



Aviation Investigation Final Report

Location:	Boulder, Colorado	Accident Number:	CEN14CA123
Date & Time:	January 25, 2014, 16:00 Local	Registration:	N738LQ
Aircraft:	Cessna 172N	Aircraft Damage:	Substantial
Defining Event:	Turbulence encounter	Injuries:	3 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot flew a round robin cross-country flight to practice touch and go landings at nearby airports. At one airport, he aborted the landing due to "moderate to severe turbulence on final." During the approach to the destination airport, he aborted his first approach due to strong winds and turbulence and decided to go around. During his second approach, the airplane lost about 200 feet of altitude following a downdraft. The pilot applied full throttle to gain airspeed. A wind gust lifted the airplane's right wing and the pilot applied full right aileron. The airplane's left wing, the left main landing gear, and the nose landing gear impacted terrain where the airplane skidded for 100 to 150 feet and sustained substantial wing damage. Subsequent to the accident, the pilot became aware of the airport/facility directory remarks for turbulence associated with the selected runway. Additionally, he reported that the airplane did not have any mechanical malfunctions during the accident flight.

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 airplane control during final approach with known turbulence present.

Findings

Personnel issues	Aircraft control - Pilot
Environmental issues	Terrain induced turbulence - Contributed to outcome

Factual Information

History of Flight

Approach-VFR pattern final	Turbulence encounter (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Private	Age:	34
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	May 10, 2011
Occupational Pilot:	No	Last Flight Review or Equivalent:	August 2, 2012
Flight Time:	(Estimated) 84 hours (Total, all aircraft), 22 hours (Total, this make and model), 80 hours (Pilot In Command, all aircraft), 7 hours (Last 90 days, all aircraft), 0 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N738LQ
Model/Series:	172N N	Aircraft Category:	Airplane
Year of Manufacture:	1977	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	17270065
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	January 3, 2014 Annual	Certified Max Gross Wt.:	2299 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	9704 Hrs at time of accident	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	O-320-H2AD
Registered Owner:	DAVISON JOSEPH E JR	Rated Power:	180 Horsepower
Operator:	Journeys Aviation Inc.	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	BDU,5288 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	15:56 Local	Direction from Accident Site:	272°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	14 knots / 22 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	320°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	15°C / -8°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	LONGMONT, CO (LMO)	Type of Flight Plan Filed:	None
Destination:	Boulder, CO (BDU)	Type of Clearance:	None
Departure Time:	15:30 Local	Type of Airspace:	

Airport Information

Airport:	BOULDER MUNI BDU	Runway Surface Type:	Asphalt
Airport Elevation:	5288 ft msl	Runway Surface Condition:	Dry
Runway Used:	26	IFR Approach:	None
Runway Length/Width:	4100 ft / 75 ft	VFR Approach/Landing:	Full stop;Go around;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	2 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 Minor	Latitude, Longitude:	40.039165,-105.216941(est)

Administrative Information

Investigator In Charge (IIC):	Malinowski, Edward
Additional Participating Persons:	Chris Lang; Federal Aviation Administration; Denver, CO
Original Publish Date:	February 13, 2014
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=88722

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