



Aviation Investigation Final Report

Location:	Diamond Point, Washington	Accident Number:	WPR10CA073
Date & Time:	December 5, 2009, 16:45 Local	Registration:	N20186
Aircraft:	Cessna 172M	Aircraft Damage:	Substantial
Defining Event:	Loss of control on ground	Injuries:	3 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot was landing at a non-controlled airport where variable gusty winds were present. While on final, she encountered a right crosswind and then both updrafts and downdrafts as she crossed over a cliff under the flight path. The pilot said that while the touchdown was uneventful, as the airplane slowed during the landing roll it encountered a right crosswind gust and the right wing lifted. Although the pilot attempted remedial flight control inputs and added power, the left wing scrapped the runway surface and the airplane rotated to the left, exposing it to a nearly direct tailwind. As the pilot attempted to bring it back under control, the airplane nosed over onto its back. According to the pilot, there was no indication of any problem with the flight control or nosewheel steering systems. The pilot also stated that the winds from the north were unusual for this airport, and that she based her assumptions as to what would happen on the runway on the normal westerly or southeasterly winds.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadequate compensation for the variable and unfavorable wind conditions.

Findings

Aircraft	Crosswind correction - Not attained/maintained
Personnel issues	Aircraft control - Pilot
Environmental issues	(general) - Response/compensation

Factual Information

History of Flight

Landing-landing roll	Loss of control on ground (Defining event)
Landing-landing roll	Dragged wing/rotor/float/other
Landing-landing roll	Nose over/nose down

Pilot Information

Certificate:	Private	Age:	36,Female
Airplane Rating(s):	Single-engine land; Single-engine sea	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	June 4, 2009
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	426 hours (Total, all aircraft), 80 hours (Total, this make and model), 377 hours (Pilot In Command, all aircraft), 3 hours (Last 90 days, all aircraft), 1 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N20186
Model/Series:	172M	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	17261079
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	July 8, 2009 Annual	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	7684 Hrs at time of accident	Engine Manufacturer:	LYCOMING
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	O-320 SERIES
Registered Owner:		Rated Power:	180 Horsepower
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Dusk
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	10 knots / 20 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Seattle, WA (KBFI)	Type of Flight Plan Filed:	None
Destination:	Diamond Point, WA (2WA1)	Type of Clearance:	None
Departure Time:	16:00 Local	Type of Airspace:	

Airport Information

Airport:	Diamond Point 2WA1	Runway Surface Type:	Asphalt
Airport Elevation:	260 ft msl	Runway Surface Condition:	Dry
Runway Used:	29	IFR Approach:	None
Runway Length/Width:	2300 ft / 24 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	48.091667,-122.926109(est)

Administrative Information

Investigator In Charge (IIC):	Anderson, Orrin
Additional Participating Persons:	
Original Publish Date:	March 23, 2010
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=75138

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