

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# ERA17LA247	07/16/2017 2010 EDT	Regis# N55US	Shirley, NY	Apt: Brookhaven Airport HWV
Acft Mk/Mdl AEROPRAKT A 20 VISTA CRUISER-N	Acft SN 047	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim	Prob Caus: Pending
Eng Mk/Mdl ROTAX 912 S	Acft TT 430	Fatal 0	Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: YURIY KOZIY	Opr dba:	Aircraft Fire: NONE		AW Cert: SPX

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## Events

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

On July 16, 2017, about 2010 eastern daylight time, an experimental light-sport Aeroprakt A-20 Vista Cruiser, N55US, operated by the private pilot, was substantially damaged during a forced landing into trees, following a total loss of engine power on final approach to runway 24 at Brookhaven Airport (HWV), Shirley, New York. The private pilot was not injured. The personal flight was conducted under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed and no flight plan was filed for the local flight.

The pilot reported that he was performing touch-and-go landings at HWV. About 700 feet above ground level, the airplane encountered a downdraft and the engine lost all power. The pilot was unable to restart the engine and realized that the airplane would not glide all the way to the runway. He elected to land in the tops of trees approximately .3 mile from the runway threshold. The airplane subsequently contacted the tree tops and descended left wing low to the ground.

Examination of the wreckage by a Federal Aviation Administration inspector revealed damage to the wings and fuselage. The airplane was equipped with a Rotax 912S, 100-horsepower engine, which was retained for further examination.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# CEN17LA275	07/17/2017	1900 CDT	Regis# N1018J	Dunn Center, ND	Apt: N/a
Acft Mk/Mdl INDY AIRCRAFT LTD T BIRD-II				Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim Prob Caus: Pending
				Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: JACOBUS SMIT			Opr dba:		Aircraft Fire: NONE
					AW Cert: SPE

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## Events

1. Initial climb - Loss of control in flight
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## Narrative

On July 17, 2017, about 1900 central daylight time, an Indy Aircraft LTD T-Bird II airplane, N1018J, impacted power lines and terrain near Dunn Center, North Dakota. The pilot sustained minor injuries and the airplane sustained substantial damage. The unregistered airplane was operated by a private individual under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Visual meteorological conditions prevailed at the time of the accident and no flight plan had been filed. The local flight had just departed from a gravel road.

The responding law enforcement officer, who spoke to the pilot after the accident, stated that the pilot pulled the airplane out of its storage building and then observed the wind conditions for a while to decide in which direction he should depart.

The pilot later stated to the NTSB that the takeoff to the south was normal until the wind lifted the left wing and the airplane unexpectedly veered to the right. The airplane descended and impacted a hill, became airborne again, then impacted power lines. The airplane came to rest in a field underneath the power lines.

The airplane has been retained for further examination.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# ERA17FA223	07/02/2017 1923 EDT	Regis# N3449	Linesville, PA	Apt: Merrys Pymatuning PA01
Acft Mk/Mdl SLIP STREAM GENNIS-NO SERIES	Acft SN 17	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim	Prob Caus: Pending
Eng Mk/Mdl ROTAX 582		Fatal 1	Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: ROSS HARRY A	Opr dba:		Aircraft Fire: GRD	AW Cert: SPX

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## Events

1. Initial climb - Aerodynamic stall/spin
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## Narrative

On July 2, 2017, at 1923 eastern daylight time, a Slip Stream Gennis, N3449, was substantially damaged when it collided with terrain shortly after takeoff from Merrys Pymatuning Airport (PA01), Linesville, Pennsylvania. The private pilot, who was also the owner of the airplane was fatally injured. The airplane was operated under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Visual meteorological conditions prevailed, and no flight plan was filed for the local flight.

Several witnesses at PA01 reported that the airplane took off from runway 4 with a 5-knot tailwind. The airplane climbed on runway heading to about 500 ft, then started a shallow left turn to the north. It then turned to the right, the right wing "dipped" quickly, and the airplane spun towards the ground. The airplane appeared to make one complete revolution as it spiraled down before striking a soybean field and bursting into flames. Several of the witnesses stated that the engine sounded strong throughout the entire flight until impact with the field.

One witness stated that prior to the flight he overheard the pilot state that he "didn't trust his aircraft" and that the airplane had an inoperable airspeed indicator.

The airplane was a two-seat side by side, strut-braced, high wing, pusher configuration with a Rotax 582, 65 horsepower engine and a three blade carbon fiber propeller. It was issued a Federal Aviation Administration experimental light-sport aircraft special airworthiness certificate on July 4, 2007. According to maintenance records, as of a condition engine inspection dated October 21, 2015, the tachometer showed 127.0 hours. The total airframe and engine time at the time of the accident could not be determined.

The pilot held a private pilot certificate with an airplane single-engine land rating. The last entry in the pilot's logbook showed that he had 424.5 total hours of flight experience as of September 16, 2016. In addition, the pilot held a repairman certificate with a light-sport aircraft rating.

Initial examination of the wreckage revealed that the airplane struck the ground in a right wing low, steep nose down attitude, about 2,000 ft from the departure end of runway 04. The fuselage, cockpit and instrumentation were consumed by a postimpact fire. Three-quarters of the outboard portion of the left and right wings remained intact and the tail, although damaged by fire, remained attached to the frame. Flight control continuity was established between all control surfaces. The engine exhibited fire and impact damage, but exhibited no mechanical anomalies during a teardown examination. Two of the propeller blades were splintered and remained partially attached to the propeller hub; they exhibited significant heat damage. One of the propeller blades was found 30 ft from the wreckage.

The airplane was recovered to a secured facility and retained for further examination.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# CEN16LA264	07/10/2016 1205 EDT	Regis# N701ZG	Dexter, MI	Apt: N/a
Acft Mk/Mdl ALONSO CH 701		Acft SN 7-6607	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl ROTAX 912ULS		Acft TT 194	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: ALONSO GREGORIO F		Opr dba:		Aircraft Fire: NONE

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## Events

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

On July 10, 2016, at 1205 eastern daylight time, an Alonso CH 701 airplane, N701ZG, collided with the terrain during an off-airport landing in Dexter, Michigan, following a loss of engine power. The pilot was not injured. The airplane was substantially damaged. The airplane was registered to and operated by a private individual under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Visual meteorological conditions prevailed for the flight, which was not operated on a flight plan. The flight originated from Livingston County Spencer J Hardy Airport (OZW), Howell, Michigan about 1150.

The pilot reported he departed from Howard Nixon Memorial Airport (50G), Chesaning, Michigan, and was flying to Ann Arbor Municipal Airport (ARB) when the engine began running rough. He landed at OZW to examine the engine with another pilot who was flying in an accompanying airplane. He stated they were not able to find anything wrong with the engine. The pilot started the engine and performed a run-up which he stated were normal, so he departed OZW to continue the flight to ARB. While en route, the engine once again started running rough and subsequently experienced a total loss of power.

The pilot chose to land in a soybean field. During the forced landing approach, he saw power lines and had to lower the pitch altitude to fly under them. The airplane impacted hard in the soybean field.

A postaccident examination of the airplane and engine was conducted by a Federal Aviation Administration (FAA) inspector along with an airframe and powerplant mechanic. The examination did not reveal any anomalies that would have resulted in the loss of engine power.

The FAA Special Airworthiness Information Bulletin (SAIB) CE-09-35 "Carburetor Icing Prevention" chart indicated that the temperature and dewpoint, 79ø F and 61ø F respectively, were conducive for serious icing at glide power, not cruise power.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# CEN16FA344	09/02/2016 1000 CDT	Regis# N676DT	Viborg, SD	Apt: Marv Skie-lincoln County Y14
Acft Mk/Mdl AVES DOUGLAS JAMES RV 6		Acft SN 22759	Acft Dmg: DESTROYED	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-360-A1A		Acft TT 390	Fatal 2 Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: BUCHOLZ ALLEN L		Opr dba:		Aircraft Fire: GRD

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## Events

1. Unknown - Loss of control in flight

## Narrative

### HISTORY OF FLIGHT

On September 2, 2016, about 1000 central daylight time, an experimental, amateur-built RV-6 airplane, N676DT, impacted a cornfield following a loss of control near Viborg, South Dakota. The commercial pilot and the passenger were fatally injured, and the airplane was destroyed. The airplane was registered to and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Visual meteorological conditions prevailed, and no flight plan had been filed. The local flight departed from Marv Skie-Lincoln County Airport (Y14), Tea, South Dakota, about 0900.

Family members reported that the passenger was the pilot's 14-year-old granddaughter, who aspired to become a pilot, and that it was very common for them to take local flights on the weekends. They added that the purpose of the flight was personal and not instructional.

A witness reported hearing an engine "sputtering," followed by a loud "thud," and then he observed a fireball. The witness did not see the airplane in flight.

### PERSONNEL INFORMATION

### AIRCRAFT INFORMATION

The airplane was built from a kit by a previous owner, and it was configured for two occupants with side-by-side seating. The airplane received a special airworthiness certificate with an experimental designation on September 11, 1996.

The investigation was unable to determine when the airplane had been fueled last.

### METEOROLOGICAL INFORMATION

There were no active AIRMETs or SIGMETs near the accident location. Also, there were no PIREPS applicable to the accident area.

### WRECKAGE AND IMPACT INFORMATION

The accident site was located in a mature cornfield about 10 nautical miles west of Viborg and 27 nautical miles southwest of Y14. The airplane came to rest on top of the corn stalks, some of which remained unbroken near the empennage. The wreckage exhibited no lateral or forward displacement. Outside of the wreckage area there was no airplane debris and no noticeable damage to the crop. According to first responders, the passenger was seated in the left seat and her 4-point seatbelt remained fastened. The pilot was seated in the right seat and his 4-point seatbelt remained fastened.

The engine cowling, cockpit, fuselage, and forward portion of the empennage were consumed by a postimpact fire (figure 1).

The wing roots and bottom side of the fuselage were thermally damaged. The wing tank fuel caps were found in place and secure.

The left wing tip fairing separated from the wing and was found near the forward left side of the wreckage. The left wing exhibited rearward and upward impact crushing signatures (figure 2). Impact marks were found under the left wing tip. The left flap was partially underneath the left wing and remained attached at the connection points. The left aileron remained partially attached to the wing; the inboard connection remained attached while the outboard connection was impact

separated. The left fuel tank was breached.

The right wing sustained leading edge damage and rearward crushing near the inboard section. The right flap was retracted and mostly undamaged. The right aileron was found in a neutral position, remained attached, and was mostly undamaged.

The aileron control tubes remained attached to the aileron surfaces and were continuous inboard to the fuselage where they were both consumed by fire.

The elevator control tube remained attached to the elevator surface and extended about 4 ft into the rear fuselage where it was thermally damaged and partially consumed by fire. The forward portion of the elevator control tube remained attached to its connection at the control stick. The elevator trim tab was slightly down from the neutral position. The rudder control cables remained attached to each side of the rudder. The rudder control cables were continuous to the forward ball swage in the cockpit area, and the right ball swage was covered with melted aluminum. The rudder pedals were found in the forward cockpit near the firewall and sustained thermal damage and impact damage.

The throttle and mixture control knobs were near the full forward position. The cockpit instrumentation was mostly consumed by fire. The ignition was positioned to "BOTH." The fuel selector was set to the right fuel tank position.

The two-bladed metal propeller remained attached to crankshaft flange. The propeller was embedded in the soil and positioned horizontally (figure 3). The propeller blades were slightly bent aft and did not exhibit any leading edge damage.

The engine remained attached to the engine mounts and sustained thermal damage primarily near the rear, which encompassed the engine accessories. The top spark plug electrodes, which were all automotive style plugs, were free of damage and exhibited coloration consistent with normal operation. The empennage and exhaust manifold did not contain any visible oil residue. Engine mechanical continuity was established from the vacuum pump drive to the propeller flange. When the crankshaft was rotated via the accessory drive gear, thumb compression and suction were obtained at each cylinder. The valve rockers were undamaged and exhibited movement consistent with normal operation. The magneto drive gear in the accessory section and fuel pump plunger actuated when the accessory drive gear was rotated. The engine driven fuel pump was thermally damaged. The carburetor remained secure on its mounting pad with the mixture and throttle controls secure at their respective connections. The carburetor throttle control was near the full open position, and the mixture was near the full rich position. The carburetor fuel inlet screen was free of contaminants. The carburetor air inlet was free of obstruction. The carburetor was removed and opened for examination, which revealed that the float bowl remained free of contamination and the plastic floats were thermally damaged. The left and right electronic ignition components were thermally damaged. The ignition harness was mostly consumed by fire; however, it appeared to have been connected at each spark plug. The vacuum pump remained secure to its mounting pad, and the plastic coupler was thermally damaged. The engine oil suction screen was free of contaminants.

The postaccident examination of the engine and airframe did not reveal any mechanical malfunctions or anomalies that would have precluded normal operation. The postimpact fire prevented a complete examination of the airplane.

## MEDICAL AND PATHOLOGICAL INFORMATION

The Sanford Health Pathology Clinic, Sioux Falls, South Dakota, completed an autopsy on the pilot, and the cause of death was multiple blunt force injuries. The Federal Aviation Administration's (FAA) Bioaeronautical Sciences Research Laboratory conducted toxicology testing, which revealed verapamil and norverapamil in the blood and liver.

Verapamil is a prescription drug used in the treatment of hypertension, angina, and arrhythmias. Norverapamil is a metabolite of verapamil.

The Sanford Health Pathology Clinic also completed an autopsy on the passenger, and the cause of death was blunt force injury. The FAA's Bioaeronautical Sciences Research Laboratory conducted toxicology testing, which was negative for carbon monoxide in the blood.

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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## ADDITIONAL INFORMATION

A review of FAA radar data for the accident area did not reveal any radar returns that correlated to the flight. Also, there were no air traffic control communications found from the airplane.

An undamaged Appareo Stratus PRX V2 was found near the wreckage. The unit was downloaded by the NTSB Recorders Laboratory and did not reveal any data from the accident flight.

The pilot's iPad was found by the family, and the ForeFlight application revealed 37 previous flight track logs. The track logs were from November 29, 2014 to July 26, 2016.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# WPR17FA155	07/17/2017 1650 MST	Regis# N571JM	Mesa, AZ	Apt: Falcon Fld FFZ
Acft Mk/Mdl EVOLUTION 19 LANCAIR EVOLUTION	Acft SN EVO-019	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim	Prob Caus: Pending
Eng Mk/Mdl P&W CANADA PT6A-135A	Acft TT 376	Fatal 2 Ser Inj 0	Flt Conducted Under: FAR 091	
Opr Name: ALAN RAM	Opr dba:	Aircraft Fire: GRD		AW Cert: SPE

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## Events

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

## Narrative

On July 17, 2017, at about 1650 mountain standard time, a single-engine experimental Lancair Evolution, N571JM, impacted terrain following a loss of control while on approach to Falcon Field, Mesa, Arizona. The private pilot and passenger were fatally injured 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. The cross-country business flight departed from Phoenix Deer Valley Airport, Phoenix, Arizona about 1555 with a planned destination of John Wayne-Orange County Airport, Santa Ana, California. Visual meteorological conditions prevailed and an instrument flight rules (IFR) flight plan had been filed and activated.

Phoenix Approach and Falcon Field Air Traffic Control (ATC) controllers were in contact with the pilot. The pilot transmitted that he needed to divert to Falcon Field airport about 1617 "just in case, my system is not charging" explaining that he had an incident "the other day" where his primary and multifunction displays "just died on me and I don't think its going to happen before we get to Falcon, but if you could keep me on a direct heading to Falcon that would be great." The pilot was cleared to land runway 22L and he transmitted to the controllers that "an electrical failure is probably imminent here," and then requested to cross mid-field to enter the downwind. He then explained that he was "still having an electrical issue," and that he "had one on Friday" and his electrical system was about to go dead.

Numerous witnesses that were located in the vicinity of the accident site reported seeing the airplane maneuvering very low and making a steep left turn. They stated that the airplane then went into a nose-low, near-vertical decent. The airplane impacted a golf course and erupted in flames.

The airplane was recovered from the accident site for further examination.



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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA435 07/22/2017 1227 CDT Regis# N91JG Denison, TX Apt: North Texas Rgnl/perrin Field GYI  
Acft Mk/Mdl GILBERT THOMAS JEFFREY LANCAIR Acft SN 090 Acft Dmg: SUBSTANTIAL Rpt Status: Prelim Prob Caus: Pending  
Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091  
Opr Name: GILES ERNEST R Opr dba: Aircraft Fire: NONE

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# CEN17LA285	07/25/2017	911 CDT	Regis# N254SF	Breckenridge, TX	Apt: Stephens County BKD
Acft Mk/Mdl HILLARD CHARLIE R HAWKER FB60-NO	Acft SN 37514	Acft Dmg: SUBSTANTIAL	Fatal 0	Ser Inj 2	Rpt Status: Prelim Prob Caus: Pending
Opr Name:	Opr dba:	Flt Conducted Under: FAR 091	Aircraft Fire: NONE		
			AW Cert: SPE		

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## Events

1. Approach-VFR pattern final - Loss of engine power (partial)
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## Narrative

On July 25, 2017, about 0900 central daylight time, an experimental Hawker FB60 airplane, N254SF, experienced a loss of engine power and impacted trees and terrain near Stephens County Airport (BKD), Breckenridge, Texas. The private pilot and one passenger were seriously injured and the airplane sustained substantial damage. The airplane was registered to a private individual and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Visual meteorological conditions prevailed at the time of the accident and no flight plan had been filed.

The Federal Aviation Administration (FAA) inspector reported that the airplane was on short final for runway 17 when the engine experienced a loss of power and the airplane descended into the trees and terrain. The pilot and passenger and were flown to a hospital for treatment.

A cell phone video of the accident flight was obtained. A review of the video revealed the airplane was near the approach end of runway 17 as it descended and made a left turn, then disappeared into the tree line.

The airplane has been retained for further examination.

# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# WPR16LA117	05/27/2016 1050 PDT	Regis# N4393H	Minden, NV	Apt: Minden-tahoe MEV
Acft Mk/Mdl HOWELL BOB HOWELL SPECIAL-NO SE	Acft SN	Acft Dmg: SUBSTANTIAL	Fatal 0	Rpt Status: Factual Prob Caus: Pending
Eng Mk/Mdl LYCOMING O-540		Ser Inj 0	Fit Conducted Under: FAR 091	
Opr Name: HOWELL BOB	Opr dba:		Aircraft Fire: NONE	
			AW Cert: SPE	

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## Events

1. Landing-landing roll - Landing gear collapse
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## Narrative

On May 27, 2016, about 1050 Pacific daylight time, an amateur built - experimental Bob Howell, Howell Special airplane, N4393H, sustained substantial damage during the landing roll at the Minden-Tahoe Airport (MEV), Minden, Nevada, following a landing gear collapse. The private pilot and sole passenger on the airplane were not injured. The airplane was registered and operated by the pilot under the provisions of Title 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed and no flight plan was filed for the personal flight which originated from Bryant Field Airport, Bridgeport, California, about 1015.

The pilot reported a normal landing, however, during the landing roll he noticed the airplane started to veer to the left. He counteracted the veering with right rudder, and brake. Shortly thereafter, about 400 ft down the runway, the right wing suddenly dropped and impacted the runway. He was unable to maintain direction control of the airplane as it veered off the runway. There were no witnesses to the accident.

Examination of the airplane by a Federal Aviation Administration inspector revealed that the right wing was substantially damaged. The wreckage was transported to a secure location for further examination.

Postaccident examination of the right landing gear assembly revealed that the right main wheel and tire assembly had separated from the airplane. Further, the remaining main gear, a-frame structure, had a strut that had separated about at the midpoint. The bolts and their respective attachment structures that attached the gear assembly to the airframe were intact. All fracture surfaces of the main gear assembly were sent to the NTSB Materials Laboratory for further examination.

The laboratory determined that the fracture features in the tubular steel structure portions showed matte gray features on slant angles consistent with a ductile overstress fracture. Some areas were observed that were consistent with sliding contact between the fracture surfaces under bending or shear loads. The end fitting was fractured in the threads and also had matte gray fracture features and the adjacent deformation of the threads was consistent with a ductile overstress fracture. No evidence of preexisting cracks or significant corrosion was observed.

The owner/builder stated that several years earlier he made a repair to the landing gear where he heated the welds to realign the gear. However, a ductile overstress fracture would be consistent with a hard landing and/or side loading on the main gear.

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA444	07/27/2017 1130 PDT	Regis# N302DM	Priest River, ID	Apt: N/a
Acft Mk/Mdl MCINTOSH DONALD W KITFOX SERIES	Acft SN S70407064	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim	Prob Caus: Pending
		Fatal 0	Ser Inj 0	Flt Conducted Under: FAR 091
Opr Name: MCINTOSH, DONALD W.	Opr dba:			Aircraft Fire: NONE

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA447	07/19/2017 1520 UTC	Regis# N489MG	Louisburg, NC	Apt: Ball 79NC
Acft Mk/Mdl MICHAEL DEAN GRISSOM GRISSOM	Acft SN 01	Acft Dmg: SUBSTANTIAL	Rpt Status: Prelim	Prob Caus: Pending
Opr Name: MICHAEL DEAN GRISSOM	Opr dba:	Fatal 0	Ser Inj 0	Flt Conducted Under: FAR 091
				Aircraft Fire: NONE

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# GAA17CA440 07/23/2017 445 AKD Regis# N6333Y Cordova, AK Apt: Cordova Muni CKU  
Acft Mk/Mdl MITCHELL DERRYLE V RANS S 7 Acft SN 0596188 Acft Dmg: SUBSTANTIAL Rpt Status: Prelim Prob Caus: Pending  
Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091  
Opr Name: MAXCY FISHING INC Opr dba: Aircraft Fire: NONE

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# National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# WPR16LA050 01/10/2016 1135 PST Regis# N1950J Fresno, CA Apt: Fresno Chandler Executive Apt FCH  
Acft Mk/Mdl MOORE ONEX Acft SN ONX0118 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending  
Eng Mk/Mdl VW TYPE 1VW Fatal 1 Ser Inj 0 Flt Conducted Under: FAR 091  
Opr Name: RONALD MOORE Opr dba: Aircraft Fire: NONE

## Events

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

## Narrative

On January 10, 2016, about 1135 Pacific standard time, an experimental amateur built airplane, Moore Onex, N1950J, experienced a loss of engine power shortly after takeoff from the Fresno Chandler Executive Airport (FCH), Fresno, California. The commercial pilot, who was the sole person on board, was fatally injured. The airplane sustained substantial damage during the forced landing. The airplane was registered to and operated by the pilot as a Title 14 Code of Federal Regulations Part 91 personal flight. Visual meteorological conditions prevailed and no flight plan was filed for the local flight.

The pilot received serious injuries during the accident and succumbed to his injuries several days after the accident.

At 11:24, airport security camera video showed the accident airplane taxi to the run-up area to prepare for its initial flight test. At 11:34, the video showed the airplane depart from runway 29 and climb out normally through about 200 feet above ground level (agl). Another video from a witness, who was located near the taxiway, depicts the engine failure. The video audio echoed a smooth and complete engine shutdown that occurred in about 1.5 seconds.

According to the pilot, shortly after the engine failure, he initiated a descending, left turn, in order to avoid an airport fence. Multiple witnesses, located at the airport, observed the airplane enter a steep left bank and rapidly descending as it pitched down. Subsequently, the airplane impacted terrain in a nose down, left wing low attitude.

The accident airplane was equipped with a Garmin GPS 296, which revealed the airplane's flight path. The data revealed that the accident flight was about 46 seconds in duration. During the last 13 seconds of recorded data, the airplane was initially at an airspeed of 72 knots. The data then showed a continuous and rapid loss of airspeed. Additionally, the data showed the airplane starting to descend at that time. About the last 7 seconds of recorded data, the airplane made a left turn off the runway centerline that continued to the accident site. The data stopped recording at 11:35.

Postaccident examination revealed that the airplane came to rest upright, nearly 180° from the runway heading and 800 ft from the runway threshold. The ground scars and airplane damage were consistent with the airplane impacting the ground in a nose down attitude, with left bank. The engine was partially attached to the airframe and found to be seized.

A disassembly was accomplished of the experimental engine. During the teardown examination, about 24 ounces of oil drained from the sump and internal portions of the engine. The oil screen was examined and was clear of metal contamination. The engine was disassembled and the center main bearing was galled, but was not seized, to the crankshaft journal. The force one main bearing was observed to be seized to the crankshaft.

According to the Airframe & Powerplant mechanic and the Federal Aviation Administration (FAA) inspector, during the assembly of the engine, improper indexing of the Force One Main Bearing to the crankcase resulted in a complete misalignment of the oil passages. This misalignment blocked the oil transfer hole to the bearing, near the bearing retention dowel pin, thus preventing oil flow into the bearing. Circular impressions were observed on the force one main bearing crankshaft surface and on the crankcase bearing support, which would be consistent with the misalignment, where the oil feed hole was inadvertently used as the dowel pin hole.

In the airplane engine assembly manual, it states: "First, check the fit of the Force One Main Bearing. Take one dowel pin and place it in the engine case bearing dowel pin hole. You have to place the dowel pin at the end of a drill and use a file to remove several thousandths from it's diameter to get it to fully seat in the dowel pin hole. When the dowel pin is installed, place the bearing in position, lining up the dowel pin hole in the bearing with the dowel pin in the engine case. Make sure the bearing is not held from seating fully in the case by a down pin that is too "high" by completing a visual check." Following this passage, the manual states: "Be careful not to mistake the oil feed hole for the dowel pin hole!"

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# ERA17LA220	06/30/2017 1238 EDT	Regis# N269HJ	Baker, FL	Apt: Skypark Estates Airpark 18FD
Acft Mk/Mdl NUNLEY KR2		Acft SN 8362	Acft Dmg: DESTROYED	Rpt Status: Prelim Prob Caus: Pending
Eng Mk/Mdl CONTINENTAL O-170			Fatal 0 Ser Inj 1	Flt Conducted Under: FAR 091
Opr Name: BRYANT J. NUNLEY		Opr dba:		Aircraft Fire: NONE
				AW Cert: SPE

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## Events

1. Initial climb - Loss of control in flight
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## Narrative

On June 30, 2017, about 1238 eastern daylight time, an experimental amateur-built KR2, N269HJ, was destroyed following a collision with terrain at Skypark Estates Airpark (18FD), Baker, Florida. The commercial pilot was seriously injured. The airplane was operated by the pilot under the provisions of 14 Code of Federal Regulations part 91 as a personal flight. Day, visual meteorological conditions prevailed, and no flight plan was filed for the local flight.

A witness was on the airfield and observed the airplane as it took off on runway 27. About 300 to 500 ft agl, after takeoff, the engine sputtered and changed sound. This occurred as the pilot began a 45° climbing turn to the right. The pilot then began a "tight" turn to the left and the airplane descended toward the ground. The witness reported that the engine appeared to be running throughout the accident sequence and may have been near idle power during the descent. The airplane collided with the ground and first responders assisted the pilot out of the wreckage.

An inspector with the Federal Aviation Administration responded to the accident site and examined the wreckage. The wings separated from the airframe and were found fragmented. The engine and propeller separated from the forward fuselage. The empennage remained attached to the aft fuselage.

The wreckage was retained for further examination.



# National Transportation Safety Board - Aircraft Accident/Incident Database

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Accident Rpt# WPR16LA149	07/23/2016 1113 PDT	Regis# N5103	Lancaster, CA	Apt: General Wm J Fox Airfield WJF
Acft Mk/Mdl SWARTZ GENE TITAN T 51 MUSTANG-N	Acft SN	Acft Dmg: SUBSTANTIAL	Rpt Status: Factual Prob Caus: Pending	
Eng Mk/Mdl AMA/EXPR SUZUKI UNKNOWN ENG	Acft TT 154	Fatal 0 Ser Inj 0	Flt Conducted Under: FAR 091	
Opr Name: JOHN TUOSTA	Opr dba:	Aircraft Fire: NONE		AW Cert: SPE

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## Events

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

On July 23, 2016, about 1113 Pacific daylight time, an experimental amateur-built Swartz Gene, Titan T-51 Mustang, N5103, sustained substantial damage during a forced landing after a reported loss of engine power while on downwind at the General William J Fox Airfield (WJF) Lancaster, California. The private pilot and passenger were not injured. The airplane was registered to and operated by the pilot as a Title 14 Code of Federal Regulations Part 91 personal flight. Visual meteorological conditions prevailed, and no flight plan was filed. The local flight departed WJF about 1040.

According to the pilot, the airplane was about 1,000 ft above ground level, initiating the base turn to final, when the engine lost power. He quickly attempted an engine restart but was unsuccessful and decided to land on a nearby road. He selected full flaps over the road and landed hard. Subsequently during the landing roll, the airplane's right main landing gear collapsed, causing the airplane to veer to the right and strike a highway traffic sign, which resulted in substantial damage to the right wing.

Postaccident examination of the airplane's engine, under the supervision of a Federal Aviation Administration inspector, revealed that while accessing the engine, a loose portion of a bolt was observed at the bottom of the cowling. It was determined that the loose bolt portion came from the timing pickup bracket that secures the primary and secondary electronic ignition pickups to the engine.

The magnetic flywheel, a part of the ignition system, consisted of four magnets. One magnet became loose and backed out and then struck the secondary timing pickup. Markings were consistent with the impact. The impact force on the secondary timing pickup caused one of the two bolts on the support bracket to separate and break off. Subsequently, the bracket moved about 2 inches, to the right and aft, which effected the primary and secondary ignition system's timing and rendered them inoperative.

The broken bolt was replaced and the attachment bracket was secured back into it's support. The engine started and ran on the primary ignition system with no anomalies noted. However, on the secondary ignition system, the engine could not be started due to the damage sustained to the secondary system.

# National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# WPR17LA114 05/30/2017 1600 PDT Regis# N399DG Puyallup, WA Apt: Pierce County - Thun Field PLU  
Acft Mk/Mdl TAPPEN CHRIS VELOCITY SUV-NO SERI Acft SN 115 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending  
Eng Mk/Mdl LYCOMING LIO-360-C1E6 Acft TT 138 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091  
Opr Name: BRUCE ANDERSON Opr dba: Aircraft Fire: NONE

## Events

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

## Narrative

### HISTORY OF FLIGHT

On May 30, 2017, about 1600 Pacific daylight time, an experimental amateur-built Velocity SUV, N399DG, departed the runway after landing at Pierce County Airport - Thun Field, Puyallup, Washington. The pilot was not injured, and the airplane sustained substantial damage to the canard and both wings after striking an airport fence. The airplane was registered to, and operated by, the private pilot as a 14 Code of Federal Regulations Part 91 personal flight. The local flight departed Thun Field about 5 minutes before the accident. Visual meteorological conditions prevailed and no flight plan had been filed.

The pilot had purchased the airplane in Tennessee from its builder about one week before the accident, and spent the intervening period flying it back to his home base of Thun Field. He stated that during taxi after one of the return flight legs, the right brake became ineffective, and therefore he was unable to turn the airplane right. He inspected the brake system and was not able to find any anomalies, and on the next three flights, he could not duplicate the problem.

On the day of the accident, he planned to fly the airplane in the traffic pattern. He performed a preflight inspection, and reported that during the engine ground-run he checked the brakes, and they held. Additionally, the taxi route from his hangar to the runway required multiple right turns. The takeoff, climbout, and landing approach were uneventful, and he touched down just beyond the runway numbers, at an airspeed of 82 knots. He applied pressure to the combination rudder/brake foot pedals to slow the airplane down, and once it had reached about 35 knots, the resistance in the right pedal suddenly dropped, and the pedal moved to almost full travel.

The airplane immediately veered to the left, and the pilot released pressure on the left pedal. He began to "pump" the right pedal in an attempt to regain braking action, but the airplane did not slow down. As the airplane approached a runway light, the pilot applied left pedal pressure, and the airplane veered left, departed the runway, and struck the fence.

## TESTS AND RESEARCH

### Brake and Steering System

The airplane was equipped with a castoring nosewheel, with steering accomplished through differential brake pressure once rudder effectiveness had reduced at slower speeds. The brakes were activated by the pilot through the rudder pedals. The design did not incorporate conventional toe-brakes, but instead braking action was applied directly via the rudder pedals once they had been pushed about 2 « inches. The main landing gear struts were equipped with Matco W600 series brake and wheel assemblies, which incorporated a triple-piston brake caliper, and a steel brake disk which was attached to a threaded aluminum wheel hub by three hex-head bolts. Each wheel assembly was enclosed in a composite wheel pant, which covered the caliper and brake rotor.

Post-accident examination revealed that all three hex bolts for the right brake disk were missing, and the disk had become detached from the wheel hub. The disk on the left side was still in place, but was loose, and the three bolts were finger-tight. The bolts and disks had holes to accommodate safety wire, but no safety wire was found on either assembly.

## Maintenance

Construction of the airplane was completed in June 2012, and at the time of the accident, it had accrued a total flight time of about 138 hours. Maintenance records indicated that it failed to pass its conditional inspection on May 19, 2017, due to the lack of an emergency locator transmitter (ELT). An entry by the

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# National Transportation Safety Board - Aircraft Accident/Incident Database

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builder dated May 26 detailed that he installed an ELT and completed a series of repairs and upgrades including the replacement of the brake master cylinders, adjustment of the main landing gear camber and toe-in, (due to uneven tire wear), along with modifications to the avionics system.

The builder stated that the toe-in adjustment required removal of the brake assembly (including the three hex bolts) and installation of shims at the wheel axle mounting points. He could not recall if he had used safety wire to secure the hex bolts, or if he had ever used safety wire for their retention in the past. He further reported that the master cylinders were replaced because he encountered a loss of brake effectiveness in the right brake, which could be overcome by "pumping" the right pedal.

The builder stated that all the work, except for the ELT installation, had actually been completed prior to the conditional inspection on May 19, but that he did not record the entry until one week later.

On May 26, 2017, the same airframe and powerplant rated mechanic (with inspection authorization) who initially inspected the airplane, certified that it was airworthy. The mechanic reported that he had examined the brake system at the time of the initial inspection, but could not recall if safety wire had or had not been installed on the disk bolts. He did not re-examine the brakes during the follow-up inspection, as the ELT was the only item which required attention.

During the 21-flight hour period leading up to the accident no other brake-related maintenance procedures were performed.

# National Transportation Safety Board - Aircraft Accident/Incident Database

Accident Rpt# ANC16LA059 08/12/2016 1800 AKD Regis# N625EX Wasilla, AK Apt: Todds Strip Airport 5AK5  
Acft Mk/Mdl WIGHT CARBON CUB CCK-1865 Acft SN 0093 Acft Dmg: SUBSTANTIAL Rpt Status: Factual Prob Caus: Pending  
Eng Mk/Mdl AEROSPORT CC-340 Acft TT 96 Fatal 0 Ser Inj 0 Flt Conducted Under: FAR 091  
Opr Name: PILOT Opr dba: Aircraft Fire: NONE  
AW Cert: SPE

## Summary

The airline transport pilot was conducting a personal cross-country flight in the experimental amateur-built, tailwheel-equipped airplane. The pilot reported that, while landing on a turf and gravel airstrip, the airplane veered sharply left as the tailwheel touched down. Despite applying full right rudder and brake controls, the pilot was unable to correct the airplane's track, and the right wing and horizontal stabilizer impacted the ground. The pilot stated that, after the airplane stopped, he was unable to straighten the tailwheel with the rudder control inputs because the tailwheel was bent.

Postaccident metallurgical examination of the tailwheel suspension system revealed fractures within the welds of the assembly and a fatigue fracture at the bolt hole for mounting the tailwheel. The crack fracture surfaces exhibited orange and dark red corrosion, suggesting that the cracks were preexisting, and the fracture surfaces were consistent with overstress. The assembly also exhibited general twisting deformation, primarily as the result of deformation in the pivot bracket.

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## Cause Narrative

THE NATIONAL TRANSPORTATION SAFETY BOARD DETERMINED THAT THE CAUSE OF THIS OCCURRENCE WAS: The failure of the tailwheel suspension assembly during landing due to preexisting fatigue fractures in the suspension system, which resulted in a loss of directional control.

## Events

1. Landing-flare/touchdown - Sys/Comp malf/fail (non-power)
2. Landing-flare/touchdown - Loss of control on ground
3. Landing-landing roll - Dragged wing/rotor/float/other
4. Landing-landing roll - Collision with terr/obj (non-CFIT)

## Findings - Cause/Factor

1. Aircraft-Aircraft systems-Landing gear system-Nose/tail landing gear-Failure - C
2. Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Directional control-Attain/maintain not possible - C

## Narrative

On August 12, 2016, about 1800 Alaska daylight time, a tundra tire-equipped, amateur-built, experimental, Wight (Cub Crafters) Carbon Cub CCK-1865 airplane, N625EX, sustained substantial damage while landing on runway 7 at Todds Strip Airport, a private airstrip situated near Wasilla, Alaska. The airline transport pilot and one passenger onboard were uninjured. The airplane was registered to, and operated by, the pilot under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight that was not operating on a flight plan. Visual meteorological conditions prevailed at the time of the accident for the flight that originated from Summit Airport, Summit, Alaska, about 1630, and was destined to Todds Strip Airport.

The pilot reported that his flight to the Todds Strip Airport, a 1,500-foot-long by 60-foot-wide turf and gravel-covered airstrip was uneventful. He added that while landing, during touchdown in a wheel landing configuration, the airplane veered sharply to the left as the tailwheel touched down. The pilot said he applied a "full deflection" of the right rudder and right brake controls in an attempt to correct the veer, but the airplane continued to veer left. The right wing and right horizontal stabilizer subsequently struck the ground, sustaining substantial damage.

After the airplane stopped, the pilot unsuccessfully attempted to turn the airplane to the right using rudder, brake, and engine power. The pilot stated that he was unable to straighten the tail wheel with the rudder control inputs because the tail wheel was bent. The pilot reported that the airplane had a total time in service of 96 hours. The airplane tailwheel spring had been replaced with a coil spring assembly that was not part of the original airplane kit manufacturer's assembly, which was a leaf spring. The coil spring was an Alaskan Bushwheels T3 Heavy Duty tailwheel suspension system with a reported total time in service of 30 hours.

Alaskan Bushwheels T3 Heavy Duty tailwheel suspension system underwent a post-accident metallurgical examination by the National Transportation Safety Board Materials Laboratory. The examination revealed that the underside of the flange used to mount the suspension to the airframe exhibited compression deformation under the faying surfaces of the bolt head washer.

Cracks were observed in weld deposits and at the edge of the bolt hole for mounting the tail wheel. The crack fracture surfaces exhibited orange and dark red

corrosion product. The dark red coloration of the corrosion deposits suggested that these cracks were pre-existing to the accident. After removal of the corrosion product, the fracture surfaces were examined with a 5X to 50X stereo-zoom microscope. The fractographic features were consistent with overstress fracture.

The crack emanating from the edge of the bolt hole was examined. After removal of superficial orange-colored corrosion product, the fracture surface of the bolt hole crack was examined with a 5X to 50X stereo-zoom microscope. The fracture initiated and propagated due to fatigue before transitioning to overstress.

The edges of the main side plates of the suspension assembly exhibited deformation and impact wear scars. The location of the scars on the side plates is consistent with contact with the airplane's tail wheel steering arms.

The pivot bracket exhibited permanent deformation and edge cracking in the region of the welded-in-place bushing as indicated in the close views. A through-thickness crack on the right side was opened for examination of the fracture surface. After removal of orange-colored corrosion product, the fracture surface of the crack was examined with a 5X to 50X stereo-zoom microscope. The fractographic features were consistent with overstress fracture.

A weld along the radiused bend in the pivot bracket exhibited a partial thickness crack in the base metal adjacent to the toe of the weld.

The suspension assembly exhibited general twisting deformation, primarily as the result of deformation in the pivot bracket.