



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Punta Gorda, FL	<b>Accident Number:</b>	ERA09LA079
<b>Date &amp; Time:</b>	12/05/2008, 1635 EST	<b>Registration:</b>	N370CT
<b>Aircraft:</b>	Flight Design CTSW	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control on ground	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

The pilot was practicing takeoffs when he made his third departure. The pilot stated that as the airplane was approaching take off speed, a gust of wind caused the airplane to veer to the right. He stated that he utilized the flight controls to stay pointing straight and on the centerline of the runway. The wind gust subsided and the airplane started "fishtailing" on the runway. The pilot then reduced power and applied brakes, while attempting not to "oversteer" the airplane. The airplane was almost stopped when the nose gear of the airplane departed the left edge of the runway, sank into the sand, and the airplane nosed over. Examination of the airplane revealed no preimpact deficiencies.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain control of the airplane during a rejected takeoff. Contributing to the accident was a gust of wind.

## Findings

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<b>Aircraft</b>	Fireseals - Damaged/degraded Performance/control parameters - Not attained/maintained (Cause)
<b>Personnel issues</b>	Aircraft control - Pilot (Cause)
<b>Environmental issues</b>	Gusts - Not specified (Factor)

## Factual Information

### HISTORY OF FLIGHT

On December 5, 2008, approximately 1635 eastern standard time, a Flight Design CTSW special light sport airplane (S-LSA), N370CT, was substantially damaged during landing at Charlotte County Airport (PGD), Punta Gorda, Florida. The certificated sport pilot was the sole occupant of the airplane and received no injuries. Day visual meteorological conditions prevailed, and no flight plan was filed for the local personal flight. The flight was conducted under the provisions of 14 Code of Federal Regulations (CFR) Part 91.

In a written statement the pilot reported that he had been practicing touch and go pattern work and he was in the process of making his third departure. As the airplane was approaching take off speed, a gust of wind caused the airplane to veer to the right. The pilot utilized the flight controls to stay pointing straight and on the centerline of the runway. The wind gust subsided and the airplane started "fishtailing" on the runway. The pilot then reduced power and applied brakes, while attempting not to "oversteer" the airplane. The airplane was nearly stopped when the nose gear of the airplane departed the left edge of the runway, sank into the sand, and airplane nosed over.

### PERSONNEL INFORMATION

The pilot, age 58, held a sport pilot certificate with a rating for airplane single-engine land, issued November 15, 2007, which was also the date of his most recent biennial flight review. The pilot reported no medical certificate and utilized his driver's license in lieu of a medical certificate. The pilot reported 146 hours of total flight experience, 103 hours were in airplane make and model as pilot in command.

### AIRCRAFT INFORMATION

The accident airplane (serial number 05-10-01), was manufactured in Germany, in 2005. It was registered with the Federal Aviation Administration (FAA) on a special airworthiness certificate for light sport operations on December 29, 2005. The airplane was powered by a 100 horsepower Rotax 912ULS engine. The engine was equipped with a 3-blade fixed pitch, Neuform CR3-65-47-101.6 propeller. The two-seat, single-engine land airplane was equipped with a fixed tricycle landing gear and had accrued 176 flight hours. The maximum gross weight of the airplane was 1,320 pounds and the weight at the time of the accident was 1,020 pounds.

Examination of the airplane was conducted by an FAA inspector and control continuity was confirmed to all control surfaces from the control column and rudder pedals.

The airplane's most recent annual inspection was completed on August 4, 2008 and it had accrued 175.9 hours time in service at the time of the accident. The engine had accrued 175.9 hours total time in service at the time of the accident and 9 hours since the last inspection.

### METEOROLOGICAL INFORMATION

The 1353 recorded weather at PGD included variable winds at 6 knots, visibility 10 statute miles, clear skies, temperature 25 degrees Celsius (C), dew point 11 degrees C, and an altimeter setting of 30.15 inches of mercury.

The weather reported an hour prior to the accident and an hour after the accident showed calm

winds.

#### AIRPORT INFORMATION

The airport has no air traffic control tower and the runway that was utilized was runway 33 a 5,688-foot-long, 150-foot-wide, asphalt runway. Runway 33 was equipped with a precision approach path indicator (PAPI) system located on the left side of the runway. The runway utilized a left hand traffic pattern and the runway markings were considered non-precision markings in good condition.

#### WRECKAGE AND IMPACT INFORMATION

The nose gear strut was bent aft and to the left at its base. The firewall was buckled and the airplane skin under the engine was crumpled. The composite structure of the wing tip was damaged exposing the wing spar. The vertical stabilizer was damaged and the rudder was separated at the top hinge attachment point. The propeller tips exhibited damage torsional bending consistent with ground contact while the engine was developing power. Examination of the passenger compartment revealed no breach in the support structure of the frame. The seat pan and shoulder harness showed no evidence of stress or fractures. Damaged was observed on the nose wheel, wing, vertical stabilizer, and fire wall.

The pilot reported no mechanical malfunctions prior to the accident.

#### ADDITIONAL INFORMATION

CFR Part 61.303 (a)(2) and (b)(1) states in part "a sport pilot may operate any light sport aircraft for which you hold the endorsements required for its category, class, make and model. A person using a current and valid U.S. driver's license must comply with each restriction and limitation imposed by that person's U.S. driver's license and any judicial or administrative order applying to the operation of a motor vehicle."

According to the pilot of the accident flight, the pilot operating handbook is "reasonable" with information about the airplane and its systems. There have been occasions when the pilot had further questions and was able to find the necessary information by utilizing either the manufacturer's website or a flight instructor to gather the needed information.

According to personnel at the maintenance shop that worked on this airplane, and other LSAs, they obtained training from both Rotax and Flight Design on task specific areas in the applicable Maintenance manual. However, one mechanic did state that normally airframe manufacturers do not require training specific to their product, only training on the documentation required.

#### History of Flight

Takeoff	Other weather encounter Loss of control on ground (Defining event)
Takeoff-rejected takeoff	Runway excursion

## Pilot Information

<b>Certificate:</b>	Sport Pilot	<b>Age:</b>	58, Male
<b>Airplane Rating(s):</b>	Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Sport Pilot None	<b>Last Medical Exam:</b>	
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	11/15/2007
<b>Flight Time:</b>	146 hours (Total, all aircraft), 103 hours (Total, this make and model), 146 hours (Pilot In Command, all aircraft), 11 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	Flight Design	<b>Registration:</b>	N370CT
<b>Model/Series:</b>	CTSW	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Special Flight	<b>Serial Number:</b>	05-10-01
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	08/04/2008, Annual	<b>Certified Max Gross Wt.:</b>	1320 lbs
<b>Time Since Last Inspection:</b>	9 Hours	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	176 Hours	<b>Engine Manufacturer:</b>	Rotax
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	912 ULS
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	100 hp
<b>Operator:</b>	On file	<b>Air Carrier Operating Certificate:</b>	None

## Meteorological Information and Flight Plan

Observation Facility, Elevation:	PGD, 26 ft msl	Observation Time:	1653 EST
Distance from Accident Site:		Condition of Light:	Day
Direction from Accident Site:		Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Clear	Temperature/Dew Point:	25° C / 11° C
Lowest Ceiling:	None	Visibility	10 Miles
Wind Speed/Gusts, Direction:	6 knots, Variable	Visibility (RVR):	
Altimeter Setting:	30.12 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Punta Gorda, FL (PGD)	Type of Flight Plan Filed:	None
Destination:	Punta Gorda, FL (PGD)	Type of Clearance:	None
Departure Time:	1450 EST	Type of Airspace:	

## Airport Information

Airport:	Charlotte County Airport (PGD)	Runway Surface Type:	Asphalt
Airport Elevation:	26 ft	Runway Surface Condition:	Dry
Runway Used:	33	IFR Approach:	
Runway Length/Width:	5688 ft / 150 ft	VFR Approach/Landing:	Touch and Go

## Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None		

## Administrative Information

Investigator In Charge (IIC):	Shawn Etcher	Adopted Date:	05/12/2009
Additional Participating Persons:	Michael E Minner; FAA/FSDO; Tampa, FL		
Publish Date:	05/12/2009		
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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