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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA18CA018	10/22/2017 1340 PST	Regis# N83512	Salinas, CA	Apt: Salinas Muni SNS
Acft Mk/Mdl AERONCA 7DC		Acft SN 7AC-2183	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: NOE JACK H TRUSTEE		Opr dba:		Aircraft Fire: NONE

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA18CA010 10/11/2017 1600 PDT Regis# N80060 Brawley, CA Apt: Brawley Muni BWC  
Acft Mk/Mdl AIR TRACTOR INC AT 402B-B Acft SN 402B-1355 Acft Dmg: SUBSTANTIAL Rpt Status: Prelim Prob Caus: Pending  
Acft TT 190 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 137  
Opr Name: Opr dba: Aircraft Fire: NONE

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# WPR18LA014	10/21/2017 1113 MST	Regis# N9239L	Maricopa, AZ	Apt: Hidden Valley Airport AZ43
Acft Mk/Mdl AMERICAN AVIATION AA 1A		Acft SN AA1A-0139	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-235			Fatal 0 Ser Inj 2	Flt Conducted Under: FAR 091
Opr Name: REMPert ROGER L		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Events

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

On October 21, 2017, about 1113 mountain standard time, an American Aviation AA-1A airplane, N9239L, impacted the runway hard after coming in contact with powerlines during the approach to land at Hidden Valley Airport (AZ43) in Maricopa, Arizona. The private pilot and passenger were seriously injured and the airplane sustained substantial damage throughout. The airplane was registered to, and operated by, the pilot as a 14 Code of Federal Regulations Part 91 personal flight. Visual meteorological conditions prevailed and no flight plan was filed. The flight originated from an unknown location.

Witnesses reported that while the airplane was on short final, the landing gear impacted powerlines. Subsequently, the airplane descended rapidly and impacted the ground hard.

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

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA18CA022 10/22/2017 1332 EST Regis# N337AM Williamsport, PA Apt: IPT  
Acft Mk/Mdl AVIAT AIRCRAFT INC A1-B Acft SN 2337 Acft Dmg: SUBSTANTIAL Rpt Status: Prelim Prob Caus: Pending  
Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091  
Opr Name: WILLIAM H. BRINE Opr dba: Aircraft Fire: NONE

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# ERA18LA010	10/18/2017 1000 EDT	Regis# N400LE	Manteo, NC	Apt: Dare County Regional MQI
Acft Mk/Mdl BEECH A24-R		Acft SN MC-72	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-360-A1B		Acft TT 3971	Fatal 0 Ser Inj 1	Flt Conducted Under: FAR 091
Opr Name: OBX AIRPLANES LLC		Opr dba:		Aircraft Fire: UNK
				AW Cert: STN

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## Events

1. Initial climb - Electrical system malf/failure

## Narrative

On October 18, 2017, about 1000 eastern daylight time, a Beech A24R, N400LE, impacted hard during a forced landing at Dare County Regional Airport (MQI), Manteo, North Carolina. The private pilot undergoing instruction (PUI), sustained serious injuries while the flight instructor sustained minor injuries. The airplane was substantially damaged, and was being operated under the provisions of 14 Code of Federal Regulations Part 91 as a local, instructional flight. Visual meteorological conditions prevailed at the time and no flight plan was filed for the flight which originated about 1 minute earlier.

The flight instructor, who was seated in the right seat, stated that there were no discrepancies with the airplane during the preflight inspection or engine run-up before takeoff. After becoming airborne, when the flight was near the midpoint of the runway at about 100 ft, the cockpit filled with smoke and she noted a burning wire and fire in front of her position. She also reported that the cockpit became hot. She took control from the PUI, and directed the battery and alternator switches to be turned off. She initiated a turn to return to the airport, parallel to runway 17, and reported the airplane impacted hard.

Preliminary examination of the accident site by several Federal Aviation Administration (FAA) inspectors revealed the airplane first impacted on airport property east of runway 17 near the approach end of the runway. The airplane came to rest upright about 500 ft and 212ø from the initial impact location. Examination of the cockpit by a FAA airworthiness inspector revealed a wire with melted insulation hanging from under the right side of the instrument panel. The airplane was recovered and secured for further examination.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# WPR15LA132	03/22/2015 1115 MST	Regis# N7628R	Flagstaff, AZ	Apt: Flagstaff Pulliam FLG
Acft Mk/Mdl BEECH B23		Acft SN M-1249	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-360-A4G		Acft TT 5371	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: WILSON RODNEY C		Opr dba:		Aircraft Fire: NONE

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## Events

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

On March 22, 2015, about 1115 mountain standard time, a Beech B23, N7628R, veered off runway 21 during the landing rollout at the Flagstaff Pulliam Airport (FLG), Flagstaff, Arizona. The private pilot/owner operated the airplane under the provisions of 14 Code of Federal Regulations Part 91 as a local area personal flight. The pilot and passenger were not injured. The airplane sustained substantial damage. Visual meteorological conditions prevailed for the local area flight, and no flight plan had been filed. The flight departed FLG about 1050.

According to the pilot, just prior to rotation for takeoff, the nose wheel seemed to turn left slightly, rudder input maintained a straight path on the runway centerline, but the nose wheel side skidded for a few seconds before he rotated. They flew for about an hour and then returned to the airport for a full stop landing. The pilot stated that touchdown was smooth and uneventful. During the landing rollout, the nose wheel turned slightly left, and he corrected for the condition with full right rudder. He felt that the right rudder bungee did not have enough pull to stop the nose wheel from continuing to turn more sharply to the left. The pilot applied right brake, but was not able to correct the turn to the left. The airplane tipped up on its nose wheel and right main landing gear, which caused the nose wheel to turn more to the left. The pilot applied full power and elevator to reduce the weight off the nose wheel in an attempt to turn it to the right. The right wing struck a precision approach path indicator (PAPI) box, and the pivot tube on the left wing caught the top of another PAPI box. After coming to a stop, the pilot and passenger exited the airplane.

Flagstaff airport reported wind from 230 degrees at 13 knots gusting to 20 knots.

The airplane was inspected by a Federal Aviation Administration (FAA) inspector, with no mechanical anomalies identified.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# CEN17LA282	07/23/2017 2230 CDT	Regis# N4216D	Wichita Falls, TX	Apt: Wichita Valley F14
Acft Mk/Mdl BEECH G35-NO SERIES		Acft SN D-4414	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL E-225-8		Acft TT 3888	Fatal 0 Ser Inj 1	Flt Conducted Under: FAR 091
Opr Name: KNOWLES AVIATION, LLC		Opr dba:		Aircraft Fire: NONE

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## Events

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

## Narrative

On July 23, 2017, about 2230 central daylight time, a Beech G35, N4216D, was substantially damaged when it struck an irrigation canal off the end of runway 13 at Wichita Valley Airport (F14), Wichita Falls, Texas. Visual meteorological conditions prevailed at the time of the accident. The personal flight was being conducted under the provisions of Title 14 Code of Federal Regulations Part 91 without a flight plan. The pilot, the sole occupant aboard, was seriously injured. The local flight originated from Grand Prairie (GPM), Texas, about 2130.

According to the pilot's accident report, he departed GPM about 2130, and received flight following and a clearance into Class B airspace. The flight proceeded normally until he entered the downwind leg for runway 13 at F14. He noted scattered thunderstorms ahead. On final approach, he thought the airplane was too high and he considered making a go-around. He felt strong downdraft and encountered heavy rain and turbulence. He also observed several lightning strikes ahead.

The pilot made the decision to land and risk running off the end of the runway rather than possibly entering the thunderstorm. The pilot said he did not realize there were 6-foot tall berms on either side of a drainage ditch 50 to 60 feet from the end of the runway because of the tall weeds obscured them. There was also standing water on the second half of the runway. The airplane went off the end of the runway and struck the first berm. The impact rendered the pilot unconscious. When he regained consciousness minutes later, the airplane was in a drainage ditch and water had filled the cockpit. He remained in the airplane until daylight, extricated himself, and walked to a nearby house where he called 9-1-1.

Federal Aviation Administration (FAA) inspectors examined the airplane and reported finding substantial damage to the forward fuselage and firewall.

Weather observations recorded at Sheppard Air Force Base/Wichita Falls Municipal Airport (SPS), located 7 miles to the east of F14, reported winds varying from 060ø to 360ø at 16 to 20 knots, and gusting from 21 to 29 knots, with a peak wind at 35 knots. There was a thunderstorm in the vicinity, with lightning observed in all quadrants.

# National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# WPR17LA072 03/01/2017 1250 PST Regis# N39894 Carson City, NV Apt: Carson Airport CXP  
Acft Mk/Mdl BELLANCA 17-30A Acft SN 73-30544 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending  
Eng Mk/Mdl CONT MOTOR IO 520 SERIES Acft TT 3394 Fatal 0 Ser Inj 1 Flt Conducted Under: FAR 091  
Opr Name: MULCAHY ROBERT F Opr dba: Aircraft Fire: NONE

## Events

1. Initial climb - Fuel related

## Narrative

On March 1, 2017, about 1250 Pacific standard time, a Bellanca 17-30A, N39894, experienced a loss of engine power shortly after takeoff from the Carson Airport (CXP), Carson City, Nevada. The pilot, sole occupant, was seriously injured, and the airplane sustained substantial damage to both wings. The airplane was registered to and operated by the pilot as a 14 Code of Federal Regulations Part 91 personal flight. Visual meteorological conditions prevailed at the time of the accident no flight plan was filed for the local flight.

At the time of this report, the pilot was unable to provide a statement or complete the NTSB Pilot/Operator Aircraft Accident/Incident Report Form 6120.1.

A witness reported that he observed the airplane takeoff normally, with the exception that the landing gear remained in the down position. At the end of the runway, when the airplane was no higher than 300 feet, it sounded as if the engine decreased to idle. The airplane made a right 180o turn and descended rapidly before impacting the ground.

Postaccident examination of the airframe revealed continuous control continuity throughout the airframe. In addition, control continuity was established from the cabin to the throttle, mixture, and propeller controls. The fuel lines were intact from the engine to the firewall, and from the wing tanks to the fuselage; the remaining lines were inaccessible due to airframe damage. Air was blown from the engine driven fuel pump inlet line aft through the fuel selector and air/fuel exited the left wing fuel tank outlet line. With no obvious anomalies with the airframe or engine, the engine was shipped to Continental Motors to be run in a test cell.

The engine was installed into a test cell. It started normally and ran for a while at 1,200 RPM with no anomalies noted. The power was increased to 2,100 rpm and the engine operated inconsistently; the fuel pump pressure was fluctuating, and after about 30 seconds the engine stabilized. After stabilization, a magneto check was completed and no abnormalities were noted. The engine power was increased to 2,400 RPM momentarily before full power was applied; the engine continued to operate normally. The engine power was abruptly changed between idle and full power several times with no anomalies noted. Unable to recreate the inconsistent running engine, it was shut down normally and removed from the test cell.

The fuel components were removed from the engine. The fuel manifold valve was disassembled and rust indicative of corrosion was present on the screen and lower housing of the unit. The plunger was removed and it also exhibited rust. The diaphragm was removed and a small amount of fuel was found on the "dry" side of the valve; the vent extending from this section was examined and clear of debris.

The most recent entries from the airplane's airframe and engine maintenance logbooks were three annual inspections that occurred over a span of about 8 years. The tach time difference between these inspections was a total of 73 hours, for an average of 9 hours a year. The wife of the pilot reported that they purchased the airplane in 2002, and it has been parked in a hangar for a majority of their ownership. About 1.5 years leading up to the accident, the airplane had been undergoing an annual inspection and new paint, which was completed on February 24, 2017. When the maintenance was completed, the pilot ran the airplane's engine on the ground for about 45 minutes with no anomalies noted; the accident flight was the first flight post maintenance.

According to a Continental Motors representative the fuel manifold valve is generally not disassembled by a mechanic in the field, and there are rarely issues with this engine component. If fuel issues are suspected, the troubleshooting section of the Continental Motors Standard Practices Manual (M-0) directs the mechanic to an isolated fix. If the problem is isolated to the fuel manifold, it is to be removed and either sent to an appropriate overhaul facility, or replaced by a new or rebuild from Continental Motors.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA524	09/03/2017 1610 CDT	Regis# N52813	Oshkosh, WI	Apt: Pioneer WS17
Acft Mk/Mdl BOEING A75N1(PT17)-UNDESIGN		Acft SN 75-394	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL W-670-6N		Acft TT 7121	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: WILLIAM D. TISCHER		Opr dba:		Aircraft Fire: NONE
				AW Cert: STA

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## Events

1. Landing - Nose over/nose down
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## Narrative

The pilot of the tailwheel-equipped biplane reported that, during the landing roll, about half way down the grass runway, the biplane "very quickly" became upside down. After exiting the biplane, he examined the runway and saw where the propeller had dug in and viewed skid marks in the grass "where it was obvious that the brakes had been applied and locked up." Subsequently, the airplane sustained substantial damage to the vertical and horizontal stabilizer.

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

The automated weather observation system about 1 nautical mile from the accident site reported, about the time of the accident, the wind was 230ø at 7 knots, gusting to 14 knots. The pilot landed on runway 31.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA504	08/18/2017 1540 EDT	Regis# N4859N	Centerville, TN	Apt: Centerville Muni GHM
Acft Mk/Mdl BOEING E75-UNDESIGNAT		Acft SN 75-5650	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL W670-6N			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: ERIC L. COLLINS		Opr dba:		Aircraft Fire: NONE
				AW Cert: SPR

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## Events

1. Landing - Loss of control on ground

## Narrative

The pilot, who was receiving instruction, reported that during the landing roll prior to stopping, the tailwheel-equipped biplane "made a sudden move to [the] left." He added that, quick reactions by the flight instructor kept the biplane on the runway and going straight.

The biplane once again under the control of the pilot, then "dropped the left wing and despite corrective inputs on the controls would not respond to further control inputs" and ground looped to the right. Subsequently, the left main landing gear collapsed and the biplane came to rest nose down on the runway.

The biplane sustained substantial damage to all four wings and fuselage.

The pilot reported that, "it was [his] personal contention and belief that the upper left gear failed[,] resulting in substantial damage to the [biplane] and the resultant ground loop." He added that, "[he] did not believe that this particular incident could have been prevented."

A review of a video of the accident that was submitted, showed in part a loss of control early in the landing roll, followed by a subsequent loss of control and ground loop to the right.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA237	04/18/2017 1030 CDT	Regis# N2198U	Earl Park, IN	Apt: Rheude II08
Acft Mk/Mdl BRANTLY B 2B		Acft SN 409	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING IVO760		Acft TT 1269	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: ROBERT A. CARLSON		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Summary

The pilot in the helicopter reported that, after 30 minutes of "hover pattern work," he decided to depart the practice area. He reported that the wind at the time of the accident was from 150ø between 5 and 15 knots with 30-knot wind gusts. The pilot exited the practice area. He made a right pedal turn at 25 to 30 ft above ground level to return to the practice area. About 120ø after beginning the right pedal turn, he felt a high wind gust, and the helicopter began to rotate to the right, "which I could not terminate through the controls." The helicopter descended, struck the ground, and rolled onto its left side. The helicopter sustained substantial damage to the main rotor drive system and the tail rotor drive system. ÿ

According to the Federal Aviation Administration Helicopter Flying Handbook (FAA-8083-21A), The Helicopter Instructors Flying Handbook (FAA-8083-4), and Advisory Circular (AC) 90-95 Unanticipated Rapid Right Yaw,

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

According to FAA-8083-21A, Chapter 11-20, paragraph 2:

Weathercock Stability (120-240ø)

In this region, the helicopter attempts to weathervane, or weathercock, its nose into the relative wind. Unless a resisting pedal input is made, the helicopter starts a slow, uncommanded turn either to the right or left, depending upon the wind direction. If the pilot allows a right yaw rate to develop and the tail of the helicopter moves into this region, the yaw rate can accelerate rapidly. In order to avoid the onset of LTE in this downwind condition, it is imperative to maintain positive control of the yaw rate and devote full attention to flying the helicopter.

Weathercock stability is defined as a region of loss of tail rotor effectiveness (120 degree - 240 degree tailwind) that will weathervane the helicopter, and if not prevented will result in a loss of helicopter control about the horizontal axis.

The handbook further states:

Pilots who put themselves in situations where the combinations above occur should know that they are likely to encounter LTE. The key is to not put the helicopter in a compromising condition but if it does happen being educated enough to recognize the onset of LTE and be prepared to quickly react to it before the helicopter cannot be controlled.

According to AC 90-95, Section 10. a. 1-2 (page 8), Recommended Recovery Techniques:

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

(1) Apply full left pedal. Simultaneously, move cyclic forward to increase speed. If altitude permits, reduce power.

(2) As recovery is affected, adjust controls for normal forward flight.

b. Collective pitch reduction will aid in arresting the yaw rate but may cause an increase in the rate of descent. Any large, rapid increase in collective to prevent ground or obstacle contact may further increase the yaw rate and decrease rotor rpm.

Per the National Transportation Safety Board Pilot Aircraft Accident Report, the pilot reported that he should have exited the practice area to the west with an immediate left turn to the south, allowed the helicopter to establish translational lift, and increased airspeed and altitude before making a turn to return to the practice area. "My initial plan was flawed from the outset, in retrospect."

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

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## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's failure to recognize that he was operating in the weathercock stability flight regime of loss of tail rotor effectiveness, which resulted in a loss of directional control during the execution of a right pedal turn.

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## Events

1. Takeoff - Loss of tail rotor effectiveness
2. Takeoff - Loss of control in flight
3. Takeoff - Collision with terr/obj (non-CFIT)

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## Findings - Cause/Factor

1. Personnel issues-Action/decision-Info processing/decision-Identification/recognition-Pilot - C

## Narrative

The pilot in the helicopter reported that after 30 minutes of "hover pattern work" he decided to depart the practice area. He reported that the wind at the time of the accident was from 150ø with 30 kt. wind gusts. The pilot tookoff to the northwest. He made a right pedal turn to return to the practice area. About 120ø after beginning the right pedal turn, he felt a high wind gust and the helicopter began to rotate to the right "which I could not terminate through the controls." The helicopter descended and struck the ground and rolled onto its left side. The helicopter sustained substantial damage to the main rotor drive system and the tail rotor drive system.

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

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

According to the Federal Aviation Administration Helicopter Flying Handbook (FAA-8083-21A), Chapter 11-20, paragraph 2:

### Weathercock Stability (120-240ø)

In this region, the helicopter attempts to weathervane, or weathercock, its nose into the relative wind. Unless a resisting pedal input is made, the helicopter starts a slow, uncommanded turn either to the right or left, depending upon the wind direction. If the pilot allows a right yaw rate to develop and the tail of the helicopter moves into this region, the yaw rate can accelerate rapidly. In order to avoid the onset of LTE in this downwind condition, it is imperative to maintain positive control of the yaw rate and devote full attention to flying the helicopter.

Weathercock stability is defined as a region of loss of tail rotor effectiveness (120 degree - 240 degree tailwind) that will weathervane the helicopter, and if not prevented will result in a loss of helicopter control about the horizontal axis.

According to the Helicopter Flying Handbook (FAA 8083-21A):

Pilots who put themselves in situations where the combinations above occur should know that they are likely to encounter LTE. The key is to not put the helicopter in a compromising condition but if it does happen being educated enough to recognize the onset of LTE and be prepared to quickly react to it before the helicopter cannot be controlled.

According to Federal Aviation Administration Advisory Circular 90-95, Section 10. a. 1-2 (page 8), Recommended Recovery Techniques:

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

(1) Apply full left pedal. Simultaneously, move cyclic forward to increase speed. If altitude permits, reduce power.

(2) As recovery is effected, adjust controls for normal forward flight.

b. Collective pitch reduction will aid in arresting the yaw rate but may cause an increase in the rate of descent. Any large, rapid increase in collective to prevent ground or obstacle contact may further increase the yaw rate and decrease rotor rpm.

Per the National Transportation Safety Board Pilot Aircraft Accident Report, the pilot reported that he should have allowed the helicopter to fly establish translational lift, increase airspeed and altitude before making a turn. "My initial plan was flawed from the outset, in retrospect."

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

# National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA16LA525	09/18/2016 950 PDT	Regis# N76284	Davis, CA	Apt: Yolo County DWA
Acft Mk/Mdl CESSNA 120-NO SERIES		Acft SN 10698	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL C-85-12F		Acft TT 6259	Fatal 0 Ser Inj 1	Flt Conducted Under: FAR 091
Opr Name: CHRISTOPHER BOSS		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

## Events

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

## Narrative

On September 18, 2016, about 0950 Pacific daylight time (PDT), a Cessna 120 airplane, N76284, veered off the runway during the landing roll, and nosed over at Yolo County Airport (DWA) in Davis, California. The empennage sustained substantial damage. The pilot sustained minor injuries and the sole passenger sustained serious injuries. The airplane was registered to a private individual, and was operated by the pilot as a visual flight rules (VFR), local, personal flight under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed for the flight; no flight plan was filed. The flight originated from DWA, about 0840 PDT.

The pilot of the tailwheel-equipped airplane reported that, during the landing roll, the airplane "began suddenly swerving with increasingly tremendous centrifugal force to the left" and would not respond to opposite rudder inputs. The airplane veered off the runway to the left and into a freshly plowed field. During the runway excursion, the airplane crossed over a dirt trench, and then nosed over.

During the nose over, the center safety belt bracket, which secures the pilot and front seat passenger's seatbelts to the cabin floor failed, and the pilot was released from his seatbelt.

An examination of the restraint system revealed that the aluminum center safety belt bracket, which was likely installed when the airplane was manufactured in 1946, had failed in shearing overstress during the nose over, which resulted in the pilot being released from the restraint system. Examination of the airplane manufacturer's records revealed that shortly after the airplane was manufactured, the manufacturer began installing a steel center safety belt bracket in new production airplanes. (See Materials Laboratory Factual Report in public docket for additional information.)

Following a similar accident (ERA14FA327), the manufacturer issued a service bulletin on February 17, 2015 that called for inspection of the center safety belt bracket on all Cessna 120 and 140 airplanes to determine if the latest type (steel) bracket was installed and replacement of any older type (aluminum) brackets found with the latest type. (See SEB-25-03 in public docket for additional information.)

During a telephone conversation with the mechanic that completed the airplane's annual inspection, he stated that he was unaware of the service bulletin related to the center safety belt bracket.

A review of the FAA aircraft registry database found that approximately 2,145 airplanes, which were manufactured with this center safety belt bracket, were currently registered in the United States.

Of these, about 2,099 (98%) were manufactured before the effectivity of the material change.

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA18CA027	10/21/2017 1019 EDT	Regis# N72552	New Bern, NC	Apt: EWN
Acft Mk/Mdl CESSNA 120-NO SERIES		Acft SN 9722	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: LEONHARDT DARRELL D		Opr dba:		Aircraft Fire: NONE

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA18CA020	10/22/2017 1808 EDT	Regis# N22092	Pottsville, PA	Apt: Schuylkill County /Joe Zerbey ZER
Acft Mk/Mdl CESSNA 150-H		Acft SN 15068059	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: POCONO MOUNTAINS FLYING CLUB INC		Opr dba:		Aircraft Fire: NONE

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA18CA008    10/08/2017 1645 EDT    Regis# N7313G    Medina, OH    Apt: Medina Muni 1G5  
Acft Mk/Mdl CESSNA 150-L    Acft SN 15074645    Acft Dmg: SUBSTANTIAL    Rpt Status: Prelim    Prob Caus: Pending  
Fatal 0    Ser Inj 0    Flt Conducted Under: FAR 091  
Opr Name: OLSON PRODUCTS INC DBA    Opr dba:    Aircraft Fire:

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# CEN18LA015	10/18/2017	1045 CDT	Regis# N50609	Willmar, MN	Apt: Willmar Municipal Airport BDH
Acft Mk/Mdl CESSNA 150J			Acft SN 15069430	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR 0-200 SERIES				Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: ERIC RUDNINGEN			Opr dba:		Aircraft Fire: NONE

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## Events

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

On October 18, 2017, at 1045 central daylight time, a Cessna 150J airplane, N50609, nosed over during a forced landing in Willmar, Minnesota. The certified flight instructor received minor injuries and the private pilot was not injured. The airplane received substantial damage to the wings and fuselage. The airplane was registered to an individual and was operated by the CFI as a 14 Code of Federal Regulations Part 91 instructional flight. Visual flight rules conditions existed near the accident site at the time of the accident, and a flight plan had not been filed. The local flight departed from the Willmar Municipal Airport (BDH), just prior to the accident.

The instructor stated they checked the magnetos and carburetor heat during the engine runup, at 1,500 rpm, and both functioned normally. They initiated the takeoff on the grass runway which was soggy due to rain. He took control of the airplane during the takeoff and lifted the nose off the ground because they were getting "bogged down" in the soft terrain. The airplane became airborne about 2,000 ft down the 3,000 ft long runway. The instructor stated he lowered the nose in ground effect to gain airspeed, but the airplane did not accelerate.

The instructor stated there was a road and a field on which to land. He turned the airplane, but had to level off because he was concerned the airplane was going to stall. He stated that during the landing in the plowed field, he flared too high and the contacted the terrain hard on the main gear. The nose gear dug into the soft terrain and collapsed when it settled to the ground. The airplane then nosed over.

The instructor did not notice the tachometer, but he reported that the private pilot stated the rpm never increased above 1,900.

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA489	08/11/2017 1302 CDT	Regis# N4189V	Axtell, KS	Apt: N/a
Acft Mk/Mdl CESSNA 170-UNDESIGNAT		Acft SN 18522	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR C145 SERIES			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: NICHOLAS BUESSING		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Events

1. Approach-VFR go-around - Aerodynamic stall/spin
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## Narrative

The pilot reported that, during a go around after a low approach, the left cabin door opened. He added that he reached back to close the door and the airplane aerodynamically stalled. The pilot was unable to recover and the airplane impacted the ground and struck multiple fences.

The airplane sustained substantial damage to the fuselage.

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

The pilot failed to submit the National Transportation Safety Board NTSB Form 6120.1 Pilot/ Operator Aircraft Accident/ Incident Report after multiple requests.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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

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## Events

1. Takeoff - Aerodynamic stall/spin

## Narrative

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

The airplane sustained substantial damage to the left wing.

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

# National Transportation Safety Board - Aircraft Accident/Incident Database

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

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## Events

1. Taxi-to runway - Ground collision
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## Narrative

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

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

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

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

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# ERA17CA250	07/19/2017 2027 EDT	Regis# N4876F	Factoryville, PA	Apt: Factoryville-seamans 9N3
Acft Mk/Mdl CESSNA 172-N		Acft SN 17273094	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320 SERIES		Acft TT 15424	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: ENDLESS MOUNTAINS AIR INC		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Summary

The private pilot reported that he had recently returned to flying after a lengthy period of inactivity and that this was his first solo flight after completing a comprehensive flight review. According to the pilot, after completing the traffic pattern, he landed the airplane at the midpoint of the 2,400-ft-long runway with 10 knots of excess airspeed and a slight tailwind. Despite maximum braking, the airplane overran the departure end of the runway and struck dense brush, which resulted in substantial damage to the engine firewall. The pilot further reported that there were no preimpact mechanical malfunctions or failures with the airplane that would have precluded normal operation.

## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's failure to attain the proper touchdown point, which resulted in a runway overrun.

## Events

1. Landing-landing roll - Runway excursion
2. Landing-landing roll - Collision with terr/obj (non-CFIT)

## Findings - Cause/Factor

2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
3. Environmental issues-Physical environment-Object/animal/substance-(general)-Contributed to outcome

## Narrative

The private pilot reported that he had recently returned to flying after a lengthy period of inactivity, and this was his first solo flight after completing a comprehensive flight review. According to the pilot, after completing the traffic pattern, he landed the airplane at the midpoint of the 2,400-foot runway with 10 knots of excess airspeed and a slight tailwind. Despite maximum braking, the airplane overran the departure end of the runway and struck dense brush, which resulted in substantial damage to the engine firewall. The pilot further reported that there were no preimpact mechanical malfunctions or failures with the airplane that would have precluded normal operation.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA268	05/03/2017 1055 HDT	Regis# N173LL	Kaunakakai, HI	Apt: Molokai MKK
Acft Mk/Mdl CESSNA 172-P		Acft SN 17275633	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320-D2J		Acft TT 9748	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: LANI LEA SKY TOURS, LLC		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Summary

The student pilot reported that she was practicing touch-and-go landings on an asphalt runway. She initiated an approach and bounced the landing and then she initiated a go-around. She was airborne when she pushed the carb heat in and applied full throttle "but mistakenly put flaps up, all at once." The airplane descended to the runway and landed hard. During the landing roll, she pulled the throttle back to idle, gained her bearings, and then initiated a takeoff. She noticed a binding and restriction in the elevator and yoke control movements while remaining in the airport's pattern. She declared an emergency and landed the airplane on the runway. The airplane sustained substantial damage to the elevator control column.

The manufacturer's Pilot's Operating Handbook identified the Balked Landing procedure as:

Throttle - Full Open

Carburetor Heat - Cold

Wing Flaps -20ø (Immediately)

Climb Speed - 55 KIAS

Wing Flaps - 10ø (Until obstacles are cleared) Retract (After reaching a safe altitude and 60 KIAS)

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

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## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The student pilot's incorrect flap configuration during the go-around, which resulted in a hard, forced landing.

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## Events

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

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## Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Configuration-Incorrect use/operation - C
2. Aircraft-Aircraft systems-Flight control system-TE flap control system-Incorrect use/operation - C
3. Personnel issues-Task performance-Use of equip/info-Use of equip/system-Student/instructed pilot - C

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## Narrative

The student pilot reported that she was practicing touch and go landings to an asphalt runway. She initiated an approach and bounced the landing, then she accomplished a go-around. However, she was airborne when she pushed the carb heat in and applied full throttle, "but mistakenly put flaps up, all at once." The airplane descended to the runway and landed hard. During the landing roll, she pulled the throttle back to idle and gained her bearings, then she initiated a takeoff. She noticed a binding and restriction in the elevator and yoke control movements while remaining in the airport's pattern. She declared an emergency and landed the airplane on the runway. The airplane sustained substantial damage to the elevator control column.

The manufacturer's pilot operating handbook identifies the Balked Landing procedure as:

1. Throttle - Full Open
2. Carburetor Heat - Cold
3. Wing Flaps -20ø (Immediately)
4. Climb Speed - 55 KIAS

5. Wing Flaps - 10ø (Until obstacles are cleared) Retract (After reaching a safe altitude and 60 KIAS)

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

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA389	07/03/2017 830 CDT	Regis# N2173Z	Shreveport, LA	Apt: Shreveport Downtown DTN
Acft Mk/Mdl CESSNA 172-R		Acft SN 17281216	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-360-L2A		Acft TT 8015	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: TUBREAU AVIATION SERVICES LLC.		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Summary

The solo student pilot reported that, during the first approach to land, the airspeed was about 10 knots fast. He added that, during the flare, he attempted to correct the airspeed by "pitching back," but the airplane bounced hard and then porpoised on the runway. He further added that he initiated a go-around and subsequently completed a normal landing after two additional goarounds. The right elevator, fuselage, and firewall sustained substantial damage. The student pilot reported that there were no preaccident mechanical malfunctions or failures with the airplane that would have precluded normal operation.

## Cause Narrative

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

## Events

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

## Findings - Cause/Factor

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

## Narrative

The solo student pilot reported that, during the first approach to land, the airspeed was about 10 kts. fast. He added that, during the flare he attempted to correct the airspeed by "pitching back," but the airplane bounced hard and then porpoised on the runway. He further added that, he initiated a go-around and subsequently completed a normal landing after two additional go-arounds.

The right elevator, fuselage, and firewall sustained substantial damage.

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

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA229	04/06/2017 1205 CDT	Regis# N2477F	San Marcos, TX	Apt: San Marcos Regional HYI
Acft Mk/Mdl CESSNA 172-S		Acft SN 172S10574	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-360-L2A		Acft TT 3436	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: COAST FLIGHT TRAINING.		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Summary

The solo student pilot reported that, during the landing flare, he "pulled aft yoke," which resulted in a "substantial balloon." He added that he "unconsciously pushed forward yoke resulting in a very hard flat or nose wheel first landing."

The airplane sustained substantial damage to the firewall and fuselage.

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

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## Cause Narrative

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

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## Events

1. Landing - Hard landing

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## Findings - Cause/Factor

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

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## Narrative

The solo student pilot reported that, during the landing flare he "pulled aft yoke" which resulted in a "substantial balloon." He added that, he "unconsciously pushed forward yoke resulting in a very hard flat or nose wheel first lading".

The airplane sustained substantial damage to the firewall and fuselage.

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

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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

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## Events

1. Landing-flare/touchdown - Hard landing
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## Narrative

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

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA283	05/02/2017 935 EDT	Regis# N704RB	Atlanta, GA	Apt: Dekalb-peachtree PDK
Acft Mk/Mdl CESSNA 172-SP		Acft SN 172S9657	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-360-L2A		Acft TT 4234	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: SKYBOUND AVIATION		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Summary

The flight instructor reported that he and his student were practicing landings. He reported that his student's approach was unstable and left of the centerline as the airplane approached the runway numbers. The instructor called for a go-around and applied full throttle, and the student pitched for a climb, but the airplane stalled. The instructor pushed the nose down to increase the airspeed, but the airplane impacted the runway. The airplane sustained substantial damage to both wings and the empennage.

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

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## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The student's incorrect use of the go-around procedure, which resulted in an aerodynamic stall, and the flight instructor's delayed remedial action.

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## Events

1. Landing - Abrupt maneuver
2. Landing - Attempted remediation/recovery
3. Takeoff - Aerodynamic stall/spin
4. Landing - Hard landing

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## Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Pitch control-Not attained/maintained - C
2. Personnel issues-Action/decision-Action-Delayed action-Instructor/check pilot - C
3. Personnel issues-Task performance-Use of equip/info-Aircraft control-Instructor/check pilot - C
4. Personnel issues-Task performance-Use of equip/info-Use of policy/procedure-Student/instructed pilot - C

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## Narrative

The flight instructor reported that he and his student were practicing landings to the runway. He reported that his student's approach was unstable and left of the centerline as the airplane approached the runway numbers. The instructor called for a go-around, and applied full throttle, and the student pitched for a climb but the airplane stalled. The instructor pushed the nose down to increase the airspeed, but the airplane impacted the runway. The airplane sustained substantial damage to both wings and the empennage.

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

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# CEN18FA011	10/13/2017 1734 CDT	Regis# N7CF	Ramsey, MN	Apt: N/a
Acft Mk/Mdl CESSNA 172M-M		Acft SN 17265261	Acft Dmg: DESTROYED	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-360-A1A		Acft TT 1351	Fatal 2 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: CHAD J RYGWALL		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Events

1. Maneuvering-low-alt flying - Low altitude operation/event
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## Narrative

On October 13, 2017, at 1734 central daylight time, a Cessna 172M airplane, N7CF, was destroyed during an in-flight collision with power lines and the Mississippi River near Ramsey, Minnesota. The pilot and passenger were fatally injured. The airplane was registered to and operated by private individuals as a 14 Code of Federal Regulations Part 91 personal flight. Day visual meteorological conditions prevailed. The flight was not operated on a flight plan. The local flight originated from the Princeton Municipal Airport (PNM), Princeton, Minnesota, about 1700.

Ground-based video footage depicted the airplane flying at a low altitude over the Mississippi River about 200 yards east of the accident site. The airplane appeared to be near treetop level proceeding northwest along the river. It appeared to be intact and in a shallow left turn apparently to follow a bend in the river at that location.

Witnesses reported observing the airplane strike power lines as it was flying along the river. Several witnesses noted that the airplane was below the level of the trees, which lined both sides of the river. One witness initially thought that the pilot intended to fly under the power lines due to the low altitude of the airplane. Several witnesses also noted that the sound of the engine seemed normal and steady before the accident.

The airplane impacted a set of four power lines installed horizontally across the river. The lines were installed with dual-pole supports on each shoreline. The supports did not appear to extend above the height of trees along either river bank. According to witness statements, the lines were equipped with red aerial marker balls.

The river was about 190 yards wide in the vicinity of the accident site and was bordered by wooded areas on both sides. The accident site was located near a bend in the river. The video footage and witness statements indicated that the airplane approached from the southeast. The section of the river approaching the bend was oriented to the northwest (about 300 degrees), while the section past the bend was oriented to the southwest (about 250 degrees), requiring an approximate 50-degree left turn to navigate the river. The power lines were located about 200 yards beyond the bend as the airplane proceeded northwest along the river.

According to data obtained from the U.S. Naval Observatory, at the time of the accident, the sun was approximately 9 degrees above the horizon to the west-southwest (249 deg). Sunset was at 1831 on the day of the accident.

# National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# ERA16LA008	10/10/2015 1400 EDT	Regis# N5295Y	Seville, FL	Apt: N/a
Acft Mk/Mdl CESSNA 172S-S		Acft SN 172S9236	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-360-L2A		Acft TT 6119	Fatal 1 Ser Inj 2	Flt Conducted Under: FAR 091
Opr Name: AIR AMERICA FLIGHT CENTER LLC.		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

## Events

1. Maneuvering-low-alt flying - Windshear or thunderstorm

## Narrative

On October 10, 2015, at 1400 eastern daylight time, a Cessna 172S, N5295Y, was substantially damaged after a loss of control during a low altitude maneuver near Seville, Florida. The commercial pilot and pilot-rated passenger sustained serious injuries, and the rear seated passenger was fatally injured. The airplane was registered to Mike Bravo LLC., and operated under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Visual meteorological conditions were reported near the accident site about the time of the accident, and no flight plan was filed. The local flight originated from Daytona Beach International Airport (DAB), Daytona, Florida at 1300.

According to the pilot, while flying about 600-650 feet above ground level (agl) at a speed of 75 knots with 20° of flaps, the airplane suddenly "fell out from under" him. The airplane lost 300-350 feet of altitude within a few seconds. He applied full power to recover the altitude but the airplane continued to "sink." He maneuvered the airplane towards a clearing to avoid trees, lost control, and collided with the ground.

According to the operator of the airplane, the pilot called twice on the day of the accident. He initially called to apologize for the accident and in the evening, he called to explain what happened earlier that day. The pilot stated earlier that day he brought one passenger and then picked up another. He said that the intent of the flight was to "drop boxes" south of Lake Crescent, at a campsite managed by St. Johns River Water Management District. The pilot said he was aware that dropping objects out of the airplane was prohibited, but assured the operator that he had coordinated with the people on the ground to stay out of the way when the items were dropped. When the pilot reached the campsite, he descended to an altitude between 300 and 600 feet agl, configured the airplane with 20° of flaps, and slowed it to 75 knots. After successfully dropping several boxes, and during the final drop, the airplane encountered a downdraft and lost altitude. The pilot attempted to recover, but the airplane subsequently impacted trees and terrain.

Examination of the airframe and engine by a Federal Aviation Administration (FAA) inspector revealed no anomalies that would have precluded normal operation.

The 1453 weather conditions reported at DAB included scattered, towering cumulus clouds at 3,500 feet, scattered clouds at 5,000 feet, scattered clouds at 7,500 feet and a broken ceiling at 25,000 feet, and winds from 060° at 6 knots. Additionally, towering cumulus clouds were noted to the south, and cumulonimbus clouds were noted in the distance to the east, southwest, and northwest of the airport. DAB was located 23 nautical miles southeast of the accident site.

The National Weather Service National Radar Mosaic for the period depicted isolated echoes associated with rain showers approximately 5 miles west and 10 miles southwest of the accident site, near Georgetown and Aster, Florida on the ends of Lake George, with a small isolated intense area of echoes immediately east of DAB at the time.

A North American Mesoscale Model sounding for the area of the accident site suggested the potential for strong low-level thermal activity and an unstable atmosphere, with expected clouds developing near 3,000 feet agl. The sounding did not depict the presence of low-level turbulence or windshear.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA274	05/10/2017 330 CDT	Regis# N34207	Frankston, TX	Apt: Aero Estates T25
Acft Mk/Mdl CESSNA 177-B		Acft SN 17701705	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-360-A1F6		Acft TT 7285	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: KESSLER KENNETH E		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Summary

The pilot reported that he made an approach to a grass airstrip in light rain conditions with mist. During the landing flare, the airplane encountered a rain shower, and the pilot's visibility was obscured. The pilot began the landing, but he lost sight of the runway. The airplane touched down left of the runway centerline and veered off the left side of the runway. He recalled that "by the time I was aware of my position it was not possible to correct," and the airplane impacted trees. The airplane sustained substantial damage to both wing spars and engine mounts.

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

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## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's loss of runway visibility during landing in rain, which resulted in the pilot's loss of situational awareness and subsequent loss of airplane control.

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## Events

1. Landing-flare/touchdown - Windshear or thunderstorm
2. Landing-flare/touchdown - Runway excursion
3. Landing-flare/touchdown - Collision with terr/obj (non-CFIT)

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## Findings - Cause/Factor

1. Environmental issues-Conditions/weather/phenomena-Ceiling/visibility/precip-Rain-Effect on personnel - C
2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
3. Personnel issues-Psychological-Perception/orientation/illusion-Situational awareness-Pilot - C
4. Environmental issues-Physical environment-Object/animal/substance-Tree(s)-Contributed to outcome

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## Narrative

The pilot reported that he made an approach to a grass airstrip in light rain conditions with mist. During the landing flair, the airplane encountered a rain shower and the pilot's visibility was obscured. The pilot commenced the landing but he lost visibility of the runway. The airplane touched down left of the runway centerline and veered off the left side of the runway. He recalled that, "By the time I was aware of my position it was not possible to correct," and the airplane impacted the trees. The airplane sustained substantial damage to the both wing spars and engine mounts.

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

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# ERA16LA286	08/08/2016 1535 EDT	Regis# N30923	Mcdonough, NY	Apt: N/a
Acft Mk/Mdl CESSNA 177-B		Acft SN 17701548	Acft Dmg: DESTROYED	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-360-A1F6		Acft TT 3984	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: JAO-SHIANG LUO		Opr dba:		Aircraft Fire: GRD
				AW Cert: STN

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# National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# ERA16CA286	08/08/2016 1535 EDT	Regis# N30923	Mcdonough, NY	Apt: N/a
Acft Mk/Mdl CESSNA 177B-B		Acft SN 17701548	Acft Dmg: DESTROYED	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-360-A1F6			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name:		Opr dba:		Aircraft Fire: GRD
				AW Cert: STN

## Events

1. Maneuvering-low-alt flying - Loss of control in flight

## Narrative

On August 8, 2016, about 1535 eastern daylight time, a Cessna 177B, N30923, was destroyed when it impacted trees and terrain while maneuvering near McDonough, New York. The private pilot and three passengers sustained minor injuries. Visual meteorological conditions prevailed and no flight plan was filed for the personal flight, which originated from Sidney Airport (N23), Sidney, New York and was destined for Brookhaven Airport (HWV), Shirley, New York. The airplane was operated under the provisions of 14 Code of Federal Regulations Part 91.

During an interview, the pilot stated that prior to the accident flight, he filled the airplane's fuel tanks, for a total fuel load of 50 gallons. The purpose of the flight was to fly back to HWV, where the airplane was based, and give the three passengers an opportunity to view and photograph a local landmark on-the-way. After making two passes over the landmark, the passengers asked the pilot to flyover again, but at a slower speed. The pilot then fully deployed the flaps in preparation for the next flyover. During the flyover, the pilot noted that the airplane was slow, and had descended to a height near the tops of the trees. He added full power and fully retracted the flaps. The airplane did not appear to be climbing, and in "a wink of an eye the nose dropped." The pilot was then looking straight down at the ground. The pilot's next recollection was that the airplane was on the ground. He and his passengers subsequently egressed before the airplane was consumed by a postimpact fire.

During separate statements to a Federal Aviation Administration (FAA) inspector, first responders and an NTSB investigator, the pilot did not report any mechanical functions during the accident flight. In a subsequent written statement he reported that the engine experienced a total power loss prior to the impact.

One of the passengers reported that he and the other two passengers were taking pictures of the landmark when he noticed the airplane descending and then hitting a tree. He did not remember hearing anything strange before the accident. Another witness that was standing on the north side of the landmark, saw the airplane fly overhead three times. During the third flyover, the airplane was flying north very low near the tree tops. He then heard the breaking of branches and a loud bang. He stated he ask someone to call 911 while he tried to help the passengers out of the airplane. Shortly after they all were out of the airplane, it erupted in flames.

Examination of the wreckage by an FAA inspector revealed that the airplane was destroyed by fire. The engine was intact, but exhibited extensive thermal damage. All other components were unrecognizable.

The weather conditions reported at Greater Binghamton Airport, Binghamton, New York, located 16 nautical miles south of the accident site, at 1553, were clear sky, wind calm, and visibility 10 statute miles.

The pilot held a private certificate with a rating for airplane single-engine land. He also held a third-class medical certificate, issued on June 24, 2016. His last flight review was completed on June 27, 2015. At the time of the accident, the pilot reported 378 total hours of flight experience, with 100 hours in the same make and model as the accident airplane.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA475	08/03/2017	1950 AKD	Regis# N5236D	Willow, AK	Apt: N/a
Acft Mk/Mdl CESSNA 180-A			Acft SN 50134	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR O-470 L			Acft TT 4000	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: PAUL M. SPIRO			Opr dba:		Aircraft Fire: NONE
					AW Cert: STN

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## Summary

The pilot of the float-equipped airplane reported that, during landing, after observing what he thought were ripples on the water, the airplane touched down sooner than he had expected. Subsequently, the left float skipped on the water, the right float's toe contacted the water, and the airplane nosed over and came to rest inverted.

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

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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## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's improper landing flare while landing on water with glassy water conditions, which resulted in the airplane nosing over.

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## Events

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

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## Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Landing flare-Not attained/maintained - C
2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
3. Environmental issues-Physical environment-Runway/land/takeoff/taxi surface-Glassy surface-Effect on personnel

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## Narrative

The pilot of the float-equipped airplane reported that, during landing, after observing what he thought were ripples on the water, the airplane touched down sooner than he had expected. Subsequently, the left float skipped on the water, the toe of the right float contacted the water, and the airplane nosed over and came to rest inverted.

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

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Accident Rpt# GAA17CA230	04/12/2017 1051 PDT	Regis# N7945V	Manchester, CA	Apt: N/a
Acft Mk/Mdl CESSNA 180-H		Acft SN 18051845	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL O-470-50		Acft TT 5145	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: CAMERON C. LEWIS		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Summary

The pilot reported that, during cruise flight, the engine "quit" while at 1,500 ft above ground level. He added that he landed the airplane in a large, flat pasture, but during the landing, the airplane nosed over. The airplane sustained substantial damage to the tail and wings.

In a telephone conversation with the recovery specialist, the pilot reported that the fuel tanks had not been breached during the landing, and he recovered 1.5 gallons of fuel from the right fuel tank and 2.5 gallons of fuel from the left fuel tank.

The airplane was equipped with an engine monitoring unit. About 1 hour 13 minutes of data were recorded during the accident flight. The data showed a sudden decrease in exhaust gas temperatures and cylinder head temperatures for all cylinders about the same time. For further information, see the JPI Engine Monitoring Unit data plot in the public docket for this accident.

The 1967 Cessna 180 Owner's Manual states, in part:

"2.5 gallons [in] each tank [is] unusable in normal flight maneuvers."

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## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's improper preflight fuel planning, which resulted in fuel exhaustion and the total loss of engine power.

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## Events

1. Enroute-cruise - Fuel exhaustion
2. Enroute-cruise - Loss of engine power (total)
3. Landing - Nose over/nose down

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## Findings - Cause/Factor

1. Aircraft-Fluids/misc hardware-Fluids-Fuel-Fluid level - C
2. Personnel issues-Task performance-Planning/preparation-Fuel planning-Pilot - C
3. Environmental issues-Conditions/weather/phenomena-Wind-(general)-Effect on operation
4. Environmental issues-Physical environment-Runway/land/takeoff/taxi surface-(general)-Contributed to outcome

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## Narrative

The pilot reported that, during cruise flight, the engine "quit" while at 1500 ft above the ground. He added that he landed the airplane in a large, flat pasture, but during the landing the airplane nosed over.

In a telephone conversation with the recovery specialist, he reported that the fuel tanks had not been breached during the landing, and he recovered 1.5 gallons of fuel from the right fuel tank and 2.5 gallons of fuel from the left fuel tank.

The airplane was equipped with a J. P. Instruments (JPI) engine monitoring unit. The data downloaded from the unit revealed that on the accident flight, the recorded data spanned about 1 hour and 13 minutes. The data showed a sudden decrease in exhaust gas temperatures (EGT) and cylinder head temperatures (CHT) for all cylinders about the same time. For further information, see the JPI Engine Monitoring Unit data plot within the public docket for this accident.

The 1967 Cessna 180 Owner's Manual states, in part:

"2.5 gallons each tank unusable in normal flight maneuvers."

# National Transportation Safety Board - Aircraft Accident/Incident Database

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

## Events

2. Takeoff - Loss of control on ground

## Narrative

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

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

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

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

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

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

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

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# CEN17LA376	09/27/2017 930 EDT	Regis# N70634	Piqua, OH		
Acft Mk/Mdl CESSNA 182M-M		Acft SN 18259334	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim	Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR O-470 SERIES			Fatal 0	Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: PILOT		Opr dba:		Aircraft Fire: NONE	
				AW Cert: STN	

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## Events

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

On September 27, 2017, about 0930 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 was not operated on a flight plan. The flight originated from the Phillipsburg Airport, near Phillipsburg, Ohio, and was destined for the Piqua Airport - Hartzell Field (I17), near Piqua, Ohio.

According to preliminary information, the airplane was approaching I17 when the airplane lost engine power. The pilot performed a forced landing and the airplane impacted a cornfield where the substantial damage occurred.

At 0935, the recorded weather at the Darke County Airport, near Versailles, Ohio, was: Wind 320ø at 7 kts; visibility 10 statute miles; sky condition clear; temperature 23ø C; dew point; 18ø C; altimeter 30.00 inches of mercury.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA245	04/23/2017 1530	Regis# N4017Y	Marsing, ID	Apt: Sunrise Skypark ID40
Acft Mk/Mdl CESSNA 185-F		Acft SN 185-0217	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL 10470		Acft TT 6500	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: TOM BOYER		Opr dba: T&C AIRCRAFT		Aircraft Fire: NONE
				AW Cert: STN

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## Summary

The pilot in the tailwheel-gear-equipped airplane reported that he set up for a wheel landing to an asphalt runway. During touchdown, the airplane bounced three times, and the right landing gear wheel split into two pieces. The airplane ground looped to the left and exited the left side of the runway. The right wing tip and the elevator struck the ground, and the airplane sustained substantial damage to the right elevator.

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## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's improper landing flare, which resulted in a bounced landing, the failure of the right main landing gear wheel, and a ground loop.

## Events

1. Landing-flare/touchdown - Abnormal runway contact
2. Landing-flare/touchdown - Loss of control on ground

## Findings - Cause/Factor

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

## Narrative

The pilot in the tailwheel gear-equipped airplane reported that he setup for a wheel landing to an asphalt runway. During touch down the airplane bounced three times and the right landing gear wheel split into two pieces. The airplane ground looped to the left and exited the left side of the runway. The right wing tip and the elevator struck the ground. The airplane sustained substantial damage to the right elevator.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA226	04/08/2017 900 MDT	Regis# N3938Y	Santa Teresa, NM	Apt: Dona Ana County Airport At San 5T6
Acft Mk/Mdl CESSNA 210-D		Acft SN 21058438	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR IO 520 SERIES		Acft TT 4029	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: JOHN AND TRACY SHORT		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Summary

The pilot reported that he was practicing takeoffs and landings on the asphalt runway. The airplane bounced during the touchdown, and the airplane began a hard porpoise down the runway. The nose landing gear wheel cracked and separated from the airplane, and the airplane nosed over. The airplane sustained substantial damage to the vertical stabilizer, the rudder, and the left wing strut. ÿ

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

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## Cause Narrative

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

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## Events

1. Landing-flare/touchdown - Abnormal runway contact
2. Landing-flare/touchdown - Hard landing
3. Landing - Nose over/nose down

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## Findings - Cause/Factor

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

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## Narrative

The pilot reported that he was practicing takeoffs and landings to the asphalt runway. The airplane bounced during the touch down and the airplane began a hard porpoise down the runway. The nose landing gear wheel cracked and separated from the airplane and the airplane nosed over. The airplane sustained substantial damage to the vertical stabilizer, the rudder and the left wing strut.

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

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# WPR16FA176	09/09/2016 700 MST	Regis# N126P	Wickenburg, AZ	Apt: Wickenburg Muni E25
Acft Mk/Mdl CESSNA 310N		Acft SN 310N-0127	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL MOTORS IO-470-VO		Acft TT 3488	Fatal 0 Ser Inj 4	Flt Conducted Under: FAR 091
Opr Name: FRED GAGLIANO		Opr dba:		Aircraft Fire: NONE

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# National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# WPR16LA176 09/09/2016 700 MST Regis# N126P Wickenburg, AZ Apt: Wickenburg Muni E25  
Acft Mk/Mdl CESSNA 310N-N Acft SN 310N-0127 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending  
Eng Mk/Mdl CONTINENTAL MOTORS IO-470-VO Fatal 0 Ser Inj 4 Flt Conducted Under: FAR 091  
Opr Name: FRED GAGLIANO Opr dba: Aircraft Fire: NONE

## Events

1. Takeoff - Unknown or undetermined
2. Takeoff - Fuel starvation

## Narrative

### HISTORY OF FLIGHT

On September 9, 2016, about 0700 mountain standard time, a Cessna 310N, N126P, struck a refuse transfer trailer shortly after takeoff from Wickenburg Municipal Airport, Wickenburg, Arizona. The airline transport pilot and three passengers were seriously injured, and the airplane sustained substantial damage. The twin-engine airplane was registered to and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91. The personal flight departed Wickenburg with a planned destination of Payson, Arizona. Visual meteorological conditions prevailed, and no flight plan had been filed.

Witnesses reported observing the airplane takeoff from runway 23, and veer to the right of centerline shortly after rotation. Having reached an altitude of about 75 ft above ground level, the airplane did not climb, and crossed over the runway verge and towards an adjacent industrial park. A witness stated that a few seconds later, the airplane rolled almost 90° to the right, and the right wing struck the refuse trailer. The right wing separated from the airframe, and the main fuselage came to rest about 75 ft downrange. The airplane came to rest within the confines of the City Sanitation Department, about 2,200 ft beyond the runway departure threshold, and about 300 ft right of its centerline.

The pilot and passengers sustained multiple serious injuries, and were initially treated and stabilized at the accident site by first response personnel. Due to the nature of their injuries, they were unable to recall the circumstances of the accident.

### PERSONNEL INFORMATION

The pilot held an airline transport pilot certificate with ratings for airplane multiengine land. He also held an instructor rating for airplane single-engine land, along with type ratings for the B-727, B-757, B-767, DC3, and N-265. He held an airframe and powerplant mechanic certificate with inspection authorization.

The pilot's last flight review took place in March 2014, he also reported practicing single-engine procedures in the accident airplane during July 2016.

### AIRPLANE INFORMATION

The airplane was manufactured in 1968, and had been owned and maintained by the pilot since 1985. It was equipped with two six-cylinder, fuel injected, Continental Motors IO-470 series engines. The right engine had been overhauled and installed in 1986, and had accrued 690.9 flight hours at the last annual inspection on July 6, 2016. The left engine was overhauled and installed in a Cessna 310N airplane in 1978, and removed and installed on the accident airplane in 1988. It had accrued 1,268.7 flight hours at the last annual inspection.

### METEOROLOGICAL INFORMATION

Area winds were out of the northwest at 5 knots, with an altimeter setting at 29.93 inches of mercury, and a temperature and dewpoint of 25° C and 16° C respectively. The corresponding density altitude for field elevation was about 4,200 ft.

### AIRPORT INFORMATION

Wickenburg Airport is at an elevation of 2,378 ft, and is composed of a single 6,101-ft-long asphalt runway, designated 5/23. Runway 23 is on a 1.2% uphill gradient. Terrain 1.5 miles beyond the departure end of runway 23 rises to a peak about 300 ft above runway elevation. Highway 60, which is offset about 300 ft right of the runway centerline, follows the foothills of the rising terrain, about 200 ft below the peak.

The only fueling facility at the airport was a self-serve pump, managed by the City of Wickenburg. During the period July 16 through 30, the pilot serviced the airplane twice at Wickenburg, and then three times at different airports in Kansas and Wisconsin. The last fuel purchased for the accident aircraft before the accident was from the Wickenburg pump on July 30, 2016. He then flew to Payson, Arizona a few days later.

The airport operations manager provided the certificate of analysis for the fuel delivered to the tank farm during that period, and the sample met the tested specifications for ASTM 5191 (vapor pressure), ASTM D86 (distillation), and IP 559 (density). Additionally, daily fuel system facility checks for the month of July and August, did not reveal any anomalies, and no pilots reported issues with fuel.

According to the operations manager, the fuel system experienced a failure on July 12, 2016, attributed to a lightning strike, and as a result, the system's computer motherboard was replaced. Metering problems persisted, and on July 30, the same day that the accident pilot purchased fuel, the system was shut down for a week because the delivery meter did not read correctly. The meter's pulse transmitter was replaced; however, anomalies persisted, and in early December, the entire fuel island was shut down for redesign. The operations manager stated that the problems were all electrical in nature, and did not require repair or replacement of any components that would have come into contact with fuel.

## MEDICAL AND PATHOLOGICAL INFORMATION

Toxicological tests on specimens recovered from the pilot after he was admitted to the hospital were performed by the FAA Bioaeronautical Sciences Research Laboratory. Analysis revealed negative findings for ethanol and all screened drug substances except Etomidate, which is an anesthetic agent often used in emergency treatment.

## TESTS AND RESEARCH

Examination of the engine control quadrant at the accident site revealed that both mixture controls were in the full rich position, the propeller controls were 1-inch short of full forward, and the throttle controls had bent to the right and over the quadrant about midrange. Both the flap actuator and landing gear assemblies were in positions consistent with retraction.

### Left Engine

The left engine had partially separated from the firewall during the impact sequence, sustaining damage to the throttle body and rocker covers, and exposing the valve springs and rocker assemblies for all cylinders except number 4. The propeller blades and hub assembly remained attached to the crankshaft. Both blades exhibited a 150 bend about 12 inches from the hub, along with multiple nicks and chordwise scratches to their leading edges.

The fuel lines along with both the engine and propeller controls were intact, and the spark plug electrodes exhibited normal service life wear signatures, and dark grey coloration. The magneto-to-engine timing was correct, and "thumb" compression was confirmed at all cylinders, along with drive train continuity to all valves and accessories. The fuel lines from the metering unit through to the fuel flow transducer and the fuel manifold valve were free of obstruction, and the internal impeller of the transducer could be heard spinning when low-pressure air was applied to the inlet.

Disassembly of the fuel manifold valve, engine driven fuel pump, and throttle body metering unit revealed no mechanical anomalies, and residual fuel was observed within the cavity of the manifold valve. The fuel inlet screen was found clear and free from obstructions. During disassembly of the metering unit, debris was observed on the spring side of the mixture control cam. The debris appeared to be a combination of dried grease and ferrous material.

### Right Engine

The right engine sustained similar impact damage, with the propeller hub assembly remaining attached to the crankshaft. Both blades had detached from the hub, and both were straight, with neither exhibiting any damage signatures associated with rotation such as leading edge nicks or chordwise scratches. Both blades displayed blue streak marks, similar in color to the paint on the refuse trailer which was struck during impact.

The engine exhibited comparable magneto-to-engine timing, cylinder compression, and spark plug characteristics as the left engine. Disassembly of the fuel manifold valve, engine driven fuel pump, and throttle body metering unit revealed no mechanical anomalies. However, about 1/8 of one side of the surface of

the throttle body inlet screen was covered in lint material, and the fuel injector nozzle for cylinder 3 was partially occluded and coated with a solid glaze. No fuel was observed within the cavity of the manifold valve or the fuel line between the fuel flow transducer and the fuel manifold valve.

Disassembly of the fuel lines revealed that a clear gelatinous substance had completely blocked the fuel flow transducer inlet port (metering orifice) (Photo 1). The material was removed, and had a slimy wet texture. After one hour of exposure to air, the material had hardened and took on a texture similar to room-temperature-vulcanization (RTV) silicone. Six fragments were recovered, which, after drying for 24 hours, ranged in size from 1 to 3 mm. Further examination of the fuel manifold valve revealed a similar fragment of the material within the manifold cavity on the pre-filtered side of its screen.

## Fuel System

The airplane was equipped with a 20-gallon auxiliary fuel tank in each wing, and a 50-gallon main tank at each wingtip. The auxiliary tanks fed the system through gravity, and an electrically driven submerged fuel pump was housed in each tip tank for use during priming and starting, and for backup operation to the engine-driven fuel pump.

Each wing housed a combination fuel selector valve/strainer, which was controlled by a selector lever in the cabin via a set of cables. The mesh size of the strainer was 104 microns. The fuel flowed from the strainer to the engine driven fuel pump, and onward to the inlet port of the fuel metering unit, which was protected by a 210-micron mesh filter. Downstream of the metering unit, the fuel passed through the fuel flow transducer, and into the fuel manifold valve, which contained a 210-micron mesh filter.

Maintenance records revealed that a Shadin 910502 fuel flow indicating system was installed in 1982, in accordance with supplemental type certificate SA573GL and SE552GL. The fuel flow transducer installed at the time of the accident was a FloScan 201 series (p/n 680501), which according to the engine logbook, had been installed in 1995 as a replacement for the original unit.

The transducer inlet and outlet ports used 1/4-inch NPT threads, and the inlet metering orifice was about 0.115 inches (2.92mm) in diameter.

Both outboard tip tanks had been breached, exposing their inner surfaces. No debris was observed within the tanks. The auxiliary tanks were intact, and no debris was observed when examined through the respective fuel filler necks.

The airframe and engine fuel lines, filter plugs, fittings, and gaskets were examined to determine if RTV sealant material had been used as a sealing medium. No traces of such material were observed. Additionally, the fuel lines within the engine compartment were stiff, almost brittle, and exhibited significant chaffing damage. The owner stated that he had never used RTV silicon to seal any components within the fuel system.

Data provided by Continental Engines indicated that the fuel pressure from the engine driven fuel pump to the metering unit was between 28.8 and 31.0 psi when the engine was operating at 2,625 RPM, and 6.5 to 7.5 psi at 600 RPM. The metered fuel pressure at 2,625 RPM varies between 17.8 and 18.8 psi.

## Material Examination

The rubber-like material was sent to the NTSB Materials Laboratory Division for analysis using a Fourier Transform Infrared spectrometer. The results revealed spectral peaks, which when evaluated, were a strong match to polydimethylsiloxane, also known as silicone.

A survey of manufacturer's data sheets for silicon rubber compounds revealed multiple warnings regarding its soluble properties and limitations when exposed to gasoline. The data advised that silicon can swell from 75% to 260% when exposed to gasoline, with the manufacturer of a popular RTV silicon brand specifically stating:

"Do not use for gasketing carburetors or fuel control devices where it will be in constant contact with hydrocarbon fuels. Material will develop excessive swell and loss of mechanical properties."

The Floscan 200 Series Application Notes, current at the time of the accident stated the following:

"SAFETY WARNING: Never use RTV or similar sealants when installing Floscan senders or any fuel system components. Sealants can get into the fuel system and cause fuel starvation."

## Performance

The pilot reported the airplanes takeoff weight was 4,900 pounds.

The airplane owner's manual stated that for a normal takeoff, the pilot should raise the nose at 90 MPH, break ground at 105 MPH, and allow the airplane to accelerate to the best "twin-engine" rate-of-climb speed of 124 MPH. It further stated that the most critical time for an engine-out condition was during the two to three second period late in takeoff, while the airplane was accelerating to a safe engine-out speed. Furthermore, during an engine-out scenario on takeoff, at a field elevation of 5,000 ft, 4,527 ft is the total distance required to accelerate to 105 MPH, recognize and respond to an engine out-event, and stop the airplane.

The manual's "Single Engine Takeoff Distance" chart provided the means to calculate the total distance required to clear a 50 ft obstacle, assuming an engine failure occurred at takeoff speed, and that the propeller was feathered, and the landing gear and flaps were retracted. Under the reported temperature, with a 4-knot headwind, and a gross weight of 4,800 pounds, the distance required would have been about 4,100 ft. Extrapolation of the graph for a gross weight of 4,900 pounds (reported takeoff weight), indicated a distance of about 6,200 ft. At airplane weights between 4,900 and 5,200 pounds (max gross weight), the distance fell beyond the 7,000 ft scale of the graph.

The manual stated that under single-engine operation at maximum gross weight, the rate of climb at sea level and standard temperature was 330 ft per minute, with a service ceiling of 6,850 ft. The minimum single-engine control speed was 87 MPH, and the best single-engine angle of climb and rate of climb speeds were 105 and 113 MPH respectively. The manual stated that although the airplane is controllable at the minimum single-engine control speed, "the performance is so far below optimum that continued flight near the ground is improbable. A more suitable recommended safe single-engine speed is 105 MPH, since at this speed, altitude can be maintained more easily while the landing gear is being retracted and the propeller is being feathered."

The propellers for both engines rotate in the same direction, with the left engine considered the, "critical engine" during engine-out conditions.

# National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA271 05/07/2017 1010 EDT Regis# N873SL Big Rapids, MI Apt: Roben-hood RQB  
Acft Mk/Mdl CESSNA A185-F Acft SN 18503380 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending  
Eng Mk/Mdl CONTINENTAL IO-520 Acft TT 3675 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091  
Opr Name: AARON SEDINE Opr dba: Aircraft Fire: NONE  
AW Cert: STN

## Summary

The pilot in the tailwheel-gear-equipped airplane reported that he was practicing takeoffs and landings and had accomplished a wheel landing on runway 27. During the landing roll, the tailwheel contacted the ground, and the airplane encountered a wind gust from the right. The pilot recalled that the right aileron was into the wind with left rudder and no power applied. The right wing rose, and the airplane began to weathervane. He added full engine power and full left rudder. The "right main" descended back to the ground, but the airplane exited the runway to the right. The airplane encountered a berm and became airborne. The airplane descended to the ground and spun about its nose to the left. The airplane sustained substantial damage to the left wing spar and the left main landing gear attachment points.

The pilot reported that, when he checked the weather before he began practicing takeoffs and landings, the wind was from 320ø at 10 knots but, about the time of the accident, the METAR reported that wind was from 350ø at 15 knots gusting to 22 knots. The crosswind component was 18 knots.

Per the National Transportation Safety Board Pilot Aircraft Accident Report, the pilot remarked that the accident could have been prevented by setting "personal limitations" and by checking the Automatic Terminal Information System "every two pattern practices."

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

## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's failure to obtain updated weather information while practicing takeoffs and landings and his subsequent failure to maintain directional control during the landing roll in gusting crosswind conditions.

## Events

1. Landing-landing roll - Abnormal runway contact
2. Landing-landing roll - Other weather encounter
3. Landing-landing roll - Runway excursion
4. Landing-landing roll - Collision with terr/obj (non-CFIT)

## Findings - Cause/Factor

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

## Narrative

The pilot in the tailwheel gear-equipped airplane reported that he had accomplished a wheel landing on runway 27. During the landing roll, the tailwheel contacted the ground and the airplane encountered a wind gust from the right. The pilot recalled that the right aileron was into the wind and with left rudder and no power applied. The right wing ascended and the airplane began to weathervane. He added full engine power and full left rudder. The right main descended back to the ground but the airplane exited the runway to the right. The airplane encountered a berm and became airborne. The airplane descended back to the ground and spun about the nose to the left. The airplane sustained substantial damage to the left wing spar and the left main landing gear attachment points.

The METAR reported that about the time of the accident, wind was from 350 ø at 15 kts. gusting to 22 kts. The crosswind component was 18 kts.

Per the National Transportation Safety Board Pilot Aircraft Accident Report, the pilot remarked that the accident could have been prevented by setting personal limitations and by checking the Automatic Terminal Information System every 2 patterns.

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

# National Transportation Safety Board - Aircraft Accident/Incident Database

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

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## Events

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

## Narrative

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

The airplane sustained substantial damage to the right wing.

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

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

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA18CA023	10/24/2017 1418 PDT	Regis# N19EC	Tacoma, WA	Apt: Tacoma Narrows TIW
Acft Mk/Mdl CESSNA A185E		Acft SN 185-1306	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR UNK
Opr Name: BLUE SKIES AVIATION LLC		Opr dba:		Aircraft Fire: NONE

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# National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# CEN17LA247	06/30/2017 1215	Regis# N210HG	Eagle, CO	Apt: Eagle County Regional EGE
Acft Mk/Mdl CESSNA P210N-N		Acft SN P21000569	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR TSIO-520 SER		Acft TT 3422	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: TRIDELAW AVIATION LLC		Opr dba:		Aircraft Fire: NONE

## Events

1. Approach - Loss of engine power (total)

## Narrative

On June 30, 2017, about 1215 mountain daylight time, a Cessna P210N airplane, N210HG conducted a forced landing near Eagle, Colorado. The pilot was not injured and the airplane was substantially damaged during the landing. The airplane was registered to and operated by Tridelaw Aviation, LLC, under the provisions of 14 Code of Federal Regulations Part 91 as a cross-country flight. Visual meteorological conditions prevailed at the time.

The pilot reported that he departed Montrose, Colorado (KMTJ) en route to the Eagle County Regional Airport (KEGE). He added that he departed KMTJ with 60 gallons of fuel and 8 quarts of oil in the P210. As he approached KEGE, he contacted the tower controller and was directed to enter the downwind. As he entered the traffic pattern and configured the airplane for the landing, the engine lost power. The pilot reported that he followed the 'engine failure during flight' checklist, and switched fuel tanks; however, the engine did not restart. The pilot informed the controller and selected an empty road for the forced landing. During the landing, the left wing impacted a pole, the airplane then exited the road, coming to rest in an upright position. During the impact with the pole, about a 5 ft section was torn from the wing; damage was also noted on the fuselage and to the four-bladed propeller.

Fire department personal arrived on scene and noted fuel leaking from the airplane, so they applied a water-based fire retardant to both wing fuel tanks. The responding Federal Aviation Administration (FAA) inspector also stated that after the recovery of the airplane fuel was leaking from at least one of the wing fuel tanks. It was also reported that the airplane was filled with about 30 gallons of fuel on June 21.

The airplane was recovered and transported to a salvage facility, where an examination was conducted by the NTSB Investigator-in-Charge and a technical representative from the engine manufacturer.

A fuel can was connected to the left-wing fuel line and a visual engine examination was conducted. A slight fuel leak was noted on the fuel metering unit, otherwise no external visual abnormalities were noted with the engine. The top set of sparkplugs were removed; the sparkplugs had normal wear and light grey deposits. Each cylinder was borescoped; the engine crankshaft was rotated by hand, and spark was observed on each ignition lead.

The airplane was equipped with a fuel flow and an JPI engine data monitor (EDM) 700 system. No information could be retrieved from the fuel flow system; however, the EDM contained 28 files, dated from May 27, 2017 to June 30, 2017. A review of the monitor's information revealed that there were two flights on June 19th, one flight on June 20th, and a one-hour flight on June 30th, which corresponded to the accident flight. The June 30th flight was plotted; just before the end of the data, there was a slight rise in exhaust gas temperatures (EGT), followed by a decrease. The rise and decrease in temperatures were uniform across all six cylinders.

In order to conduct an engine run, and due to damage to the engine's propeller, two blades were shortened to provide blade symmetry and balance. Prior to the engine run, the fuel strainer was opened and liquid consistent in appearance with water, was drained from the fuel line.

The engine was started and run to 2,500 rpm; a magneto check was also performed, with no abnormalities noted. During the run, fuel continued to leak from the fuel metering unit. After the run, the unit was disassembled, the internal O-rings appeared flattened or degraded. It was not determined if the O-ring leakage was due to impact to the metering unit during the accident, degradation of the O-rings due to the fire retardant, drying out of the O-rings, or natural degradation of the O-rings over time.

The fuel metering inlet screen was removed and was absent any debris and contamination.

A reason for the loss of engine power was not determined.

# National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA291 05/19/2017 2100 PDT Regis# N6203S Carson City, NV Apt: Carson CXP  
Acft Mk/Mdl CESSNA T182 Acft SN T18208285 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending  
Eng Mk/Mdl LYCOMING TIO-540-AK1A Acft TT 1455 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091  
Opr Name: BRAGGER OSWALD E A Opr dba: Aircraft Fire: NONE  
AW Cert: STN

## Summary

The pilot reported that he was conducting a night flight to comply with the 14 Code of Federal Regulations Part 61.57 (b) night takeoff and landing experience requirements. He added that, on his second approach, the airplane encountered wind shear during the landing flare. The airplane was blown about 400 nose left of the runway centerline. The pilot tried to correct to the right, but the airplane stalled and landed hard. The nose landing gear tire separated from the wheel, and the airplane bounced. The airplane settled on the runway, and a propeller strike occurred as the airplane slid off the left side of the runway. After the runway excursion, the nose landing gear wheel burrowed into the dirt surface, and the airplane nosed over.

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

The METAR reported that the wind about the time of the accident was from 050 at 8 knots. Critical wind shear or low-level wind shear were not observed at any time during the day or night per the METAR on the date of the accident.

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

## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's unstabilized approach during the landing flare and his exceedance of the airplane's critical angle of attack, which resulted in an aerodynamic stall.

## Events

1. Landing-flare/touchdown - Windshear or thunderstorm
2. Landing-flare/touchdown - Aerodynamic stall/spin
3. Landing-flare/touchdown - Hard landing
4. Landing-flare/touchdown - Part(s) separation from AC
5. Landing-flare/touchdown - Abnormal runway contact
6. Landing-landing roll - Runway excursion
7. Landing-landing roll - Nose over/nose down

## Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Airspeed-Not attained/maintained - C
2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
3. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Landing flare-Incorrect use/operation - C
4. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Angle of attack-Not attained/maintained - C
5. Environmental issues-Physical environment-Runway/land/takeoff/taxi surface-Soft surface-Contributed to outcome

## Narrative

The pilot reported that he was conducting a night flight to comply with the night takeoff and landing experience requirements specified in Title 14 Code of Federal Regulations Part 61.57 (b). On his second approach the airplane encountered wind shear during the landing flare. The airplane was blown about 400 nose left of the runway centerline. The pilot tried to correct to the right, but the airplane stalled and landed hard. The nose landing gear tire separated from the wheel and the airplane bounced. The airplane settled on the runway and a propeller strike occurred as the airplane slid off the left side of the runway. After the runway excursion, the nose landing gear wheel burrowed into the dirt surface and the airplane nosed over. Substantial damage was sustained to both wings, and the empennage.

The METAR reported that the wind about the time of the accident was from 050 at 8 kts. Critical wind shear or low-level wind shear were not observed at any time during the day or night per the METAR on the date of the accident.

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

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA18CA007    10/06/2017 2358 EDT    Regis# N5EC    Waterford, MI    Apt: Oakland County Intl PTK  
Acft Mk/Mdl CESSNA T210-M    Acft SN 21062373    Acft Dmg: SUBSTANTIAL    Rpt Status: Prelim    Prob Caus: Pending  
Fatal 0    Ser Inj 0    Flt Conducted Under: FAR 091  
Opr Name:    Opr dba:    Aircraft Fire: NONE

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# ERA17LA307	09/01/2017 1710 EDT	Regis# N4615X	Harpswell, ME		
Acft Mk/Mdl CESSNA U206-G		Acft SN U20605513	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim	Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL IO-520F		Acft TT 7359	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091	
Opr Name: WATERS AERO-MARINE INC		Opr dba: PENOBSCOT ISLAND AIR		Aircraft Fire: NONE	
				AW Cert: STN	

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## Events

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

On September 1, 2017, about 1710 eastern daylight time, a Cessna U206G, N4615X, operated by Waters Aero-Marine, doing business as Penobscot Island Air, was substantially damaged during a forced landing near Harpswell, Maine. The commercial pilot sustained minor injuries. Visual meteorological conditions prevailed, and a company visual flight rules flight plan was filed for the flight operated under the provisions of 14 Code of Federal Regulations Part 91, which departed Knox County Regional Airport (RKD), Rockland, Maine, about 1645, destined for Portland International Jetport (PWM), Portland, Maine.

According to the pilot, while in cruise flight at 2,500 ft en route to PWM, about 6 nautical miles from Brunswick Executive Airport (BXM), Brunswick, Maine, he heard a "loud bang," followed by a total loss of engine power. He immediately transmitted a distress call to Portland Approach Control, and advised that he was going to attempt to land at BXM. The pilot then advised on the Penobscot Island Air company frequency of his situation and his intentions. He then performed the emergency procedures for securing the engine and continued with the emergency landing.

At 600 ft the pilot realized that the airplane was not going to reach BXM and transmitted his intentions to make an off-airport landing. Upon landing the airplane bounced, traveled about 150 ft, and touched down again. The nose landing gear entered a small drainage ditch; the airplane nosed over, and came to rest inverted. The pilot then verified that all the engine controls and electronics were shut off, and egressed through the pilot's door, which he had opened on touchdown.

According to Federal Aviation Administration (FAA) airman records and pilot records, the pilot held a commercial pilot certificate with ratings for airplane single-engine land, airplane single-engine sea, airplane multi-engine land, and instrument airplane. He also held a flight instructor certificate with a rating for airplane single engine. His most recent FAA second-class medical certificate was issued on May 18, 2017. He reported that he had accrued 2,400 total hours of flight experience, 800 of which was in the accident airplane, make and model.

According to FAA airworthiness and maintenance records, the airplane was manufactured in 1979. Its most recent 100-hour inspection was completed on August 28, 2017. At the time of the inspection, the airplane had accrued 7,359.1 total hours of operation, and the engine had accrued 1,694 total hours of operation since major overhaul.

The airplane was retained for further examination.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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

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## Events

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

## Narrative

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

The left wing sustained substantial damage.

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

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

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA18CA025    10/21/2017 1200 PDT    Regis# N7589E    Gerlach, NV    Apt: Black Rock City 88NV  
Acft Mk/Mdl CHAMPION 7GC-NO SERIES    Acft SN 7GC-23    Acft Dmg: SUBSTANTIAL    Rpt Status: Prelim    Prob Caus: Pending  
Fatal 0    Ser Inj 0    Flt Conducted Under: FAR 091  
Opr Name: RYAN N. DILLON    Opr dba:    Aircraft Fire: NONE

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# National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA201 03/22/2017 1300 EDT Regis# N146GS Atlanta, GA Apt: Dekalb-peachtree PDK  
Acft Mk/Mdl CIRRUS DESIGN CORP SR22-NO SERIES Acft SN 2393 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending  
Eng Mk/Mdl CONT MOTOR IO-550-N Acft TT 1884 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091  
Opr Name: DRC AIR LLC Opr dba: Aircraft Fire: NONE  
AW Cert: STN

## Summary

The pilot of the airplane reported that he had recently completed flight training from the manufacturer. The accident flight was conducted under instrument flight rules (IFR). During the first approach to land, the pilot reported that the airspeed was too fast and that he decided to go around. He canceled the IFR flight plan, squawked 1200, and remained in the traffic pattern. During his second approach, the airspeed was again too fast, but he attempted to land. The airplane bounced three times, and during the ascent of the third bounce, the pilot added full power and attempted to go around. The airplane veered left, and he attempted to counter the veer with full right rudder application. However, the airplane touched down hard and exited the runway to left. The nose gear collapsed, and the airplane slid across the safety area before coming to rest upright. The airplane sustained substantial damage to the firewall. The pilot reported that there were no preaccident mechanical malfunctions or failures with the airplane that would have precluded normal operation.

## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's use of excessive airspeed during the approach, which resulted in a bounced, hard landing and subsequent loss of directional control during an attempted go-around.

## Events

1. Landing-flare/touchdown - Abnormal runway contact
2. Landing-aborted after touchdown - Abnormal runway contact
3. Landing-aborted after touchdown - Runway excursion
4. Landing-flare/touchdown - Hard landing
5. Landing-aborted after touchdown - Landing gear collapse

## Findings - Cause/Factor

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

## Narrative

The pilot of the airplane reported that had recently completed flight training from the manufacturer. The accident flight was conducted under Instrument Flight Rules (IFR) as was the first approach. During his first approach, the pilot reported that his airspeed was too fast and he decided to go around. He canceled the IFR flight plan and squawked 1200 and remained in the traffic pattern. During his second approach, his airspeed was again too fast, but he attempted to land. The airplane bounced three times and during the ascent of the third bounce, the pilot added full power and attempted to go around. The airplane veered left and he attempted to counter the veer with full right rudder application. However, the airplane exited the runway to left and touched down hard. The nose gear collapsed and the airplane slid across the safety area before coming to rest upright. The airplane sustained substantial damage to the firewall.

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

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# ANC18LA004	10/15/2017 1100 CDT	Regis# N289CM	Tuskegee, AL	Apt: Moton Field Municipal Airport 06A
Acft Mk/Mdl CIRRUS DESIGN CORP SR22T		Acft SN 0014	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR TSIO-550 SER			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name:		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Events

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

## Narrative

On October 15, 2017, about 1100 central daylight time, a Cirrus SR22T airplane, N289CM, sustained substantial damage during a forced landing following a partial loss of engine power shortly after takeoff from Moton Field Municipal Airport (06A), Tuskegee, Alabama. The airplane was registered to Skylane Partners, LLC and operated by the pilot as a visual flight rules flight under the provisions of 14 Code of Federal Regulations Part 91 when the accident occurred. The certificated private pilot and two passengers were not injured. Visual meteorological conditions prevailed, and an instrument flight plan had been filed.

The pilot reported that after completing the preflight inspection and the before takeoff checks, he departed runway 13 from 06A. Shortly after takeoff, during the initial climb, he sensed the airplane slow down and the climb rate diminish. Realizing the airplane had suffered a partial loss of power well below 1,000 feet above ground level, and unable to return to the airport, he selected a sod field as an off-airport landing site. During the forced landing the airplane's landing gear collapsed and the airplane sustained substantial damage to the fuselage.

In a written statement, a fixed base operator (FBO) Line Service Technician at 06A reported that he observed a cloud of faint white smoke after the accident airplane's engine was started. He stated that the engine sounded "choppy" throughout the entire takeoff. After liftoff, about midfield, he observed grey smoke being emitted from the airplane's exhaust. About 200 feet above ground level, the airplane's speed began to decrease as it entered a gradual left bank and began to lose altitude. Concerned for the occupant's safety, he radioed the pilot and asked, "Is everything OK" and the pilot responded, "We have a field in sight." He continued to observe the airplane as it disappeared behind the trees followed by the sounds of an airplane impacting the ground. Unable to contact the pilot on the radio, he immediately notified first responders of the accident.

The closest weather reporting facility was Auburn University Regional Airport (AUO), Auburn, Alabama, about 16 miles northeast of the accident site. At 1056, a METAR from AUO was reporting, in part: wind from 180ø at 5 knots; visibility, 10 statute miles; clouds and sky condition, few clouds at 1,100 feet, broken clouds at 5,500 feet; temperature, 77ø F; dew point 70ø F; altimeter, 30.20inches of mercury.

The airplane was equipped with a Continental TSIO-550 series engine; a detailed engine examination is pending.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# CEN18LA012	10/09/2017 1425	Regis# N90365	Los Lunas, NM	Apt: Mid Valley Airpark E98
Acft Mk/Mdl GLOBE GC 1A-NO SERIES		Acft SN 379	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
			Fatal 0 Ser Inj 1	Flt Conducted Under: FAR 091
Opr Name: PRIVATE		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Events

1. Takeoff - Loss of control in flight

## Narrative

On October 9, 2017, about 1425 mountain daylight time, a Globe Swift GC-1A airplane, N90365, impacted a steel culvert structure following a loss of control during takeoff from the Mid Valley Airpark (E98), Los Lunas, New Mexico. The private pilot sustained serious injuries, and the airplane was substantially damaged. The airplane was registered to and operated by a private individual as a 14 Code of Federal Regulations Part 91 personal flight. Visual meteorological conditions prevailed at the time of the accident, and a flight plan was not filed. The flight was originating from E98 at the time of the accident and was destined for Las Vegas, Nevada.

According to a Federal Aviation Administration inspector who responded to the accident site, the airplane arrived to E98 to refuel the day before the accident after attending a Swift airplane event in Texas. During the subsequent takeoff from E98, the airplane ground looped and sustained unknown damage to the airplane. Over the course of that day and the day of the accident, the pilot, who was also a mechanic, completed repairs to the airplane. A portion of the repairs included welding to the right main landing strut assembly, and any additional repairs to the airplane were unknown.

During takeoff from runway 36 (4,332 ft long by 37 ft wide) at E98 on the day of the accident, the airplane veered to the left of the runway and struck a berm. The airplane became airborne and then impacted a steel culvert structure adjacent to the runway. The airplane sustained substantial damage to the fuselage and wings.

Examination of the airplane by the FAA inspector revealed the left main landing gear strut assembly was broken.

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA18CA019	10/22/2017 0 EDT	Regis# N7GL	Dayton, OH	Apt: Greene County-lewis A Jackson I19
Acft Mk/Mdl GREAT LAKES 2T 1A 2		Acft SN 1009	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: HOPEWELL MEDICAL ACUPUNCTURE CENTER LLC		Opr dba:		Aircraft Fire: NONE

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# WPR15LA160	05/13/2015 930 PDT	Regis# N8875H	Maxwell, CA	Apt: N/a
Acft Mk/Mdl GRUMMAN ACFT ENG COR-SCHWEIZER	Acft SN 1556	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual	Prob Caus: Pending
Eng Mk/Mdl PRATT AND WHITNEY R1340-AN1	Acft TT 10032	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 137	
Opr Name: RICHTER AVIATION INC	Opr dba:		Aircraft Fire: NONE	
			AW Cert: SPR	

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## Events

1. Initial climb - Fuel exhaustion
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## Narrative

On May 13, 2015, about 0930 Pacific daylight time, a restricted category Grumman Aircraft ENG COR-Schweizer G164A airplane, N8875H, experienced a loss of engine power shortly after takeoff, and the pilot subsequently made an emergency landing on a dirt road near Maxwell, California. Richter Aviation Inc., operated the airplane under the provisions of 14 Code of Federal Regulations Part 137 as an aerial application flight. The commercial pilot, the sole occupant, was not injured. The airplane sustained substantial damage. Visual meteorological conditions prevailed for the local flight that departed from a private airstrip. No flight plan had been filed.

In the pilot's written statement, he reported that the airplane seemed to function normally; good magneto check before takeoff and no indications of any problems. About 200 feet above the ground he heard a loud pop, and then the engine quit. He made a right 90o turn to land on a dirt road. The road was too narrow, and the right wheel went over the edge into the rice field and got stuck in mud, which caused the airplane to slow down and flip over onto its back.

During an interview with an inspector from the Federal Aviation Administration (FAA), the pilot reported that when he took off, on the day of the accident, there was less than half a tank of fuel on board.

The operator reported that the day before, the left magneto had been replaced, and that the airplane had not been refueled following the maintenance. The operator also stated that the pilot started flying at 0900 the day of the accident for the purpose of spraying a pesticide on the rice fields.

According to a responding deputy from the Colusa County Sheriff's Department, there was no evidence of fuel, or the smell of fuel, at the accident site.

An FAA inspector reported that during the recovery of the airplane, maintenance personnel recovered « gallon of fuel out of the airplane. Maintenance personnel stated that there was no fuel smell, or residual fuel found on the ground. The airplane holds 80 gallons of fuel and burns about 40 gallons of fuel per hour.

The loader reported that on the day of the accident the airplane was not refueled.

During the postaccident engine examination, the FAA inspector stated that the engine turned freely without any binding, and about a 1/3-cup of fuel was recovered from the gascolator. Compression was obtained in all the cylinders except the #1 cylinder which had sustained impact damage. The left magneto produced a spark when rotated however, the right magneto had sustained impact damage and could not be functionally tested.

# National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA443 07/23/2017 915 EDT Regis# N48519 Berlin, MD Apt: Bunting's Field 4MD1  
Acft Mk/Mdl GRUMMAN ACFT ENG COR-SCHWEIZER Acft SN 42B Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending  
Eng Mk/Mdl PRATT & WHITNEY 985 Acft TT 8400 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 137  
Opr Name: BUNTINGS DUSTING INC Opr dba: Aircraft Fire: NONE  
AW Cert: SPR

## Summary

The pilot reported that he noticed that a spray nozzle was leaking on the agricultural spray airplane. Subsequently, he performed multiple test flights over a nearby field while the head of the ground crew remained on the ground to monitor the leak. He added that he landed the airplane on the grass airstrip, adjusted the nozzle, departed for another visual check, and repeated as necessary.

Following the tests and adjustments, the ground crewman told the pilot that the nozzle was not leaking, and the pilot returned to land. The pilot reported that, during the landing roll, he did not see the ground crewman visually check the runway before crossing the runway in front of the airplane in an all-terrain vehicle (ATV). He added that he immediately veered the airplane to the right and sped up to avoid striking the ground crewman with the propeller. However, the left wing struck the ATV and the ground crewman.

The airplane sustained substantial damage to the left wing leading edge, and the ground crewman sustained minor injuries.

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

## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The ground crewman's failure to visually check the runway before crossing it in a vehicle, which resulted in he and the vehicle being struck by the landing airplane.

## Events

1. Landing-landing roll - Miscellaneous/other
2. Landing-landing roll - Attempted remediation/recovery
3. Landing-landing roll - Runway incursion veh/AC/person

## Findings - Cause/Factor

1. Personnel issues-Psychological-Attention/monitoring-Monitoring environment-Ground crew - C
2. Personnel issues-Action/decision-Action-Forgotten action/omission-Ground crew - C
3. Environmental issues-Physical environment-Object/animal/substance-Person-Effect on operation - C
4. Environmental issues-Physical environment-Object/animal/substance-Ground vehicle-Effect on operation - C

## Narrative

The pilot reported that he noticed that a spray nozzle was leaking on the agricultural spray airplane. Subsequently, he performed multiple test flights over a nearby field while the head of the ground crew remained on the ground to monitor the leak. He added that he would land the airplane on the grass airstrip, adjust the nozzle, depart for another visual check, and repeat as necessary.

Following the tests and adjustments, the ground personnel told the pilot that the nozzle was not leaking and the pilot returned to land. The pilot reported that, during the landing roll, he did not see the ground personnel visually check the runway before crossing the runway on an all-terrain vehicle (ATV) in front of the airplane. He added that he immediately veered the airplane to the right and sped up to avoid striking the ground personnel with the propeller. The left wing struck the ATV and the ground personnel.

The airplane sustained substantial damage to the left wing leading edge and the ground personnel received minor injuries.

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# WPR14LA340 08/11/2014 1130 PDT Regis# N7432F Darrington, WA Apt: N/a  
Acft Mk/Mdl HUGHES 269C Acft SN 160458 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending  
Eng Mk/Mdl LYCOMING HIO-360-D1A Acft TT 3015 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091  
Opr Name: SNOHOMISH FLYING SERVICE INC Opr dba: Aircraft Fire: NONE  
AW Cert: STN

## Summary

The commercial pilot was conducting a local, personal flight in the rented helicopter. The pilot reported that, while descending the helicopter from 5,000 ft and approaching 4,000 ft, he increased the collective and noticed that the engine was slowing down; he was unable to recover the engine rpm to a normal range. The helicopter continued to descend until the pilot entered an autorotation. The helicopter then impacted a tree and came to rest in a small stream. The pilot stated that he did not believe that the engine ever quit but that it did not produce enough power to continue flight. Postaccident examination of the helicopter revealed that the throttle mount bracket was hanging by the throttle cable linkage and was not secured to the servo mount studs, which would have led to the loss of throttle movement for acceleration. The operator stated that the engine had been installed in the helicopter 10 flight hours before the accident. It is likely that maintenance personnel did not properly secure the throttle mount bracket during the engine installation, which led to the loss of throttle movement and inability to control engine power.

## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: Maintenance personnel's failure to secure the throttle mount bracket during a recent engine installation, which resulted in the loss of throttle movement and an inability to control engine power.

## Events

1. Enroute-descent - Loss of engine power (partial)
2. Autorotation - Off-field or emergency landing
3. Autorotation - Collision with terr/obj (non-CFIT)

## Findings - Cause/Factor

1. Aircraft-Aircraft power plant-Engine controls-Power lever-Incorrect service/maintenance - C
2. Personnel issues-Task performance-Maintenance-Installation-Maintenance personnel - C
3. Environmental issues-Physical environment-Object/animal/substance-Tree(s)-Contributed to outcome
4. Environmental issues-Physical environment-Object/animal/substance-Water/moisture-Contributed to outcome

## Narrative

On August 11, 2014, about 1130 Pacific daylight time (PDT), a Hughes 269C Helicopter, N7432F, impacted terrain following a partial loss of engine power near Darrington, Washington. The airline transport pilot was not injured; the helicopter sustained substantial damage. Snohomish Flying Service (SFS) was operating the helicopter under the provisions of 14 Code of Federal Regulations (CFR) Part 91. The local personal flight departed Snohomish, Washington, about 0815. Visual meteorological conditions prevailed, and no flight plan had been filed.

The pilot reported that during a flight in the rented helicopter he was descending out of 5,000 ft. As he approached 4,000 ft, he increased collective and noticed that the engine was slowing down; he was unable to recover the engine rpm to a normal range. The helicopter continued to descend until the pilot entered an autorotation. The helicopter impacted a tree about 30 ft high and then came to rest in a small stream.

The pilot stated he did not believe the engine ever quit, but the engine would not produce enough power to continue flight.

The helicopter was recovered on August 12, 2014, by SFS and examined by Federal Aviation Administration inspectors with assistance from SFS personnel. They found that the throttle mount bracket was hanging by the throttle cable linkage and was not secured to the servo mount studs as it should have been. This would prevent the loss of throttle movement for acceleration.

The operator stated that the engine had just been installed into the helicopter 10 flight hours prior to the accident.

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA18CA006	10/07/2017	1430 AKD	Regis# N81818	Manokatak, AK	Apt: N/a
Acft Mk/Mdl MAULE M 7-235			Acft SN 4047C	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
			Acft TT 3434	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: GABRIEL L. DAVIS			Opr dba:		Aircraft Fire: NONE

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# National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# WPR15LA209	07/10/2015 900 MST	Regis# N9152V	Phoenix, AZ	Apt: Phoenix Deer Valley Airport DVT
Acft Mk/Mdl MOONEY M 20G		Acft SN 690012	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O&VO-360 SER		Acft TT 2993	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: BURDICK MARK		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

## Events

1. Landing - Fuel related

## Narrative

On July 10, 2015, about 0900 mountain standard time, a Mooney M20G, N9152V, experienced a partial loss of engine power while on short final to the Phoenix Deer Valley Airport (DVT), Phoenix, Arizona, and subsequently landed short of the runway. The private pilot undergoing instruction and the certified flight instructor (CFI) sustained no injuries; the airplane sustained substantial damage to the right wing. The airplane is registered to a private individual and operated by the private pilot under the provisions of 14 Code of Federal Regulations Part 91 as an instructional flight. Visual meteorological conditions prevailed and no flight plan was filed.

The private pilot undergoing instruction reported that when they passed the approach end of the runway on the downwind leg of the traffic pattern, he reduced power to idle to conduct a practice 180o power off landing. The pilot maintained glide speed until about 40 feet above the ground when the pilot observed the airplane was slightly below the intended glide path. The pilot increased power to initiate a go around, however, the engine sputtered and did not increase RPM. The pilot executed a forced landing short of the runway surface; the airplane touched down hard and bounced. When it settled back onto the ground, the right main landing gear and nose landing gear collapsed and the airplane came to rest to the right of the runway surface.

The CFI reported that when the private pilot decided to conduct a go around, he looked at the throttle quadrant to confirm that the throttle was full forward and the propeller and mixture levers were also positioned correctly.

A postaccident engine run was conducted by a mechanic and inspectors from the Federal Aviation Administration (FAA). The spark plugs were removed and examined; they displayed signatures consistent with a rich running engine. The spark plugs were reinstalled and an undamaged propeller was installed. The engine started without hesitation; after idling temporarily, the RPM was increased and a magneto check was completed with no abnormalities noted. The power was decreased to idle for two minutes to simulate a 180o power off landing. The throttle was abruptly increased to full power; it hesitated for a split second and went to full RPM for a couple minutes. This sequence was conducted twice with no anomalies noted. The engine was shutdown uneventfully.

The engine data monitor download showed that shortly before the engine lost power, the engine was at idle for about 1.5 minutes; during which, the cylinder exhaust gas temperatures were decreasing. At the end of the 1.5 minutes, there was an increase in RPM and subsequent small spike in the exhaust gas temperatures before they continued to decrease. In addition, the RPMs continued to zero, and the manifold pressure adjusted to barometric pressure.

At the time of the accident, the reported temperature was 29o C and the dew point was 7o C. According to the FAA carburetor icing Special Airworthiness Information Bulletin, the condition was conducive to carburetor icing at glide and cruise power settings.



# National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA211 04/28/2017 1506 EST Regis# N1157N Cedar Key, FL Apt: George T Lewis CDK  
Acft Mk/Mdl MOONEY M20J-NO SERIES Acft SN 24-1288 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending  
Eng Mk/Mdl LYCOMING IO-360-A3B6D Acft TT 2254 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091  
Opr Name: NM LIQUORS INC Opr dba: Aircraft Fire: NONE  
AW Cert: STN

## Summary

The private pilot reported that, during the landing roll, he had traveled about halfway down the 2,355 ft-long runway when he realized that a go-around was going to be required. He could not recall the airplane's airspeed when the airplane touched down on the runway that was located steps from the ocean. However, he did recall that he initiated the go-around by applying full throttle, retracting the flaps to 0, and rotating at 62 knots. The airplane "lifted off but did not gain altitude." The pilot lowered the nose to accelerate, but the airplane stalled and impacted the water. The airplane sustained substantial damage to the right wing spar and aileron. ÿ

According to the manufacturer's Pilot's Operating Handbook, the go-around procedure is:

### CAUTION

To minimize control wheel forces during go-around, timely nose-down trimming is recommended to counteract nose up pitching moment as power is increased and/or flap retraction.

Power...Full Throttle/2700 RPM

Mixture...Full Rich

Airspeed...65 KIAS

Wing Flaps...Takeoff position after climb established

Trim...Nose Down (to reduce control forces)

Airspeed...Accelerate to 76 KIAS

Landing Gear...-Retract

Wing Flaps...Retract

Cowl Flaps...Open

Airspeed...Accelerate to 86 KIAS

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

## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's failure to follow the manufacturer's go-around procedure, which resulted in an aerodynamic stall.

## Events

1. Landing-landing roll - Attempted remediation/recovery
2. Landing-aborted after touchdown - Collision during takeoff/land

## Findings - Cause/Factor

1. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
2. Personnel issues-Task performance-Use of equip/info-Use of policy/procedure-Pilot - C
3. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Airspeed-Not attained/maintained - C
4. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Climb rate-Not attained/maintained
5. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Configuration-Incorrect use/operation

## Narrative

The private pilot reported that during the landing roll, he had traveled about half of the distance down the 2,355 ft. runway and he realized that a go-around was going to be required. He could not recall the airplane's airspeed when the airplane touched down on the runway that was located steps from the ocean. However, he did recall that he initiated the go-around by applying full throttle, retracting the flaps to zero and rotating at 62 kts. The airplane "lifted off but did not gain altitude." The pilot lowered the nose to accelerate, but the airplane stalled and impacted the water. The airplane sustained substantial damage to the right wing spar and aileron.

According to the manufacturer's pilot operating handbook, the go-around procedure is:

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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## CAUTION

To minimize control wheel forces during go-around, timely nose-down trimming is recommended to counteract nose up pitching moment as power is increased and/ or flap retraction.

Power... Full Throttle/2700 RPM

Mixture... Full Rich

Airspeed... 65 KIAS

Wing Flaps... Takeoff position after climb established

Trim... Nose Down (to reduce control forces)

Airspeed... Accelerate to 76 KIAS

Landing Gear... Retract

Wing Flaps... Retract

Cowl Flaps... Open

Airspeed... Accelerate to 86 KIAS

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

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# ERA17CA149	04/08/2017 1340 EDT	Regis# N3167G	Culpepper, VA	Apt: Culpeper Regional Airport CJR
Acft Mk/Mdl NORTH AMERICAN T 6G-G		Acft SN 49-3272	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl PRATT & WHITNEY R-1340-AN1		Acft TT 8875	Fatal 0 Ser Inj 1	Flt Conducted Under: FAR 091
Opr Name: SEJ WARBIRDS, LLC		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Summary

The pilot stated that, after a thorough preflight inspection and passenger briefing, he started the engine and noted that there was an 80ø left crosswind at 5 knots, gusting to 15 knots. He performed an engine run-up, checked the flight controls, and then departed to fly around the local area for about 20 minutes. He then returned to the departure airport, and because the airplane was only equipped with a single radio and there was traffic congestion, he did not monitor the weather or ask for a wind check. He performed a "high break" at traffic pattern altitude, and while on final approach with the flaps fully extended, he maintained a left-wing-low attitude to correct for the left crosswind. He performed a wheel landing, but as the tailwheel was lowering, the left wing raised "dramatically," and the right wingtip contacted the runway. He added power to abort the landing, but because the right wing was contacting the runway, the airplane pivoted to the right. The airplane went off the right side of the runway and nosed over.

The pilot reported that there were no preimpact mechanical failures or malfunctions of the airframe or engine that would have precluded normal operation. The reported wind conditions about 5 minutes before the accident included a variable crosswind between 80ø and 170ø left of the selected runway heading at 8 knots, gusting to 16 knots.

## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's failure to maintain airplane and directional control during the landing roll and subsequent go-around in gusting wind conditions.

## Events

1. Landing-landing roll - Loss of control on ground
2. Landing-aborted after touchdown - Dragged wing/rotor/float/other
3. Landing-flare/touchdown - Nose over/nose down

## Findings - Cause/Factor

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

## Narrative

The pilot stated that after a thorough preflight inspection and passenger briefing, he started the engine and noted that there was an 80ø left crosswind at 5 kts, with gusts to 15 kts. He performed an engine run-up and checked the flight controls, then departed to fly around the local area for about 20 minutes. He then returned to the departure airport, and because the airplane was only equipped with a single radio and traffic congestion, he did not monitor the weather or ask for a wind check. He performed a "high break" at traffic pattern altitude and while on final approach with the flaps fully extended, he maintained a left wing low attitude to correct for the left crosswind. He performed a wheel landing, but as the tailwheel was lowering, the left wing raised "dramatically" and the right wingtip contacted the runway. He added power to abort the landing, but because the right wing was contacting the runway, the airplane pivoted to the right. The airplane went off the right side of the runway and nosed over. The pilot indicated there were no preimpact mechanical failures or malfunctions of the airframe or engine that would have precluded normal operation. The reported wind conditions about 5 minutes before the accident included a crosswind that was variable between 80ø and 170ø left of the selected runway heading, at a velocity of 8 kts, with gusts to 16kts.

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA506	08/09/2017 1145 PDT	Regis# N6048H	Camas, WA	Apt: Grove Field 1W1
Acft Mk/Mdl PIPER J3C-65		Acft SN 19194	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl CONT MOTOR A&C65-8		Acft TT 3991	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: NEIL T. CAHOON		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Events

1. Landing - Loss of control on ground
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## Narrative

The flight instructor, who was giving tailwheel instruction reported that, after several dual landings, he exited the airplane to allow the pilot receiving instruction to conduct a solo flight. The flight instructor further reported that, during the pilot's third solo landing, he observed the pilot make a wheel landing. During the landing, the airplane exited the runway to the left and impacted a hangar.

The airplane sustained substantial damage to the fuselage.

The flight instructor 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

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Accident Rpt# GAA17CA199	04/03/2017 1930 PDT	Regis# N7822D	Scappoose, OR	Apt: Scappoose Industrial Airpark SPB
Acft Mk/Mdl PIPER PA 22		Acft SN 22-5468	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: COLUMBIA AVIATION CENTER		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Summary

The student pilot in the tailwheel-equipped airplane reported that he accomplished several takeoffs and landings on the asphalt runway during his solo flight in the pattern. He reported that, during his sixth landing, the airplane swerved to the left and subsequently swerved to the right during the landing roll. He attempted to control the airplane's direction with rudder pedal application, but he inadvertently applied the toe brakes, and the airplane nosed over. The airplane sustained substantial damage to both left side wing struts, the rudder, and the windscreen. ÿ

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

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## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The student pilot's loss of directional control during the landing roll and his subsequent inadvertent brake application, which resulted in a nose-over.

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## Events

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

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## Findings - Cause/Factor

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

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## Narrative

The student pilot in the tailwheel-equipped airplane reported that he accomplished several takeoffs and landings to the asphalt runway during his solo flight in the pattern. He reported that during his sixth landing, the airplane swerved to the left and subsequently swerved to the right during the landing roll. He attempted to control the airplane's direction with rudder pedal application, but he inadvertently applied the toe brakes and the airplane nosed over. The airplane sustained substantial damage to both left side wing struts, the rudder, and the windscreen.

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

# National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# WPR14LA368 09/06/2014 1226 MST Regis# N5966P Mesa, AZ Apt: Falcon Fld FFZ  
Acft Mk/Mdl PIPER PA 24-250 Acft SN 24-1059 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending  
Eng Mk/Mdl LYCOMING O-540 SERIES Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091  
Opr Name: CHRISTOPHERSON JACK T TRUSTEE Opr dba: Aircraft Fire: NONE  
AW Cert: STN

## Summary

The airline transport pilot reported that, during the approach to land, the right main landing gear (MLG) would not extend, and the locked gear-down position would not illuminate. The pilot attempted to manually extend the gear without success. The pilot then conducted a normal landing, and during the rollout, the right MLG collapsed. Examination of the airplane revealed that the two landing gear cables were rigged slightly differently and that the right bracket that connected the landing gear transmission to the airframe was broken off. Examination of the break with a magnifying glass revealed that it likely had not occurred recently. With the airplane on jacks and the landing gear cables disconnected, the MLG successfully locked down, and the MLG could be manually returned to the "up" position with no restrictions. The airplane experienced a gear-up landing 13 years before the accident, and it is likely that the differential rigging of the two gear cables had existed since that time and led to the MLG being just on the edge of locking. The broken bracket that connected the MLG transmission to the airframe likely fractured some time before the accident and eventually separated from the airframe. The separation of the right MLG transmission bracket coupled with the differential rigging of the two landing gear cables likely prevented the right MLG from moving over center to the "locked" position and resulted in the gear-up landing.

## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The failure of the right main landing gear (MLG) transmission mounting bracket coupled with the differential rigging of the two landing gear cables, which prevented the right MLG from moving to the down-and-locked position before landing.

## Events

1. Landing-landing roll - Landing gear collapse

## Findings - Cause/Factor

1. Aircraft-Aircraft systems-Landing gear system-Main landing gear-Damaged/degraded - C
2. Aircraft-Aircraft systems-Landing gear system-Main landing gear-Failure - C
3. Aircraft-Aircraft systems-Landing gear system-Main landing gear-Not specified - C

## Narrative

### HISTORY OF FLIGHT

On September 6, 2014, at 1226 mountain standard time, a Piper PA24-250, N5966P, had the right main landing gear collapse during the landing roll at Falcon Field Airport, Mesa, Arizona. The airline transport pilot and one passenger were uninjured; the airplane sustained substantial damage to the right wing. The owner/pilot was operating the airplane under the provisions of 14 Code of Federal Regulations (CFR) Part 91. The cross-country flight departed Nephi, Utah, about 0930 with a planned destination of Mesa. Visual meteorological conditions prevailed, and no flight plan had been filed.

The pilot reported that on approach to land the right main landing gear would not extend and indicate a locked gear down position. After a low fly by, the pilot attempted to manually extend the gear but was unable to get a safe gear indication.

The pilot made a normal landing and during the roll out the right main landing gear collapsed.

The pilot stated that the airplane and engine had no mechanical failures or malfunctions during the flight.

## PERSONNEL INFORMATION

## AIRCRAFT INFORMATION

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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METEOROLOGICAL CONDITIONS

AIRPORT INFORMATION

TESTS AND RESEARCH

A Federal Aviation Administration inspector examined the wreckage. He discovered that the rigging of the two landing gear cables was slightly off. The bracket that connected the landing gear transmission to the airframe was broken off; when examined with a magnifying glass, the break did not appear to have occurred recently. With the airplane on jacks and the landing gear cables disconnected, the gear successfully locked down, and the gear could be manually returned to the up position with no restrictions. He determined that the airplane had a gear up landing in 2001.

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# WPR18LA005	10/05/2017 1420 PDT	Regis# N7892P	Hillsboro, OR	Apt: Stark's Twin Oaks Airpark 7S3
Acft Mk/Mdl PIPER PA 24-250-250		Acft SN 24-3121	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl LYCOMING 0-540 SERIES			Fatal 0 Ser Inj 2	Flt Conducted Under: FAR 091
Opr Name: TWIN OAKS AIRPARK INC		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Events

1. Landing-flare/touchdown - Aerodynamic stall/spin
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## Narrative

On October 5, 2017, about 1420 Pacific daylight time, a Piper PA-24-250, N7892P, sustained substantial damage during a hard landing at the Stark's Twin Oaks Airport (7S3) Hillsboro, Oregon. The flight instructor and student pilot sustained serious injuries. The airplane was registered to and operated by Twin Oaks Airpark Inc. under the provisions of 14 Code of Federal Regulations Part 91 as an instructional flight. Visual meteorological conditions prevailed and no flight plan was filed for the local flight that departed about 1320.

The flight instructor reported that during a practice short field full stop landing, as the student pilot was approaching the landing flare, the airplane was slow and he called for a go-around. During the go-around, the airplane aerodynamically stalled and struck the runway hard, substantially damaging the fuselage and wings.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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

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## Events

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

## Narrative

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

During the off-airport landing, the airplane went through an electric fence, spun around about 180 degrees. The nose landing gear sheared off, resulting in substantial damage to the airframe. Examination of the engine revealed no evidence of any preimpact mechanical failures or malfunctions that would have precluded normal operation. Examination and draining of the fuel system, revealed that the fuel strainer bowl, the line from the fuel strainer to the carburetor, and the carburetor float bowl were absent of fuel. The right fuel tank also contained only about 1 pint of fuel, while the left fuel tank contained about 3 gallons of fuel. Review of flight school records revealed that the airplane had flown 4.7 hours since it was last refueled. When asked, the flight instructor advised that she had not observed the private pilot as he performed his preflight inspection, did not know when the airplane had last been refueled, and did not remember asking the private pilot about the fuel quantity before they departed.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# ERA17LA300	08/20/2017 1120 EDT	Regis# N9431N	St. Augustine, FL	Apt: Northeast Florida Rgnl SGJ
Acft Mk/Mdl PIPER PA 28R-200-200		Acft SN 28R-35144	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl LYCOMING I0360 SER		Acft TT 6943	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: FLORIDA FLYERS FLIGHT SCHOOL		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Events

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

## Narrative

On August 20, 2017, about 1120 eastern daylight time, a Piper PA-28R-200, N9431N, was substantially damaged after a collision with terrain while conducting an emergency landing at Northeast Florida Regional Airport (SGJ), St Augustine, Florida. The flight instructor and student pilot sustained minor injuries. The airplane was privately owned and the instructional flight was operated under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed at the time, and no flight plan was filed for the local flight, which originated from SGJ about 1035.

According to the flight instructor, the purpose of the flight was to practice traffic pattern touch and go landings. The instructor said that during the run-up he told the student "not to forget to change the fuel tanks every 30 minutes." The flight instructor stated that they were on their fourth takeoff and were climbing through 500 ft when the engine started to "sputter." The flight instructor took control of the airplane, declared an emergency and landed the airplane in a marsh area.

According to the student pilot, as they were climbing through 500 ft he switched the fuel tanks while climbing and the engine "failed." The student pilot did not recall which fuel tank he switch to prior to the loss of engine power. He passed the controls over to the instructor, and an emergency landing was performed.

Examination of the airplane by a Federal Aviation Administration Inspector revealed the right wing and fuselage was buckled.

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# CEN18LA017    10/19/2017 1300 CDT    Regis# N633CB    Port Mansfield, TX    Apt: T05  
Acft Mk/Mdl PIPER PA 32RT-300T-300T    Acft SN 32R-7887158    Acft Dmg: SUBSTANTIAL    Rpt Status: Prelim    Prob Caus: Pending  
Fatal 0    Ser Inj 0    Flt Conducted Under: FAR 091  
Opr Name: PILOT    Opr dba:    Aircraft Fire: NONE  
AW Cert: STN

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## Events

1. Taxi - Part(s) separation from AC
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## Narrative

On October 19, 2017, at 1300 central daylight time, a Piper PA-32RT-300T, N633CB, experienced a nose landing gear collapse and an impact with a taxiway surface during an after-landing taxi at Charles R Johnson Airport (T05), Port Mansfield, Texas. The airplane sustained substantial damage to the engine firewall. The airplane was registered to PKJ Aviation LLC and operated by the pilot under 14 Code of Federal Regulations as a part 91 flight. The flight was operating on an instrument rules flight plan. Visual meteorological conditions prevailed at the time of the accident. The flight departed from Conroe-North Houston Regional Airport, Houston, Texas, at 1041 and was destined to T05.

# National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA233 04/11/2017 2152 CDT Regis# N461RL Llano, TX Apt: Llano Muni AQO  
Acft Mk/Mdl PIPER PA 34-200T Acft SN 34-8170001 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending  
Eng Mk/Mdl TELEDYNE CONTINENTAL LTSIO360EB1 Acft TT 5022 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091  
Opr Name: CLAIBORNE AVIATION LLC Opr dba: Aircraft Fire: NONE  
AW Cert: STN

## Summary

The pilot in the multiengine, retractable-gear-equipped airplane reported that he was flying in instrument meteorological conditions and leveled off at 8,000 ft mean sea level. He began to configure the airplane for cruise flight, and he realized that the right engine cross-feed fuel selector was positioned for the left tank. The left tank fuel indicator displayed empty, and the right fuel indicator displayed 45 gallons remaining. He believed that the fuel indicators had malfunctioned, and he established an approach to a nearby highway intersection. The pilot landed with the landing gear stowed on the asphalt highway. The airplane sustained substantial damage to the lower fuselage longerons. ÿ

Per the National Transportation Safety Board Pilot Aircraft Accident Report, the pilot reported that he became complacent during the flight and vowed to use a checklist in the future. The pilot has coordinated with his local Federal Aviation Administration Safety Team to help prevent similar accidents from occurring in the future. ÿ

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

## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's complacency during the en route phase of flight, which resulted in fuel mismanagement and a subsequent gear-up landing.

## Events

1. Enroute - Fuel exhaustion
2. Landing-landing roll - Landing gear not configured

## Findings - Cause/Factor

1. Aircraft-Fluids/misc hardware-Fluids-Fuel-Fluid management - C
2. Personnel issues-Task performance-Use of equip/info-Use of equip/system-Pilot - C
3. Personnel issues-Psychological-Attention/monitoring-Task monitoring/vigilance-Pilot - C
4. Personnel issues-Psychological-Personality/attitude-Complacency-Pilot - C

## Narrative

The pilot in the multi-engine, retractable gear-equipped airplane reported that he was flying in instrument meteorological conditions and leveled off at 8,000 ft mean sea level. He began to configure the airplane for cruise flight and he realized that the right engine cross-feed fuel selector was positioned for the left tank. The left tank fuel indicator displayed empty and the right fuel indicator displayed 45 gallons remained. He believed that the fuel indicators had malfunctioned and he established an approach to a nearby highway intersection. The pilot landed with the landing gear stowed on the asphalt highway. The airplane sustained substantial damage to the lower fuselage longerons.

Per the National Transportation Safety Board (NTSB) Pilot Aircraft Accident Report, the pilot reported that he became complacent during the flight and vowed to use a checklist in the future. At the recommendation of the NTSB Investigator-in-charge, the pilot has coordinated with his local Federal Aviation Administration Safety Team to help prevent accidents in kind from occurring in the future.

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

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# CEN17LA341	05/27/2017 1135 EDT	Regis# N5584U	Ray, MI	Apt: Ray Community Airport 57D
Acft Mk/Mdl PIPER PA-28-140		Acft SN 28-26314	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING 0-320 SERIES		Acft TT 3715	Fatal 0 Ser Inj 1	Flt Conducted Under: FAR 091
Opr Name: LYNN CURTIS W		Opr dba:		Aircraft Fire: NONE

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## Events

1. Landing-flare/touchdown - Hard landing
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## Narrative

On May 27, 2017, about 1135 eastern daylight time, a Piper PA-28-140, N5584U, impacted trees, terrain, and a tractor near Ray Township, Michigan. The private pilot on board sustained serious injuries and the airplane was substantially damaged. The airplane was owned and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. No flight plan was filed and day visual meteorological conditions prevailed at the time of the accident.

The pilot was landing at the Ray Community Airport following a 20 minute local flight. On his first attempt to land, he was high on the approach and elected to go around. On the second landing attempt, the pilot said he was long. He said he applied throttle and lost consciousness.

Witnesses reported that the pilot made several landing attempts, but each time the airplane was too fast or too high to land. On the last attempt, the airplane touched down fast about halfway down the 2,495' runway. The airplane skipped, floated, and impacted the runway nose gear first about 1/4 the distance from the end, breaking the nose gear. The airplane bounced and departed the east end of the runway. The airplane continued across a gravel road, through a field, and then struck several small trees and a farm tractor before coming to a stop.

The pilot's flight instructor said the pilot was not competent to operate the airplane. He had previously flown with the pilot and said that his traffic patterns, approaches and landings were very substandard for the certificate he held. The flight instructor discussed this with the pilot following their last flight together, and told the pilot he needed a lot of practice and should be flying with a competent pilot or instructor.

The airplane sustained substantial damage to both wings, the engine and propeller, the engine cowling, and forward fuselage. The nose landing gear was broken aft and the left main landing gear was bent inboard. Flight control continuity was confirmed. An examination of the airplane's engine, and other systems revealed no pre-impact anomalies that contributed to the accident.

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA501	08/17/2017	1200 AKD	Regis# N7678D	Tyonek, AK	Apt: N/a
Acft Mk/Mdl PIPER PA18-A150			Acft SN 18-5900	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320-B2B			Acft TT 6761	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: ELDRIDGE, WILLIAM D.			Opr dba:		Aircraft Fire: NONE
					AW Cert: SPR

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## Events

1. Landing - Loss of control on ground

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## Narrative

The pilot of the tailwheel-equipped airplane reported that during an off airport landing on wet, marsh vegetation, he used "excessive braking" and the airplane nosed over.

The airplane sustained substantial damage to the left wing lift struts and rudder.

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

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Accident Rpt# GAA17CA441	07/23/2017	1110 AKD	Regis# N4387A	Sterling, AK	Apt: Scooter's Landing Strip AK84
Acft Mk/Mdl PIPER PA18S-150			Acft SN 18-4795	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-320			Acft TT 2321	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: JAMES G. TRUESDELL			Opr dba:		Aircraft Fire: NONE
					AW Cert: STN

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## Summary

The pilot of the tailwheel-equipped airplane reported that, while landing in crosswind conditions and as the tailwheel set down, the airplane veered left. Subsequently, the airplane exited the left side of the runway, struck a well head, and came to rest nose down.

The airplane sustained substantial damage to the fuselage.

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

The automated weather observation system about 7 nautical miles from the accident site reported that, about the time of the accident, the wind was from 280° at 11 knots. The pilot landed on runway 26.

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## Cause Narrative

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

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## Events

1. Landing - Loss of control on ground
2. Landing - Runway excursion
3. Landing - Collision with terr/obj (non-CFIT)
4. Landing - Nose over/nose down

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## Findings - Cause/Factor

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

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## Narrative

The pilot of the tailwheel-equipped airplane reported that, while landing in crosswind conditions, as the tailwheel set down the airplane veered left. Subsequently, the airplane exited the left side of the runway, struck a well head and came to rest nose down.

The airplane sustained substantial damage to the fuselage.

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

The automated weather observation system about 7 nautical miles from the accident site reported that, about the time of the accident, the wind was 280° at 11 knots. The pilot landed on runway 26.

# National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# GAA17CA452 07/29/2017 2115 CDT Regis# N2204B St. Joseph, IL Apt: Routh 9IL2  
Acft Mk/Mdl PIPER PA28-236 Acft SN 28-7911012 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending  
Eng Mk/Mdl LYCOMING O-540-J3A5D Acft TT 3391 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091  
Opr Name: PAUL L. ROUTH Opr dba: Aircraft Fire: NONE  
AW Cert: STN

## Summary

The pilot reported that, while landing at night, the threshold and right side runway lights were out of service at the airport. He added that he "must have been closer [to the ground] than [he] estimated" on approach because the airplane landed flat. Subsequently, the nose landing gear collapsed, the airplane veered left, and he attempted to correct with right rudder. The airplane came to rest left of the runway in an adjacent cornfield.

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

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

## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's improper landing flare, which resulted in the nose landing gear collapsing and subsequent loss of directional control.

## Events

1. Landing - Hard landing
2. Landing - Landing gear collapse
3. Landing - Attempted remediation/recovery
4. Landing - Runway excursion
5. Landing - Nose over/nose down

## Findings - Cause/Factor

1. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Landing flare-Not attained/maintained - C
2. Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
3. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Directional control-Not attained/maintained - C
4. Personnel issues-Psychological-Perception/orientation/illusion-Perception-Pilot
5. Environmental issues-Physical environment-Object/animal/substance-Runway/taxi/approach light-Effect on personnel
6. Environmental issues-Conditions/weather/phenomena-Light condition-Dark-Effect on personnel
7. Environmental issues-Operating environment-(general)-(general)-Effect on personnel

## Narrative

The pilot reported that, while landing at night, the threshold and right side runway lights were out of service at the airport. He added that, he "must have been closer [to the ground] than [he] estimated" on approach because the airplane landed flat. Subsequently, the nose landing gear collapsed, the airplane veered left and he attempted to correct with right rudder. The airplane came to rest left of the runway in an adjacent cornfield.

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

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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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA18CA021	10/01/2017 1230 EDT	Regis# N1054S	Block Island, RI	Apt: Block Island State BID
Acft Mk/Mdl PIPER PA32R-301T		Acft SN 3257448	Acft Dmg: DESTROYED	Rpt Status: Prelim Prob Caus: Pending
			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: THOMAS PEPE		Opr dba:		Aircraft Fire: NONE

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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

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## Events

1. Landing-flare/touchdown - Wildlife encounter (non-bird)
- 

## Narrative

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

The engine mounts and firewall sustained substantial damage.

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

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

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA509	08/24/2017 1335 PDT	Regis# N7198J	Bremerton, WA	Apt: Bremerton National PWT
Acft Mk/Mdl ROBINSON HELICOPTER R22		Acft SN 3232	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-360-J2A		Acft TT 7188	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: HELICOPTERS NORTHWEST, INC		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Events

1. Takeoff - Dynamic rollover
- 

## Narrative

The flight instructor reported that, after the student pilot performed several practice approaches, they landed the helicopter and the flight instructor exited. The instructor reported that after the start, the student pilot attempted to takeoff; the left skid lifted off the ground, but the right skid did not. Subsequently, the helicopter rolled to the right and came to rest on its right side.

The helicopter sustained substantial damage to the main rotor system.

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

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA18CA030 10/05/2017 730 PDT Regis# N878MC

Las Vegas, NV

Apt: North Las Vegas VGT

Acft Mk/Mdl ROBINSON HELICOPTER R22 BETA-BETA Acft SN 3782

Acft Dmg: SUBSTANTIAL

Rpt Status: Prelim

Prob Caus: Pending

Fatal 0 Ser Inj 0

Flt Conducted Under: FAR 091

Opr Name: CASS AVIATION LLC

Opr dba:

Aircraft Fire: NONE

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA514	08/29/2017 1330 PDT	Regis# N622MP	Sacramento, CA	Apt: Sacramento Executive SAC
Acft Mk/Mdl ROBINSON HELICOPTER R22-BETA	Acft SN 4016	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual	Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-360-J2A	Acft TT 274	Fatal 0	Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: CAPITOL HELICOPTERS	Opr dba:	Aircraft Fire: NONE		AW Cert: STN

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## Events

1. Taxi - Loss of control in flight
- 

## Narrative

The helicopter flight instructor reported that the student was practicing quick-stops on the taxiway. The student was hovering with a tailwind and began to accelerate when the helicopter started a "fast yaw to the right". He added that they stopped the acceleration, checked the engine gauges, and then accelerated again. As the helicopter was going through effective translational lift (ETL), it spun to the right. The flight instructor took the flight controls, noticed the rpm was high, and reduced the throttle. The helicopter impacted the ground backwards and slid before coming to rest.

The helicopter sustained substantial damage to the vertical stabilizer.

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

A review of recorded data from the automated weather observation station located on the airport reported that, about 37 minutes before the accident, the wind was from 190° at 7 knots. The helicopter was taxiing to the north.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# WPR18LA010	10/16/2017	1918 HST	Regis# N820DF	Molokai, HI	Apt: N/a
Acft Mk/Mdl ROBINSON HELICOPTER			Acft SN 1164	Acft Dmg: DESTROYED	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl LYCOMING 0-540 SERIES				Fatal 2 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name:			Opr dba:		Aircraft Fire: NONE

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## Events

1. Enroute-change of cruise level - Loss of control in flight
- 

## Narrative

On October 16, 2017, about 1918 Hawaiian standard time, a Robinson Helicopter R44, N820DF, impacted the waters off the island of Molokai, Hawaii. The flight instructor and commercial pilot receiving instruction are missing and presumed to be fatally injured. Debris from the helicopter was observed floating on the water northwest of the shores of Molokai. The helicopter was registered to Stasys Aviation Leasing LLC., and operated by Hawaii Pacific Aviation doing business as Mauna Loa Helicopters under the provisions of 14 Code of Federal Regulations Part 91 as an instructional flight. Visual meteorological conditions existed in the area at the time of the accident, and the flight was operated on an instrument flight rules flight plan. The flight originated from the Daniel K. Inouye International Airport (PHNL) at an undetermined time.

Preliminary information provided by the Federal Aviation Administration indicated that Air Traffic Control cleared the flight for a practice RNAV (GPS)-B instrument approach to the Molokai Airport and provided instructions for the missed approach procedure which included instructions to climb to 4,000 feet and maintain a heading of 040 degrees. Following completion of the instrument approach and subsequent execution of the missed approach, the flight reestablished radio contact with Air Traffic Control. The controller informed the flight that radar contact was identified and subsequently issued a clearance to PHNL with instructions to fly a heading of 260 degrees and ascend to an altitude of 4,000 feet. Shortly after, the controller issued a heading change to 240 degrees to intercept the Victor 8 airway, of which the flight verified. Shortly after, the controller noticed the flight had descended to 3,600 feet before radar and radio communication with the accident helicopter was lost.

A representative from the United States Coast Guard reported that after the helicopter was reported missing, an air unit located debris and a red chemlight floating in the ocean water northwest of Molokai. The following day, another air unit from Maui Fire Department located an uninflated life jacket along the northwestern shoreline of Molokai. The search for the helicopter was suspended on the evening of October 19, 2017.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA491	08/14/2017 1315 CDT	Regis# N97UP	Westby, WI	Apt: N/a
Acft Mk/Mdl ROBINSON HELICOPTER		Acft SN 0237	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-540-F1B5		Acft TT 5353	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 137
Opr Name: MF HELICOPTERS LLC.		Opr dba:		Aircraft Fire: NONE
				AW Cert: SPR

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## Events

1. Maneuvering-low-alt flying - Low altitude operation/event
- 

## Narrative

The helicopter pilot reported that, during an aerial application flight, he performed a "high recon [reconnaissance]" pass over the field and observed houses, tree lines, and power lines surrounding the field. He added that he descended for the first pass, about 70 mph and 100 to 150 ft. above ground, and as he approached the end of the field, he "suddenly became aware of two [additional] large power lines stretched out in front of [him] at eye level and closing fast." He further added that, he "instinctively pulled up on the collective and back on the cyclic" and the fuselage cleared the wire, but suddenly there was a "violent lurch" when the tail rotor contacted the wire. Subsequently, the helicopter started to "spin out of control," the pilot braced for impact, and the helicopter impacted the terrain.

The fuselage, tail boom, and main rotor sustained substantial damage.

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

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA279	05/10/2017 1627 CDT	Regis# N428JG	Vevay, IN	Apt: N/a
Acft Mk/Mdl ROBINSON HELICOPTER COMPANY	Acft SN 10168	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual	Prob Caus: Pending
Eng Mk/Mdl LYCOMING IO-540-AE1A5	Acft TT 2220	Fatal 0 Ser Inj 0	Fit Conducted Under: FAR 137	
Opr Name: AG-MAX LLC	Opr dba:		Aircraft Fire: NONE	
			AW Cert: SPR	

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## Summary

The pilot reported that he accomplished a high reconnaissance of the field before maneuvering to descend for an agricultural application. He recalled that his attention was split between visually acquiring the intended application area and the indications on his digital map mounted in the cockpit. He descended below a tree line into the intended application area, but "I was still attempting to compare the crop on my field to my map, and was not looking outside the aircraft as diligently as required." He diverted his attention outside the cockpit and noticed power lines at eye level. He immediately lowered the collective and applied forward cyclic, but the main rotor mast struck the power lines. He landed the helicopter in the field; however, the main rotor blades sustained substantial damage.

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

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## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The pilot's failure to see and avoid power lines during any agricultural application flight due to distraction when reading a map.

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## Events

1. Enroute-descent - Controlled flight into terr/obj (CFIT)

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## Findings - Cause/Factor

1. Environmental issues-Physical environment-Object/animal/substance-Wire-Effect on equipment - C
2. Personnel issues-Psychological-Attention/monitoring-Monitoring environment-Pilot - C
3. Personnel issues-Psychological-Attention/monitoring-Attention-Pilot - C

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## Narrative

The pilot reported that he accomplished a high reconnaissance before maneuvering to descend for an aerial application. He recalled that his attention was split between visually acquiring the intended application area and the indications on his digital map mounted in the cockpit. He descended below a tree line into the intended application area, but "I was still attempting to compare the crop on my field to my map, and was not looking outside the aircraft as diligently as required." He diverted his attention outside the cockpit and noticed powerline wires at eye level. He asserted that he immediately lowered the collective and applied forward cyclic, but the main rotor mast struck the powerline wires. He landed the helicopter in the field, however, the main rotor blades sustained substantial damage.

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

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# ERA14LA360	07/26/2014 1545 EDT	Regis# N59418	Newnan, GA	Apt: Panther Creek Airport 17GA
Acft Mk/Mdl RYAN AERONAUTICAL ST3KR		Acft SN 2168	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl KINNER R5 SERIES		Acft TT 1800	Fatal 0 Ser Inj 2	Flt Conducted Under: FAR 091
Opr Name: LEE LARRY W		Opr dba:		Aircraft Fire: NONE
				AW Cert: STN

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## Events

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

## Narrative

On July 26, 2014, about 1545 eastern daylight time, a Ryan Aeronautical ST3KR, N59418, was substantially damaged when it impacted trees and terrain following a total loss of engine power while maneuvering near Panther Creek Airport (17GA), Newnan, Georgia. The private pilot and passenger were seriously injured. Visual meteorological conditions prevailed, and no flight plan was filed for the flight, which departed Cobb County International Airport-McCollum Field (RYY), Atlanta, Georgia, at an unknown time. The personal flight was operated under the provisions of Title 14 Code of Federal Regulations Part 91.

A witness stated that the pilot was conducting a "low pass" when the accident occurred. Video footage of the accident obtained from the witness's cell phone showed the accident airplane flying over the runway at 17GA. As it neared the end of the runway and began to climb, a sudden loss of engine power could be heard, and the airplane subsequently descended into the trees from an altitude about 200 feet above ground level.

The pilot held a private pilot certificate with ratings for airplane single engine land, instrument airplane, rotorcraft - helicopter, and glider. His most recent FAA first-class medical certificate was issued in August 2012. His most recent flight review was conducted in April 2014. Neither the pilot's total flight time, nor his time in the accident airplane, was determined.

The airplane was manufactured in 1942 and registered to the pilot in 1989. It was equipped with a Kinner R5 series, 160-hp, reciprocating, radial engine. The most recent annual inspection, the first since 1996, was completed on June 1, 2014. The accident flight was the first flight after the inspection.

The 1555 weather observation at Newnan Coweta County Airport (CCO), located about 10 miles southeast of the accident site, included scattered clouds at 4,500 ft, wind from 260° at 7 knots, temperature 32° C, dew point 22° C, and an altimeter setting of 30.05 inches of mercury.

Postaccident examination revealed that both left and right wing fuel tanks had been breached during the accident and contained no fuel. The throttle and mixture controls were found in a mid-range position. The fuel selector was on the "both" position. The wooden propeller hub remained attached to the crankshaft. Both blades were splintered; one blade was separated.

The engine turned freely when the propeller was rotated by hand. One spark plug was removed from each of the 5 cylinders, and the plugs exhibited normal wear. Cylinder compression was established using the thumb method on the No. 1, 4, and 5 cylinders. The No. 3 cylinder was impact-damaged.

The No. 2 cylinder was intact and undamaged. The valve covers were removed, and it was observed that as the engine was rotated, the intake valve failed to completely close. The valve set screw was observed in an excessively tight position; after readjusting the screw, the intake valve subsequently closed normally and compression was established on the No. 2 cylinder.

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA18CA028	10/26/2017 1914 UTC	Regis# N927D	Lewiston, ID	Apt: Lewiston-nez Perce County LWS
Acft Mk/Mdl STINSON 108-2		Acft SN 108-2927	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
			Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: SCHOO PETER L		Opr dba:		Aircraft Fire: NONE

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA18CA016	10/06/2017	700 MDT	Regis# N123UT	Albuquerque, NM	Apt: N/a
Acft Mk/Mdl ULTRAMAGIC SA T210-NO SERIES			Acft SN 210/42	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
				Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: PACIFIC RIM ADVENTURES INC DBA			Opr dba:		Aircraft Fire: NONE

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