and right yokes was verified by movement of one yoke which resulted in like movement of the opposite side yoke.

Both flaps appeared equally deployed. The flap switch which was positioned at 50 percent.

No preimpact defects were noted with respect to the flight control system.

The airplane Cirrus Airframe Parachute System (CAPS) system had not been deployed. The safety pin for the activation handle was found in-place during the wreckage examination in the hangar. The opposite end of the cable which is normally attached to the rocket igniter had been previously disconnected after the accident. The CAPS solid propellant rocket motor, igniter, and reefing line cutters were removed from the airplane. The solid propellant rocket motor, the igniter and reefing cutters were activated to dispose of potential hazards.

TESTS AND RESEARCH

The RDM data that was downloaded during the on-scene examination consisted of comma-delimited text entries recorded at one second intervals. The data contained various flight parameters including but not limited to: aircraft attitude, position, speed, acceleration, engine parameters, etc. At 2156, the RDM recording showed several blocks of missing data with the engine RPM dropping to zero. This was consistent with an impact that stopped the engine. The last data string before impact recorded the airplane in a 56° right roll with the nose pitched up 12°, at an indicated airspeed (IAS) of 57 knots. Three seconds earlier the RDM recorded a roll angle of 17° left wing down, and a pitch attitude of 13° nose up. At the same time, the IAS was 55 knots and the flaps were deployed 100 percent. During this time, the engine speed was above 2,600 RPM, indicating that the engine was at full power during the attempted go-around. According to the RDM data, the aerodynamic stall warning had activated about 6 seconds before the impact.

According to the Pilot's Operating Handbook (POH) for the accident airplane, the aerodynamic stall speed at maximum gross weight, most rearward center of gravity, 0° of bank, and 100 percent flap deflection, was 59 knots IAS. The actual airplane loading was not determined during the investigation.

The POH also stated that landings had been demonstrated in direct crosswinds up to 20 knots. Based on the reported wind gusts at FWA, the airplane was landing with a 16.7 knot headwind component and a 19.9 knot crosswind component.

At the time of the accident the School of Aviation & Transportation Technology at Purdue University operated several SR-20 airplanes that were used for student training. The flight department had established wind and crosswind component limitations for all the aircraft that the university operated. For the SR-20 airplane used for dual instruction the wind limits were based on the reported winds and the wind direction relative to the runway heading. For wind 50° from runway heading the maximum wind was listed as 23 knots and was noted to include peak gusts. The wind limitations noted that if the wind began to exceed the limits that the airplane was to be returned to the airport for a full stop landing as soon as practical.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# ERA14LA347	07/19/2014 2000 EDT	Regis# N976TC	Clinton, MA	Apt: N/a
Acft Mk/Mdl COLT BALLOONS 160A		Acft SN 1482US	Acft Dmg: MINOR	Rpt Status: Factual Prob Caus: Pending
		Acft TT 711	Fatal 0 Ser Inj 3	Flt Conducted Under: FAR 091
Opr Name: YOUNG DERALD E		Opr dba:		Aircraft Fire: NONE
				AW Cert: STB

Events

1. Approach - Controlled flight into terr/obj (CFIT)
4. Approach - Controlled flight into terr/obj (CFIT)

Narrative

HISTORY OF FLIGHT

On July 19, 2014, about 2000 eastern daylight time, a Colt Balloons 160A, N976TC, contacted powerlines in Clinton, Massachusetts. The balloon received minor damage. The pilot and three passengers were uninjured, and three passengers were seriously injured. The local sightseeing flight was operated by Damn Yankee Balloons under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed, and no flight plan was filed for the flight, which departed from a field in Shrewsbury, Massachusetts, about 1845.

The pilot stated that the accident flight was the second flight that day. After meeting the passengers and ground crew at the departure location, he provided the passengers with a safety briefing that included all aspects of the flight, including the risks involved and the flight procedures and timeline. While the pilot conducted the safety briefing, his ground crew assembled the balloon. The pilot then performed a preflight inspection before inflating the envelope. The passengers boarded, and the pilot conducted a second preflight inspection before launching.

According to the pilot, after launch, the balloon climbed to about 1,000 ft above ground level (agl) and traveled 170ø-180ø (southbound) at a groundspeed of about 5 knots. About 1 hour into the flight, the balloon passed over a reservoir, then the wind "shifted" and the balloon began approaching the town of Clinton. Witness photographs captured images of the balloon as it traveled over the reservoir between 50 and 100 ft agl. One witness reported that the balloon's basket was "skimming the water." The pilot reported that he approached the town at an altitude of 100 ft agl in preparation for landing should an adequate landing site appear. Shortly thereafter, he saw a large side yard next to a house at an intersection. He initiated a descent using the balloon's burners intermittently to maintain the proper descent path. Photographs showed the balloon approaching the landing site about 50 feet agl.

According to the pilot, as the balloon approached the landing site, the basket skid (attached to the bottom of the basket), contacted the top wire of a set of electrical wires perpendicular to the balloon's flight path. The balloon continued forward, causing the top wire to contact another wire; a large arc and flash ensued. The balloon then continued its descent to the landing site, where it touched down normally.

Video footage of the accident showed that the pilot engaged the burner several times as the balloon approached the landing site. Subsequent footage showed the balloon descending toward the landing site. As it descended, the envelope contacted the three uppermost powerlines, resulting in an electrical discharge, a shower of sparks, and portions of the powerlines falling onto the ground and a parked vehicle. The balloon then continued in a controlled descent to the landing area. After the balloon landed, the ground crew and others who had stopped to render assistance helped the passengers egress from the basket. Three of the passengers received serious electrical burns as a result of the balloon's contact with the powerlines.

The pilot stated that he decided to land in the town because the balloon had about 20 minutes of fuel remaining, and that sunset would occur in about 30 minutes. He also stated that he was unfamiliar with the area, and reported to law enforcement personnel that he was navigating with the use of a map application on his cell phone. In his written statement to the NTSB, he suggested that the accident may have been prevented with a steeper approach to the landing site.

PERSONNEL INFORMATION

The pilot held a commercial pilot certificate with a rating for lighter-than-air balloon, and private pilot privileges for airplane single-engine land. His most recent Federal Aviation Administration (FAA) third-class medical certificate was issued on September 14, 2012. He reported 4,388.9 total hours of flight experience, of which 2,708.2 hours were in lighter-than-air balloons.

National Transportation Safety Board - Aircraft Accident/Incident Database

AIRCRAFT INFORMATION

The balloon envelope and basket were manufactured in 1989. The balloon was powered by 2 propane burners, and had a basket capacity of 9 occupants. The balloon's most recent annual inspection was completed on May 28, 2014. At the time of the accident, the balloon had accrued about 711.1 total hours of operation.

METEOROLOGICAL INFORMATION

The 2052 recorded weather at Fitchburg Municipal Airport (FIT) Fitchburg, Massachusetts, located about 9 miles northwest of the accident site included wind from 090ø at 3 knots, visibility 10 statute miles, clear skies, temperature 22øC, dew point 17øC, and altimeter setting of 30.23 inches of mercury.

WRECKAGE AND IMPACT INFORMATION

Examination of the balloon envelope and basket by an FAA inspector revealed that the outside of the wicker basket had been scorched on one side and that both burner support covers on that side of the basket displayed thermal damage.

ADDITIONAL INFORMATION

Balloon's Flight Path

Contrary to the pilot's statement, the departure location of the flight, and the accident site location were consistent with the balloon traveling on a predominantly northerly course throughout the 1 hour 15 minute, 7-nautical-mile (nm) flight. Review of satellite imagery of the area showed several fields about 1 - nm north of the accident site located along the balloon's established route of flight.

Balloon Manufacturer's Guidance

According to the balloon manufacturer's flight manual, section 2.9, LANDING PROCEDURE, when choosing a landing site, the pilot should allow for possible variations in the wind at ground level, and choose a site:

- (a) Free of obstructions, especially power lines;
- (b) Overshoot area should also be clear;
- (c) Field free of crops and animals;
- (d) If possible, look for upwind shelter to reduce speed;
- (e) If possible, choose a field with good accessibility for retrieve crew, and minimum inconvenience for the owner.

The manual also states:

Do not fly into power lines at any cost. If contact is inevitable descend as fast as possible so that the contact of the wires is with the envelope and not with the basket assembly. Shut down the fuel system and vent lines before contact. If the balloon is caught in the wires DO NOT TOUCH ANY METAL PARTS. If possible, remain in the basket until the power is shut off. Never attempt to remove the balloon until the power authority has arrived. Do not allow crew members to make contact between the ground and the basket until the power is shut off.

Balloon Flying Handbook

The FAA Balloon Flying Handbook (FAA-H-8083-11A), 7-7, "Maneuvering," states, "The balloon is officially a nonsteerable aircraft." Although a hot air balloon has no direct controls for steering, a balloon's flightpath can be indirectly influenced using the burner and parachute valve. The handbook also states:

Being knowledgeable of the wind at various altitudes, both before launch and during flight, is the key factor for maneuvering. Maneuvering, or steering, comes indirectly from varying one's time at different altitudes and different wind directions.

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To initiate a climb, a balloon pilot activates one or more of the balloon's propane fuel burners. Rate of climb is adjusted by the duration and/or frequency of burner activations. Level flight is achieved by executing a series of burns that minimizes changes in vertical velocity. Descent is achieved either by allowing the air in the envelope to cool or by opening the parachute valve to allow hot air to escape. The rate of descent can be increased by leaving the parachute valve open longer or reopening the valve. Rate of descent can be slowed or stopped by activating the burner(s).

The FAA Balloon Flying Handbook further states that when contour flying, or during an approach to a landing site, the potential of collision with trees, power lines, and other obstacles is increased. For balloons, landing accidents consistently account for over 90 percent of the total number of accidents in any given year. The most common causal factors for landing accidents include collision with obstructions in the intended landing area.

In addition, these accidents account for the majority of injuries to pilots and damage to balloons. Accidents are more likely during landing because the tolerance for error is greatly diminished and opportunities for pilots to overcome errors in judgment and decision-making become increasingly limited, particularly in high wind conditions.

Additional Incidents

Over the course of the investigation, the NTSB became aware of other incidents with the operator. In October 2004, one passenger received minor injuries when, during landing, the balloon encountered a downdraft. The pilot applied the burners to ascend and overshot the intended landing site. In an attempt to slow the balloon, the pilot brushed the basket through a tree, during which a branch cut the passenger's hand.

In October 2011, a witness observed the balloon flying low in the middle of Northborough, Massachusetts. During the flight, the pilot flew below the tops of the surrounding trees and the balloon passed between and struck two houses, which sustained soffit and gutter damage.

On September 30, 2013, the pilot landed in the parking lot of a Kmart store in Auburn, Maine. The eight passengers onboard were not injured. The pilot reported to a local media outlet that the flight was going according to plan when an unexpected breeze kicked in around sunset. During the approach to landing, the balloon contacted and damaged a light pole in the parking lot.

On September 22, 2015, about 14 months after the accident in Clinton, Massachusetts, the pilot and his six passengers were uninjured when he landed the balloon in the parking lot of a Massachusetts Bay Transportation Authority commuter rail station in Grafton, Massachusetts. The balloon had launched from Shrewsbury, Massachusetts earlier that morning. The pilot advised that, sometime during the flight, the wind conditions changed. He originally tried to land in an open field at Tufts University, but instead landed in the parking lot which was about 1,000 yards northwest of the field. During the balloon's descent, it contacted an overhead guide wire that stretched between two light poles, knocking one pole over and resulting in damage to 3 vehicles.

Articles published by local media in Portland, Maine, and Miramichi, New Brunswick, Canada, stated that the pilot's invitations to two separate balloon festivals were rescinded as a result of the open investigation into the Clinton, Massachusetts, accident.

NTSB Recommendations

On April 7, 2014, the NTSB issued recommendations to the FAA (A-14-11 and A-14-12) to address operational deficiencies in commercial sightseeing (air tour) balloon operations that have resulted in occupant injuries and a fatality. They were derived from the NTSB's investigations of several air tour balloon accidents. The accidents highlighted operational deficiencies in commercial air tour balloon operations, such as operating in unfavorable wind conditions and failure to follow flight manual procedures, that the NTSB considered a result of the lack of oversight relative to similar airplane and helicopter air tour operations.

In its recommendations, the NTSB stated that, depending on gondola capacity, balloons can carry more than 20 passengers per flight. Given the various safety deficiencies noted in the NTSB's investigations of the subject balloon accidents, the potential for a high number of fatalities in a single air tour balloon accident is of particular concern if air tour balloon operators continue to conduct operations under less stringent regulations and oversight. Although such an accident had yet to occur in the United States at the time of the issuance of the recommendations, a high-fatality accident occurred in Egypt on February 26, 2013, when a commercial air tour balloon carrying 21 occupants experienced a fire on board, resulting in 19 deaths.

On July 30, 2016, about 0742 central daylight time, a Balçny Kubıcek BB85Z hot air balloon, N2469L (NTSB Case No. DCA16MA204), crashed into a field after striking high voltage powerlines while landing near Lockhart, Texas. The 15 passengers and pilot onboard were fatally injured. The NTSB determined that

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the probable cause of this accident was the pilot's pattern of poor decision-making that led to the initial launch, continued flight in fog and above clouds, and descent near or through clouds that decreased the pilot's ability to see and avoid obstacles. Contributing to the accident were (1) the pilot's impairing medical conditions and medications and (2) the FAA's policy to not require a medical certificate for commercial balloon pilots.

The investigation further concluded that the FAA's primary method of oversight-sampling balloon operators at festivals and events-does not effectively target the operations that pose the most significant safety risks to members of the public who choose to participate in commercial balloon sightseeing activities. As a result of this investigation, the NTSB classified Safety Recommendations A-14-011 and -12 as "Closed-Unacceptable Action/Superseded," and made the following new safety recommendation to the FAA:

Analyze your current policies, procedures, and tools for conducting oversight of commercial balloon operations in accordance with your Integrated Oversight Philosophy, taking into account the findings of this accident; based on this analysis, develop and implement more effective ways to target oversight of the operators and operations that pose the most significant safety risks to the public.

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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

Events

1. Landing - Landing area overshoot
-

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

Events

1. Takeoff - Loss of control on ground
-

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.

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Accident Rpt# CEN17LA018	10/15/2016 1430 CDT	Regis# N9473D	Jasper, TX	Apt: N/a
Acft Mk/Mdl PIPER PA 18-150-A150		Acft SN 18-7019	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING 0-320 SERIES		Acft TT 3655	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: JONES CHARLES W		Opr dba:		Aircraft Fire: NONE

Events

1. Enroute - Loss of engine power (partial)

Narrative

On October 15, 2016, about 1430 central daylight time, a Piper PA 18-150 airplane, N9473D, conducted a forced landing near Jasper, Texas. The private rated pilot received minor injuries and the airplane was substantially damaged during the accident. The airplane was registered to and operated by a private individual under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Visual meteorological conditions prevailed at the time.

The pilot reported the flight had just departed from the Jasper County Airport (KJAS), Jasper, Texas. After reaching an altitude of about 1,000 ft, the engine starting "missing." He switched fuel tanks and pumped the throttle; the engine continued to run, but was not making power. Unable to maintain altitude, he turned back towards the airport. Realizing he would not clear trees, he selected an area for the forced landing. The airplane came to rest with in a slight right wing down, nose low attitude among several trees.

Substantial damage was noted to the airplane's fuselage and wings. Fuel was present on site.

The airplane was recovered and transported to a salvage facility, where an examination was conducted by the NTSB Investigator in Charge and an FAA inspector.

A review of aircraft records revealed the last annual inspection was completed on August 31, 2016. At the time of the inspection, the engine had accrued 44.87 hours since a top overhaul. The aircraft's tachometer had accumulated 1.49 hours, since the last annual inspection.

Examination of the airplane noted that the wood under the battery box, located in the aft section of the airplane, appeared rotted. The engine's muffler had hole(s) rusted through it; exhaust signatures on the inside of the muffler shroud and cabin heat duct, were consistent with exhaust gas leakage. Welding on the muffler-exhaust pipe appeared to have holes in and around the weld. When the engine was rotated by hand, thumb compression and suction was noted on each cylinder; engine continuity was also established through the valve train and engine. The intake and exhaust rocker arms were removed from each cylinder; two of the four cylinders had the exhaust rocker arm on the intake valve, and/or the intake rocker on the exhaust valve. Both left and right magnetos were removed and produced a spark at each terminal when rotated by hand. The carburetor inlet screen was removed and the carburetor separated. The carburetor bowl and screen were clear of any debris and contamination, the bowl contained a small amount of liquid; light blue in color, consistent with 100LL avgas. Both wing fuel tank gas caps were an aftermarket type, and were absent an FAA-PMA marking; additionally, the fuel caps appeared to be a 'non-vented' type. Air was blown into the fuel lines near the fuselage/wing root, both left and right fuel lines were clear to the gascolator.

At 1415, the automated weather station at KJAS recorded; temperature 92.5 degrees F, and a dew point of 69.6 degrees F, 10-mile visibility, wind from 170 degrees at 7 knots, and altimeter setting of 30.06.

The carburetor icing probability chart included in Federal Aviation Administration Special Airworthiness Information Bulletin No. CE-09-35, Carburetor Icing Prevention, indicated that the airplane was operating in an area that was associated with a risk of carburetor ice formation, at glide and cruise power settings.

The examination did not find a specific reason for the loss of engine power.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# WPR18FA026	11/03/2017 900 MDT	Regis# N4393Z	Murphy, ID		
Acft Mk/Mdl PIPER PA 18-150-A150		Acft SN 18-8724	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim	Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320-B2B			Fatal 1	Ser Inj 1	Flt Conducted Under: FAR 091
Opr Name: HILDE DEAN		Opr dba:		Aircraft Fire: NONE	
				AW Cert: STN	

Events

1. Initial climb - Loss of control in flight
-

Narrative

On November 3, 2017, about 0900 mountain daylight time, a Piper PA-18-150, N4393Z, impacted mountainous terrain about 25 miles south of Murphy, Idaho. The pilot/owner was fatally injured, and the passenger received serious injuries. The airplane was substantially damaged. The airplane was registered to the owner and operated under the provision of 14 Code of Federal Regulations Part 91, as a personal cross-country flight that was departing from a private dirt strip and was en route to Boise Air Terminal/Gowen Field (BOI), Boise, Idaho. Visual meteorological conditions prevailed for the flight and no flight plan had been filed.

According to a witness, this was a flight of two, with the intent of flying over the owner's property spotting for elk. The flight had originally departed from BOI about 0730. They flew toward the owner's property, and were flying in the area for about 1.5 hours, when they had to land due to the passenger getting airsick. They were on the ground for about 20 minutes, went back to the airplanes, and were departing at the time of the accident. The witness reported that he was the second airplane; he watched the accident airplane takeoff, establish a positive rate of climb, and when the airplane was about 150 feet above the ground, he saw the right wing drop with the pilot simultaneously keying the mike and saying "whoa." The airplane's nose continued to drop, and the airplane impacted the ground in a nose-low near vertical attitude. The pilot of the second airplane removed both the pilot and passenger from the airplane and called 911.

Life Flight, Air Ambulance, from BOI was notified of the accident at 0905.

The National Transportation Safety Board (NTSB) investigator-in-charge (IIC), an operations inspector from the Federal Aviation Administration, and representatives from Piper Aircraft and Textron Lycoming Engines responded to the accident site. The entire airplane came to rest at the accident site, inverted. The engine remained attached to the propeller assembly as well as the engine mounts. The engine mounts remained attached to the firewall. Both wings remained attached to the fuselage. The wings had uniform leading edge to trailing edge crush damage. The tail and empennage sections remained connected and attached to the fuselage and sustained minor damage.

The airplane was recovered to a secure facility for further examination.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# WPR16FA126	06/19/2016 1149 PDT	Regis# N1270P	Hayward, CA	Apt: Hayward Executive HWD
Acft Mk/Mdl PIPER PA 23-150		Acft SN 23-300	Acft Dmg: DESTROYED	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320 SERIES		Acft TT 4076	Fatal 1 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: PURSEL ROBERT E JR		Opr dba:		Aircraft Fire: GRD

Events

1. Enroute-descent - Miscellaneous/other
3. Enroute-descent - Loss of control in flight

Narrative

HISTORY OF FLIGHT

On June 19, 2016, about 1149 Pacific daylight time, a Piper PA-23-150, N1270P, was destroyed after colliding with a commuter railcar wash building during an approach to land at Hayward Executive Airport (HWD), Hayward, California. The airline transport pilot was fatally injured. The airplane was registered to and operated by the pilot under the provisions of Title 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed and no flight plan was filed for the local flight. The personal flight departed HWD about 1035.

According to a witness, the pilot completed a series of high speed taxi tests for about 25 minutes before he departed on the accident flight. A witness stated that he observed the accident airplane complete the taxi tests on runway 28L on the morning of the accident flight. The airplane was subsequently refueled at a self-serve fuel kiosk and then taxied to the airport run-up area. The witness remarked that the engines did not sound "synchronized" during the run-up.

Federal Aviation Administration (FAA) radar data was plotted using a third party mapping program that featured a satellite view of the terrain. The data showed the airplane depart HWD to the south before it transitioned east over a mountain and then north. The airplane completed a reverse course during its return flight to HWD. According to an Air Traffic Control report furnished by the FAA, at 1145:06, the pilot contacted HWD tower for a landing clearance about 10.5 nautical miles (nm) southeast of the airport. The pilot was instructed to proceed to a straight in for runway 28L and to advise the controller when he was three-miles from the airport, on final approach. At 1147:30, and about 6.5 nm from the airport, and while approaching several grass fields to his right, the pilot notified the tower controller that he was experiencing "difficulty" with his left engine and could not maintain altitude. At the request of the controller, the pilot reported that he was the only person onboard and had approximately sixty gallons of fuel remaining. Seconds later, he informed the controller that he would "not be able to make it to the airport." The controller then asked the pilot if he observed any landing sites in his field of vision. At 1148:51, the pilot informed the controller that he could see a field near a set of Bay Area Rapid Transit commuter train tracks, which is where he planned to attempt a forced landing. Seconds before the pilot reported the landing site to the controller, a witness, who was about one-half mile east of the accident site, observed the airplane enter a steep left bank turn, to a westerly heading. According to the radar and map data, the airplane passed beyond the grass fields at about 1148:33 and seconds later it entered an approximate 45° left turn. The airplane subsequently disappeared from the witnesses view and approximately 30 seconds later he heard the accident, which was immediately followed by a plume of dark smoke.

Nearby surveillance video showed the airplane enter a slight left wing low attitude, which gradually increased as the airplane traversed a set of railroad tracks. The forward fuselage and right wing impacted the east wall of a small building. A mist covered the right wing, empennage, and tail, as they fell to the ground and a postcrash fire ensued.

Eyewitness Interviews

A total of three eyewitnesses were interviewed; two of which observed the airplane flying inbound to land and another that observed the airplane moments before it impacted the rail yard.

The first witness (Witness 1 on the map) was located near the airplane's inbound leg, approximately 9 nautical miles from HWD. Witness 2, was located approximately 10 miles from HWD in proximity of the airplane's outbound leg. Witness 3, was located one half mile from the accident site in a nearby graveyard. Please refer to the map below for a graphical depiction of the witness locations.

Witness 1 reported that she heard the airplane and an abnormal sound from inside her home. She went outside and observed an airplane approaching her house from a group of hills located to the east. The airplane appeared to be losing altitude and the engine made a "sputtering sound," which she also described

as "cutting out." The sound repeated when the airplane reached her property and again seconds later after it passed her home.

Witness 2 stated that he was working in his yard all morning and initially observed a red and white colored airplane on a southeastern heading at approximately 1,750 ft. He never observed any smoke, but heard a sound that resembled an engine "backfiring." The airplane subsequently made a left turn and proceeded eastbound and disappeared behind a group of hills. About 30 minutes later he observed the same airplane northeast of his house flying towards the airport. The witness reported hearing more sounds that resembled an engine "popping" and "backfiring." He added that he did not observe any smoke, foreign object debris, or fluids coming from the airplane, but further remarked that the engine "backfiring" sounds were much louder during the airplane's inbound leg.

According to Witness 3, he observed an airplane flying abnormally low over a group of houses before noon on the day of the accident. The witness stated that he observed the airplane in a wings level descent for a few seconds before it suddenly entered a steep left turn, with the right wing approximately 700 to the horizon. The airplane then disappeared behind a residential area. Approximately 10 seconds later he heard a loud impact sound; shortly thereafter plumes of smoke emerged from the airplane's direction.. He added that he may have been downwind of the accident because he smelled fuel burning.

Figure 1 - Witness Locations

PERSONNEL INFORMATION

According to the flight instructor who administered the pilot's most recent flight review, the flight was conducted in March 2015 in the pilot's BE60 airplane and included two simulated left engine failures. The first simulated engine failure took place during an instrument landing system approach. The instructor failed the left engine during the approach, and the pilot completed the engine out procedure and continued the approach successfully. During the simulated engine failure, the instructor noted the pilot's yaw control as "good" and his descent as "smooth and right on." A subsequent simulated engine failure took place at 5,000 ft when the flight instructor reduced the left engine manifold pressure to 13 in Hg. He then asked the pilot to complete a 450 turn and hold his altitude, but the airplane was unable to accommodate the altitude demand due to the combination of a low power setting and higher than standard rate turn. During both simulated engine failures, the pilot successfully kept the airspeed above minimum controllable airspeed (Vmc).

AIRCRAFT INFORMATION

According to FAA records, the airplane was manufactured in 1955 and registered to the pilot on September 2, 2015. The airplane was powered by two Lycoming O-320-A, normally-aspirated, direct drive, air cooled, 150 hp engines. The family provided the original aircraft logbooks, which were comprised of service information that spanned from May 1986 to July 2015. An initial record in the earliest engine and airframe logbooks stated that the first three entries had been re-constructed as the logbooks were lost. A review of the logbooks revealed that the airplane's most recent 100-hour inspection was completed on July 15, 2015 at which time the left engine had accumulated a total of 4,051 flight hours, and the right engine had accumulated 4,059 flight hours.

At the time of its most recent service, the left engine had accumulated approximately 1,955 hours since its engine's most recent overhaul as indicated by a recent entry in the engine logbook. Although records of the left and right engine overhauls could not be located in the available aircraft records, a logbook entry stated that the right engine had accrued 1,957 hours since major overhaul at the time of the last 100-hour inspection. The logbooks did not contain any record of a camshaft lobe inspection or camshaft replacement.

The airplane hobbs meter was not recovered and the airplane total time at the time of the accident was computed using the right engine tachometer time. Based on the pilot's 17 hours of accumulated time in the airplane after he purchased it, the airplane's total time was estimated to be about 4,076 hours, at the time of the accident.

According to records furnished by a refueling station at HWD, the pilot had purchased fuel from their self-service facility 11 times in the previous 10 months. The records showed that the pilot last purchased fuel for the accident airplane in September 2015, in the amount of 23.4 gallons. A witness reported seeing the pilot taxi to the airport's self-serve fuel kiosk; however, the fuel history did not show a record of the pilot purchasing fuel on the day of the accident. According to the fuel service facility, they did not receive any reports of water contamination from customers who obtained 100 low lead aviation grade gasoline from their self-service fuel kiosk on the day of the accident.

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The pilot's logbook showed that he flew the accident airplane on May 1, 2016, which correlates to a fuel purchase in the amount of about 15 gallons of 100 low lead gasoline that took place the same day at Nut Tree Airport (VCB), Vacaville, California. Prior to that, the pilot purchased about 28 gallons of 100 low lead gasoline on September 27, 2015.

Textron Lycoming Service Bulletin SB301B - Valve Maintenance Procedures

A service bulletin was issued by Textron Lycoming on February 18, 1977 entitled "Service Bulletin No. 301B" (SB301B). The service bulletin contained maintenance procedures and service limitations for intake and exhaust valves.

Textron Lycoming Service Instruction SI1009AZ - Recommended Time Between Overhaul Periods

According to "Table 1" of service instruction SI009AZ, the recommended time between overhaul period for the Lycoming O-320 engine is 2,000 hours. The service instruction further states that "all engines that do not accumulate the hourly period of TBO specified in this publication are recommended to be overhauled in the twelfth year."

PA-23 Emergency Procedure for Feathering a Propeller

A procedure to feather the propeller of an inoperative engine was included in the airplane's aeronautical flight manual (AFM). According to the AFM,

1. Throttle "CLOSED".
2. Prop Control "FEATHERED". PROP CANNOT BE FEATHERED UNDER 700 RPM.
3. Mixture control "IDLE CUT-OFF".
4. Ignition switches "OFF".
5. Electric fuel pump (if in use) "OFF".
6. Main valve "OFF".

METEOROLOGICAL INFORMATION

The 1152 recorded weather observation at HWD included wind 280ø true at 11 knots, visibility 10 statute miles, clear skies, temperature 27ø C, dew point 8ø C, and an altimeter setting of 30.06 inches of mercury.

According to a representative of APP Jet Center, he reported that the airport received significant levels of rain during the winter of 2016. In February, the rain levels resulted in an overflow of the airport's drainage ditch.

The investigation was unable to confirm if the airplane was parked outside between the time it was purchased and the accident flight.

WRECKAGE AND IMPACT INFORMATION

Initial examination of the accident site by the National Transportation Safety Board investigator-in-charge revealed that the airplane came to rest at the base of a fiberglass railroad car wash building, about 5 nm southeast of HWD. All major structural components of the airplane were accounted for at the accident site, which was contained within an area about 35 ft long and 25 ft wide. The main fuselage came to rest inverted on a heading of 095ø magnetic and was destroyed by fire. With the exception of some thermal damage, the empennage was in one piece and remained connected to the fuselage through the airplane's rudder control cables. The right wing was destroyed by fire and its corresponding engine was inverted and covered in soot. The left wing was co-located with the main wreckage in a near vertical position, at rest against the southeastern end of the building and exhibited an odor of fuel near the left wingtip. Both sets of propeller blades remained attached to their respective hubs; the left engine propeller blades were in the feathered position and did not display any damage. The right engine propeller blades were in a low pitch position and displayed nicks, gouges, and tip curling.

Airframe Examination

Left Wing

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Left aileron control continuity was confirmed from the left aileron bell crank to the wing root where the cables had been cut by recovery personnel. The rubber seal to the inboard left tank fuel cap was rusted and the cap did not form a seal inside the fuel tank ring when installed. The fuel cap rubber seal to the left outboard tank displayed some corrosion and did not form a seal when installed in the fuel tank ring. The left fuel selector valve displayed _ inches of space between the lever and the valve. According to the manufacturer, this position is consistent with an auxiliary tank setting. A trace amount of fuel was drained from the left engine gascolator into a plastic container that had been cleaned and dried. The fuel odor and appearance resembled 100LL aviation grade gasoline; however, a SAR-GEL fuel purity test indicated that the fuel was contaminated with water. The left wing fuel boost pump was not recovered.

Right Wing

The right wing bell crank was damaged by fire, but remained intact and attached to the primary aileron and balance cables. The right aileron cable was continuous from the bell crank to the chain, which had fracture signatures consistent with overload separation.

The right wing fuel boost pump was disassembled and the gasket and internal components displayed carbon coloring consistent with exposure to fire. The pump was void of fuel and the fuel screen was found free of debris.

Fuselage

One arm from the control T bar assembly separated at the T section and the assembly was damaged by fire; however, the remaining three sprockets were intact. A portion of elevator control tube remained attached to the tube stem.

Continuity of the rudder assembly was traced from the rudder torque tube through a control cable located on the right side of the airplane to the rudder flight control surface. A rudder control cable on the opposing side was traced from the rudder to the cockpit; however, the cable had separated from the torque tube arm, which had separated from the torque tube.

The flap actuator measured approximately 20 inches, which is consistent with partial deployment of the flaps. According to the airplane manufacturer, an actuator measurement of 18.35 inches corresponds with a full flap extended position and 25.50 inches corresponds with a full flap retracted position. While the flap actuator rod displayed significant fire damage on the fore and aft ends, the intermediate section was shiny in appearance with only some blue discoloration.

Elevator continuity was traced from the elevators to a fractured control tube near the aft fuselage.

Empennage

The rudder trim jackscrew displayed approximately 1 inch of exposed threads. According to the manufacturer, this measurement is consistent with a neutral trim position.

The elevator trim displayed approximately 17 threads, which correlates to a near full nose up trim position. However, the elevator trim cables were loosely fixed to the trim drum, which indicates that the trim jackscrew may have moved during the accident sequence.

Engine Examination

Left Engine

Mechanical continuity of the engine was confirmed from the propeller throughout the valve train to the accessory section when the propeller was rotated by hand. Thumb compression and suction were established on each of the engine's four cylinders and the valve train moved in the proper firing order. An examination of each cylinder's internal combustion chamber revealed no evidence of foreign object ingestion or detonation.

A magneto synchronizer confirmed the magneto breaker points opened at 25o below top dead center. Both the left and right magnetos were timed within 1o of each other. The magnetos were then removed from their respective mounting pads to facilitate a magneto examination. Hand rotation of each drive produced spark at each of the four plug leads.

The top and bottom spark plugs were secured in their respective position and undamaged. As each plug was cross-checked against the Champion Spark Plug "Check-A-Plug" chart AV-27, the plugs were oil-soaked, but displayed coloration consistent with normal operation.

The carburetor was attached to the engine accessory case at the mounting flange, and the throttle/mixture controls were secured to their respective controls arms at the carburetor. The carburetor fuel screen was free of debris and the carburetor floats were intact. Trace amounts of residual fuel were discovered in the carburetor fuel bowl and in the accelerator pump. A subsequent SAR-GEL water indicating paste test confirmed the presence of water contamination in both cavities. A white powdery residue was observed on the accelerator pump plunger, consistent with corrosion.

Disassembly of the left engine driven fuel pump revealed trace amounts of residual fuel, which exhibited an odor and appearance of 100LL aviation gasoline. A subsequent SAR-GEL test confirmed that the pump had been contaminated by water. The internal chambers to the fuel pump exhibited significant corrosion signatures consistent with long term exposure to water. Additionally, the pump valves and backing plate displayed a white powdery substance consistent with corrosion.

Right Engine

The right engine and accessories displayed significant fire damage. Mechanical continuity of the engine was established from the crankshaft through the valve train to the accessory section when the propeller was rotated by hand. Thumb compression and suction was achieved for each cylinder; however, a borescope inspection revealed that the intake valve rocker arm for each cylinder displayed little movement as the valve train was rotated. The exhaust rocker arms moved normally and the pushrods did not exhibit any bending.

An internal examination was achieved by drilling holes through the top of the engine case material in-line with the rotational plane of each connecting rod. Subsequent inspection of the camshaft with a lighted borescope revealed that the intake camlobe for cylinder nos. 3 & 4 were concentric in shape, consistent with long term wear. The intake camlobe for cylinder nos. 1 & 2 had been worn approximately 90% and had formed a nearly concentric shape. The corresponding tappet faces displayed significant spalling on the subject camlobes.

Both magnetos remained attached to their respective mounting pads. Magneto to engine timing could not be established and the magnetos could not be functionally tested as they had been thermally damaged due to postcrash fire.

The top spark plugs were secured in their respective positions and had been thermally damaged. Although undamaged, the ground electrode wear could not be determined as each plug displayed a varying amount of coloration due to the thermal effects of the post impact ground fire.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot by the Alameda County Sheriff's Office, Oakland, California. The autopsy report indicated the cause of death as "extensive blunt trauma."

A toxicological test on specimens recovered from the pilot was performed by the FAA Bioaeronautical Sciences Research Laboratory. A carboxyhemoglobin saturation test revealed no evidence of carbon monoxide in the pilot's cavity blood. The pilot's toxicology results were negative for ethanol, but positive for ibuprofen in his urine.

TESTS AND RESEARCH

Radar Data

FAA radar data captured the airplane's position, altitude, and airspeed, at a sampling rate of approximately 5 seconds. According to the data, the airplane departed on a local flight at approximately 1035. During its return to HWD, the pilot initiated a descent from approximately 2,000 ft, at a rate of about 450 ft per minute (fpm). From the beginning of his approach to the time of impact, the airplane's rate of descent fluctuated between 450 fpm and 700 fpm. As the airplane began its left turn in its final movements of flight, the airplane's groundspeed was recorded at 59 knots (about 68 mph) at an altitude of 375 ft mean sea level (msl). The airplane never exceeded this groundspeed during its subsequent descent to impact. Additionally, the airplane's groundspeed reached a minimum of

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52 knots (60 mph), at an approximate height of about 225 ft msl (about 173 feet above ground level), which was approximately 20 seconds before the last radar return and about the time of the accident.

The manufacturer's published minimum control speed (V_{mc} single engine) is 85 mph.

ADDITIONAL INFORMATION

According to the Airplane Flying Handbook, published by the FAA,

V_{mc} is defined as the "Minimum control speed with the critical engine inoperative." Marked with a red radial line on most airspeed indicators. The minimum speed at which directional control can be maintained under a very specific set of circumstances outlined in 14 CFR part 23, Airworthiness Standards.

Engine inoperative flight with wings level and ball centered requires large rudder input towards the operative engine. The result is a moderate sideslip towards the inoperative engine. Climb performance will be reduced by the moderate sideslip. With wings level, V_{mc} will be significantly higher than published as there is no horizontal component of lift available to help the rudder combat asymmetrical thrust.

The publication further remarks that a single engine failure in a twin engine airplane will result in "high drag, large control surface deflections required, and rudder and fin opposition due to sideslip."

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: Prelim Prob Caus: Pending
		Acft TT 6457	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: GREDEIN CRAIG A		Opr dba:		Aircraft Fire: NONE

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Accident Rpt# ERA16FA257	07/16/2016 1845 EDT	Regis# N2241Q	Esperance, NY	Apt: Hogan NY05
Acft Mk/Mdl PIPER PA 28R-201-201		Acft SN 28R-7737029	Acft Dmg: DESTROYED	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-360-C1C6		Acft TT 6574	Fatal 3 Ser Inj 1	Flt Conducted Under: FAR 091
Opr Name: A AND N COMPANY INC		Opr dba:		Aircraft Fire: GRD
				AW Cert: STN

Events

2. Initial climb - Collision during takeoff/land

Narrative

HISTORY OF FLIGHT

On July 16, 2016, about 1845 eastern daylight time, a Piper PA-28R-201, N2241Q, collided with terrain after takeoff from Hogan Airport (NY05), Esperance, New York. The private pilot was seriously injured, the three passengers were fatally injured, and the airplane was destroyed. No flight plan was filed for the personal flight conducted under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed for the flight that originated at NY05 and was destined for Tweed-New Haven Airport (HVN), New Haven, Connecticut.

According to a fixed base operator at HVN, on the day of the accident, the airplane was fueled with 14 gallons of 100LL aviation fuel, which brought the fuel level to "just above the tabs." The pilot then flew the airplane with the three passengers onboard from HVN to NY05. According to witnesses, the pilot and passengers attended a party at NY05. A witness reported that the accident airplane was the last of a group of airplanes to depart from NY05 and that another pilot had suggested to the accident pilot that he depart on runway 12L. A review of surveillance video revealed that the airplane took off on runway 30R, which was 3,000 ft long; the first 600 ft and the final 400 ft of runway 30R were turf, and middle 2,000 ft was asphalt. The surveillance video showed that the pilot began the takeoff roll where the paved section of the runway began (with 2,400 ft of available runway). During the takeoff roll, the nosewheel of the airplane lifted off and then settled back onto the runway. The nosewheel lifted again, and the airplane became airborne with about 900 ft of runway remaining.

Several witnesses observed the airplane's takeoff from runway 30R. They consistently described the airplane's takeoff as "slow" and "sluggish" and reported that it entered a "gentle" left turn immediately after takeoff. One witness stated that the airplane attempted to rotate earlier than the other airplanes that were departing that day. When the airplane became airborne, "the nose was pitched so high that the wings wallowed;" the witness then reached for his phone to dial 911. The airplane overflew a hangar located left of the departure end of the runway at a low altitude as it continued its left turn before descending into trees. Another witness stated that "the airplane was under full power the entire time. The engine did not fail."

Due to his injuries, the pilot was not interviewed. In a written statement, the pilot reported that he had "no personal recollection of the subject flight."

Radar track data obtained from the Federal Aviation Administration (FAA) depicted the airplane in a left turn after takeoff. The airplane climbed to about 100 ft above ground level, and its groundspeed ranged between 58 and 67 knots from takeoff to the final radar target. The radar track ended about 100 ft beyond the departure end of the runway and about 1,000 ft left of the runway centerline.

PERSONNEL INFORMATION

The pilot held a private pilot certificate with ratings for airplane single-engine land and instrument airplane. He was issued a third-class medical certificate on May 1, 2015. The pilot reported about 561 total hours of flight experience. The pilot's logbooks were not recovered and no determination could be made of his flight experience in the accident airplane make and model.

AIRCRAFT INFORMATION

The four-seat, low-wing, retractable-gear airplane was manufactured in 1977. It was powered by a 200-horsepower Lycoming IO-360 engine driving a McCauley two-blade, constant-speed propeller.

The airplane's most recent annual inspection was completed on March 1, 2016, at 6,573.6 total aircraft hours.

The airplane's weight and balance condition at the time of takeoff was calculated based on the estimated fuel onboard the airplane and the estimated weights

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of the passengers. According to the information provided by the fixed base operator at HVN, the airplane departed HVN with about 25 gallons or about 300 lbs of usable fuel. Fuel burn from HVN to NY05 was estimated to be about 8 gallons or 48 lbs.

The airplane's takeoff weight at NY05 was calculated to be 2,816.5 lbs, which was 66.5 lbs above the maximum allowable gross weight of 2,750 lbs. There are no performance charts for any weight above the maximum gross weight.

The performance charts indicated that at the airplane's maximum allowable gross weight, the estimated takeoff ground roll was 2,180 ft and the total distance to clear a 50-ft obstacle was 2,750 ft.

According to the pilot's operating handbook for the airplane, the rotation speed for a normal takeoff was between 65 and 75 knots indicated airspeed (KIAS). With a flap setting of 25°, the rotation speed for a short-field takeoff was between 50 and 60 KIAS. After liftoff, the pilot was to increase airspeed to 55 to 65 KIAS.

There are no performance charts or procedures for a 10° flap setting during takeoff. The performance charts do not consider the effects of a grass runway surface on takeoff and landing performance.

The gross weight stalling speed with power off and full flaps is 55 KIAS, and, with flaps up, this speed is increased 5 knots. Loss of altitude during stall can be as great as 400 ft depending on configuration and power. The manufacturer did not publish power-on stall speeds for the airplane. The best rate of climb speed at gross weight is 90 KIAS, and the best angle of climb speed is 78 KIAS.

METEOROLOGICAL INFORMATION

At 1851, the weather reported at Albany International Airport (ALB), Albany, New York, located about 23 nautical miles east of the accident site, included wind from 030° at 3 knots, visibility 10 statute miles; few clouds at 5,000 ft, scattered clouds at 11,000 ft, broken clouds at 22,000 ft, overcast at 25,000 ft; temperature 27°C; dew point 16°C; and altimeter 30.04 inches of mercury. The calculated density altitude at NY05 was about 3,000 ft.

The density altitude at HVN when the airplane departed at 1845 was 1,971 ft.

AIRPORT INFORMATION

NY05 was a private-use airport at 1,260 ft elevation, configured with two parallel runways, each of which was 3,000 ft long. Runway 12R/30L was a turf runway, and runway 12L/30R combined both asphalt and turf surfaces.

The elevation of HVN was 12.4 ft. HVN is equipped with two asphalt runways; runway 2/20 is 5600 ft long, and runway 14/32 is 3,626 ft long.

WRECKAGE AND IMPACT INFORMATION

The airplane came to rest in swampy, wooded terrain and was destroyed by impact and postcrash fire. All major components of the airplane were accounted for at the scene. The wreckage path was oriented on a 180° magnetic heading and was 60 ft in length. The main wreckage was oriented on a magnetic heading of 350° and rested upright about 1,400 ft beyond the departure end of the runway and about 700 ft left of the runway's centerline.

The right stabilator and a portion of the right wing were separated and found in trees along the debris path. All flight controls surfaces were accounted for at the accident site, and flight control continuity was confirmed from the cockpit to each control surface. The left wing was separated at the wing root and had thermal damage on the inboard portion. The right wing was still attached to the fuselage and sustained substantial thermal damage. The flap control handle indicated a flap position of 10°.

The cockpit and fuselage were destroyed by fire. Both propeller blades exhibited aft bending and leading-edge polishing. The landing gear was retracted.

The engine was rotated by hand at the propeller, and continuity of the drive train, valve train, and accessory section were established. The sparkplugs showed signs of normal wear. The magnetos were destroyed by fire. Thumb compression was confirmed on all cylinders. Examination of the engine and disassembly of

its accessories revealed no evidence of any preimpact mechanical anomalies.

MEDICAL AND PATHOLOGICAL INFORMATION

The FAA's Bioaeronautical Sciences Research Laboratory, Oklahoma City, Oklahoma, performed toxicological testing of samples from the pilot, which were negative for ethanol and drugs of abuse.

ADDITIONAL INFORMATION

According to FAA Pamphlet FAA-P-8740-2, Density Altitude:

Whether due to high altitude, high temperature, or both, reduced air density (reported in terms of density altitude) adversely affects aerodynamic performance and decreases the engine's horsepower output. Takeoff distance, power available (in normally aspirated engines), and climb rate are all adversely affected. Landing distance is affected as well; although the indicated airspeed (IAS) remains the same, the true airspeed (TAS) increases. From the pilot's point of view, therefore, an increase in density altitude results in the following:

- Increased takeoff distance.
- Reduced rate of climb.
- Increased TAS (but same IAS) on approach and landing.
- Increased landing roll distance.

Because high density altitude has particular implications for takeoff/climb performance and landing distance, pilots must be sure to determine the reported density altitude and check the appropriate aircraft performance charts carefully during preflight preparation. A pilot's first reference for aircraft performance information should be the operational data section of the aircraft owner's manual or the Pilot's Operating Handbook developed by the aircraft manufacturer. In the example given in the previous text, the pilot may be operating from an airport at 500 ft MSL, but he or she must calculate performance as if the airport were located at 5,000 ft. A pilot who is complacent or careless in using the charts may find that density altitude effects create an unexpected -and unwelcome - element of suspense during takeoff and climb or during landing.

According to the Pilot's Handbook of Aeronautical Information, Chapter 3 (pg. 3-3, para. 1) per the section entitled Density Altitude (DA):

DA is the vertical distance above sea level in the standard atmosphere at which a given density is to be found. The density of air has significant effects on the aircraft's performance because as air becomes less dense, it reduces:

- Power because the engine takes in less air.
- Thrust because a propeller is less efficient in thin air.
- Lift because the thin air exerts less force on the air foils.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# WPR18LA033	11/16/2017 1800 PST	Regis# N5966V	Nipton, CA	Apt: N/a
Acft Mk/Mdl PIPER PA 28R-201T-201T		Acft SN 28R-7703172	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR TSIO-360 SER			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: LAWRENCE M LANCY		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

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

Narrative

On November 16, 2017, about 1800 Pacific standard time, a Piper PA-28R-201T, N5966V, was substantially damaged following an emergency landing as a result of a total loss of engine power near Nipton, California. The commercial pilot and the sole passenger were not injured. Instrument meteorological conditions (IFR) prevailed at altitude, while visual meteorological conditions prevailed at the accident site. The cross-country flight was being operated in accordance with 14 Code of Federal Regulations Part 91, and an IFR flight plan was filed and active at the time of the accident. The flight departed North Las Vegas Airport (VGT), Las Vegas, Nevada, about 1655, with an intended destination of Brackett Field (POC), La Verne, California.

In a telephone interview with the National Transportation Safety Board investigator-in-charge shortly after the accident, the pilot reported that while in cruise flight at 10,000 feet he noticed the JPI indicator revealed that the #5 cylinder had spiked. This was followed shortly thereafter by the engine running rough, and then a total loss of engine power. The pilot subsequently made an emergency landing to the west on interstate highway 115, about 20 miles north of Baker, California. During the landing roll the airplane exited the right side of the highway and into some soft dirt. An onsite damage assessment by Federal Aviation Administration inspectors assigned to the Las Vegas Flight Standards District Office revealed that the airplane's right wing spar was substantially damaged.

The airplane was recovered to a secured storage facility in Phoenix, Arizona for further examination.

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Accident Rpt# ERA18FA016	11/07/2017 1845 CST	Regis# N47831	Morrison, TN	Apt: Warren County Memorial RNC
Acft Mk/Mdl PIPER PA 32-300		Acft SN 32-7840014	Acft Dmg: DESTROYED	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-540-K1G5		Acft TT 4365	Fatal 2 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: A W STILES CONTRACTORS INC		Opr dba:		Aircraft Fire: GRD
				AW Cert: STN

Events

1. Approach-IFR missed approach - Loss of control in flight

Narrative

On November 7, 2017, about 1845 central standard time, a Piper PA-32-300, N47831, was destroyed after it impacted terrain near Morrison, Tennessee. The flight instructor and a private pilot were fatally injured. Instrument meteorological conditions prevailed, and an instrument flight rules flight plan was filed for the flight, which originated from Monroe County Aeroplex Airport (MVC), Monroeville, Alabama, about 1625. The instructional flight was conducted under the provisions of 14 Code of Federal Regulations Part 91 and was destined for Warren County Memorial Airport (RNC), McMinnville, Tennessee.

According to preliminary air traffic control data provided by the Federal Aviation Administration (FAA), the controller cleared the airplane for the RNAV Runway 23 approach to RNC and switched the airplane to the common traffic advisory frequency (CTAF). A radar target identified as the accident airplane executed a missed approach and requested a clearance to Upper Cumberland Regional Airport (SRB), Sparta, Tennessee. The controller radar identified the airplane, issued a climb to 5,000 ft, a clearance to SRB, and issued the weather for SRB. The radar target reached 5,000 ft and turned toward SRB. Then, one of the pilots declared a "Mayday" and the radar target was observed in a rapid descent before radar contact was lost.

According to witnesses, the engine was "loud" and they reported hearing it "throttle up" before they heard the impact.

According to FAA records, the flight instructor held a commercial pilot certificate with ratings for airplane multiengine land, airplane single-engine land, glider, rotorcraft-gyroplane, and instrument airplane. In addition, he held a flight instructor certificate with ratings for airplane single-engine, glider, rotorcraft-gyroplane, and instrument airplane. He received a BasicMed certificate on June 22, 2017. According to the flight log found in the airplane, the flight instructor had accumulated about 2 hours of flight time in the accident airplane since October 6, 2017.

According to FAA records, the private pilot held a private pilot certificate with a rating for airplane single-engine land. The private pilot was issued a third-class medical certificate on November 3, 2016. At that time, he reported 16 hours of total flight time, of which the 16 hours were within the previous 6 months of the medical examination. According to a flight log found in the wreckage, the private pilot had accumulated about 24 hours of flight time in the accident airplane since October 6, 2017.

According to FAA records, the airplane was manufactured in 1978. In addition, it was powered by a Lycoming IO-540 series, 300-horsepower engine that was equipped with a Hartzell constant-speed propeller. According to airplane maintenance logbooks, the most recent annual inspection was completed on May 1, 2017, at a total time of 4,133 hours and a Hobbs time of 1549.3 hours. According to a flight log located in the main wreckage, at the time of departure, the airplane Hobbs indicated 1781.3 hours.

The main wreckage was located in a soy bean field at an elevation of 1,030 ft above mean sea level. The airplane impacted the field and came to rest about 100 ft beyond the initial impact point on a 040° heading. A 2.5 ft indent was noted in the field at the initial impact point. All major components of the airplane were located in the vicinity of the main wreckage.

The wreckage came to rest upright and was partially consumed by postimpact fire. Flight control continuity was confirmed from all flight control surfaces to the flight controls in the cockpit through cuts made to facilitate recovery. The right wing exhibited leading edge damage and sections were consumed by postimpact fire. The inboard section of the right flap remained attached to the right wing. The outboard right aileron remained attached to the right wing at the outboard hinge. The remainder of the right aileron was consumed by fire. The left wing was impact separated at the spar box and remained attached at the forward fuselage attach point. The leading edge exhibited impact damage and skin separation. Thermal damage was noted on the inboard approximate 5-ft section of the left wing. The outboard approximate 8-ft section of the left wing was impact separated and located in the vicinity of the main wreckage. The vertical stabilizer remained attached to the fuselage. The rudder remained attached to the vertical stabilizer. The stabilator remained attached at all attach points. The right side of the stabilator was deformed in the positive direction. The trim tab remained attached to the stabilator at all attach points. The trim tab control was

measured and corresponded to the near full nose up position.

The propeller remained attached to the crankshaft flange. All three propeller blades remained attached to the hub. There was leading edge damage noted along all of the blades

The engine remained attached to the firewall, but was removed to facilitate examination. Engine crankshaft continuity was confirmed from the propeller flange to the accessory section of the engine. All cylinders remained attached to the crankcase and thumb compression and suction was observed on all cylinders. The rocker box covers were removed and no anomalies were noted with the valve springs and rocker arms. Valvetrain continuity was confirmed when the crankshaft was rotated through 360-degrees of motion. The vacuum pump was removed and disassembled. The vanes and rotor remained intact. The composite vacuum drive was consumed by post impact fire. Both magnetos remained attached to the engine. However, both magnetos were partially consumed by fire. The oil filter was removed and disassembled. The filter was charred and absent of metallic debris. The oil suction screen was removed from the engine and free of debris.

The 1845 recorded weather observation at RNC, which was about 5 miles northeast of the accident location, included wind from 350ø at 6 knots, visibility 2 1/2 miles, mist, overcast clouds at 500 ft above ground level, temperature 12ø C, dew point 11ø C; and an altimeter setting of 30.09 inches of mercury.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# ANC18LA006	10/30/2017 826 EDT	Regis# N4213F	Dawsonville, GA	Apt: N/a
Acft Mk/Mdl PIPER PA 32R-300		Acft SN 32R-7680432	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl LYCOMING TIO-540			Fatal 0 Ser Inj 1	Flt Conducted Under: FAR 091
Opr Name: RICKY TODD PEAVY		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

1. Enroute - Loss of engine power (total)

Narrative

On October 30, 2017, about 0826 eastern daylight time, a Piper PA-32R airplane, N4213F, sustained substantial damage during a forced landing on an asphalt race track about 4 miles west-northwest of Dawsonville, Georgia. The private pilot sustained serious injuries. The airplane was registered to Peavy LLC and was being operated as a 14 Code of Federal Regulations (CFR) Part 91 instrument flight rules (IFR) flight. Visual meteorological conditions prevailed and an IFR flight had been filed. The flight departed Gainesville, Georgia (GVL) about 0807 destined for Gary, Indiana (GYY).

According to the pilot, while climbing through 8,000 ft mean sea level (msl) to an assigned altitude of 10,000 ft msl, he heard a sound consistent with a prop governor overspeed which lasted about 5 seconds before returning to normal. Coinciding with the sound, was a low oil quantity light and a reading of zero on the oil pressure gauge. After declaring an emergency, the pilot began a descent for an emergency landing. When the aircraft was passing through about 5,000 ft msl, the pilot heard a loud "pop or bang" and saw a puff of smoke emit from under the engine cowling and smoke entered the cockpit through the cabin heat system. Around 3,500 ft msl, the pilot tried to add some power before sensing a "bad vibration" that felt as if a propeller blade had separated. About the same time as the vibration, the engine lost power.

Seeing an asphalt racetrack below, the pilot selected one of the straight sections of track for landing. As the airplane neared the surface, a white truck moved in the way and the pilot veered the airplane left to avoid a collision. Following the maneuver, the airplane's right wing struck a dirt berm, resulting in substantial damage.

An on-site examination of the airplane by a Federal Aviation Administration (FAA) aviation safety inspector revealed that the bottom of the fuselage was coated in oil and the engine crank case was fractured at the upper aft attach bolts of the number six cylinder. All three propeller blades were present, with only one blade exhibiting signs of damage. The damaged blade was bent aft with no significant signs of leading edge damage or scaring. The two remaining blades were free of impact damage.

The closest official weather observation station is GVL, which is located about 20 miles southeast of the accident site. At 0753, a METAR was reporting, in part, wind 270ø at 8 knots; visibility 10 statute miles; clouds and ceiling clear; temperature 36ø F; dew point 28ø F; altimeter 29.96 inches of Mercury.

The airplane was equipped with a Lycoming TIO-540 series engine. A detailed examination is pending.

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

Events

1. Landing - Nose over/nose down

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# ERA18LA021	11/10/2017 1520 EST	Regis# N207GT	Annapolis, MD	Apt: Lee ANP
Acft Mk/Mdl SOCATA TB200-XL		Acft SN 2078	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-360-A1B6D			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: TIPTON TAMPICO LLC		Opr dba:		Aircraft Fire: UNK
				AW Cert: STN

Events

1. Maneuvering - Loss of engine power (partial)

Narrative

On November 10, 2017, about 1520 eastern standard time, a Socata TB200, N207GT, operated by Tipton Tampico LLC, was substantially damaged during a forced landing near Annapolis, Maryland. The commercial pilot and two passengers were not injured. The personal flight was conducted under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed, and no flight plan was filed for the flight that departed Tipton Airport (FME), Fort Meade, Maryland, about 1430.

The pilot reported that he was conducting a sightseeing flight with his two children around the eastern shore of Maryland. About 45 minutes after departure, the airplane was at an altitude of 1,500 ft and about 25 miles southeast of FME, when the pilot felt a very light and subtle vibration from the engine. Shortly thereafter, the propeller rpm increased to 2,700 rpm uncommanded and was "pegged at the redline." He followed the checklist and reduced engine power in an attempt to remain below redline rpm, but it had little effect. The airplane was 11 miles southeast of FME when the engine vibration increased, and the cockpit started filling-up with smoke; he diverted to Lee Airport (ANP) Annapolis, Maryland. The pilot reported that the engine gauges were all "indicating green" during this time, but once the situation started deteriorating rapidly, he focused on flying the airplane and did not recall reading the gauges again.

Immediately after turning south towards ANP at around 1,400 feet, the engine experienced a total loss of power. The pilot realized that the airplane would not be able reach the airport and he looked for a place to land. He maintained 70 knots in a glide and found an exit ramp on a state highway that appeared to be relatively straight and free of vehicles. The airplane touched down normally on the road, but struck a light pole and a guardrail before coming to rest on the grassy shoulder of the road.

Examination of the airplane by a Federal Aviation Administration (FAA) inspector revealed that both wings were sheared, the engine detached from the fuselage, and the right horizontal stabilator was crushed.

According to FAA records, the airplane was issued a standard airworthiness certificate in the normal category on September 24, 2001. It was a four-place, internally braced low-wing airplane, that was equipped with fixed tricycle landing gear, and a Lycoming IO-360, 200-horsepower engine with a two-blade metal constant-speed propeller.

The weather conditions reported at FME, 12-miles northeast of the accident site, at 1524, included wind from 350ø at 12 knots gusting to 17 knots, visibility 10 miles, clear skies, temperature 3ø C, dew point -9ø C, and an altimeter setting of 30.38 inches of mercury.

The airplane was recovered from the accident site and retained for additional examination.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# CEN17LA036	11/06/2016 1222 CST	Regis# N4252K	San Marcos, TX	Apt: San Marcos Regional HYI
Acft Mk/Mdl STINSON L 5		Acft SN 3551	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-435-1		Acft TT 1257	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: PATTERSON JERRY E		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

1. Initial climb - Fuel starvation
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Narrative

On November 6, 2016, about 1222 central standard time, a Stinson L5, N4252K, nosed over during a forced landing at the San Marcos Regional Airport (HYI), San Marcos, Texas. The private pilot and passenger received minor injuries. The airplane was substantially damaged. The aircraft was registered to a private individual and was operated 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 on a flight plan. The flight originated from HYI about 1100.

The pilot reported the airplane bounced while landing on runway 13, so he performed a go-around. He reported the engine lost power at an altitude of about 500 ft above the ground during climbout. The pilot made a turn to land on runway 35; however, the airplane was not able to make it to the runway, so he landed on the wet grass between the runways. Upon touchdown, the left main gear collapsed when it dug into the soft terrain and the airplane nosed over resulting in substantial damage to the vertical stabilizer and wings.

The airplane was full of fuel, 15 gallons usable in each tank, when the flight was initiated. The pilot reported he had the left fuel tank selected during the entire 1 hour, 22-minute-long flight. The pilot reported the fuel quantity indicator showed between π and $3/8$ of a tank of fuel remaining in the left fuel tank at the time of the accident. The right fuel tank was full, and the pilot reported he should have switched tanks before the landing. He reported the left fuel tank had previously shown signs of fuel seeping and that the fuel quantity gauges were not reliable. The pilot stated the airplane usually burned between 9 and 10 gallons per hour fuel.

A postaccident examination of the airplane by a Federal Aviation Inspector revealed fuel was not present in the fuel line leading into the engine and there was very little fuel in the left fuel tank. The inspector stated that the location of the fuel pick-up line in the wing, would have allowed the fuel in the wing to un-port during the climb.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# CEN18FA030	11/10/2017 1120 CST	Regis# N2363B	Pineville, LA	Apt: Pineville Municipal Airport 2L0
Acft Mk/Mdl TEMCO GC 1B		Acft SN 3663	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-360-A1A			Fatal 1 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: CANNIZZARO JOSEPH E		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

Events

1. Maneuvering-low-alt flying - Loss of engine power (total)
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Narrative

On November 10, 2017, about 1120 central standard time, a Temco GC 1B airplane, N2363B, was substantially damaged when it impacted trees and then terrain while maneuvering north of Pineville Municipal Airport (2L0), Pineville, Louisiana. The airline transport pilot was fatally injured. The personal flight was conducted under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed and no Federal Aviation Administration (FAA) flight plan had been filed for the flight. The cross-country flight departed Lake Water Wheel Airport (XS99), Shepherd, Texas, about 1000.

According to an employee with the fixed base operator at 2L0, the pilot called on the airport UNICOM frequency and asked for assistance verifying that the landing gear were down and locked. The airplane was observed to fly from south to north over the airport and at the north end of the airport the airplane pulled up and turned to the right. The employee confirmed that the landing gear appeared to be down but the pilot did not respond. The airport manager of 2L0 was flying in the area and flew to the location that the airplane was last seen. The wreckage of the airplane was located about 30 minutes later.

The wreckage of the airplane came to rest in heavily forested terrain about half a mile north of 2L0. The main wreckage came to rest inverted on a 60 degree heading. The main wreckage included the inboard sections of the left and right wings, fuselage, the left elevator and its horizontal stabilizer, the rudder, the vertical stabilizer, the right horizontal stabilizer, and the engine and propeller assembly. The outboard section of the left wing was found about 140 feet from the main wreckage. The outboard section of the right wing, sections of canopy, right elevator, ailerons, flaps, sections of cowling, and a section of the throttle were found in trees and on the ground between the outboard section of the left wing and the main wreckage. All major components of the airplane were located.

National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA18CA046 11/14/2017 1112 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: Prelim Prob Caus: Pending
Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091
Opr Name: OHIO STATE UNIVERSITY AIRPORT Opr dba: Aircraft Fire: NONE
