



National Transportation Safety Board Aviation Accident Final Report

Location:	Rawlings, WY	Accident Number:	WPR11CA365
Date & Time:	08/01/2011, 1545 MDT	Registration:	N7024V
Aircraft:	CESSNA 162	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	2 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot reported that prior to takeoff, he noted an approaching storm but estimated that the wind was light and variable for the takeoff roll. The airplane was slow to accelerate and reached the 50 knot rotation speed halfway down the runway. The pilot stated that the airplane lifted off and maintained an altitude a few feet above the runway, but lost altitude at the end. The airplane struck the ground and subsequently nosed over, coming to rest inverted. A few minutes after the accident, the pilot reported that it began to rain. The airport density altitude at the time of the accident was calculated to be approximately 9,000 feet, which is 1,000 feet above the manufacturer's recommended maximum takeoff altitude as outlined in the Pilot's Operating Handbook. The weather observation facility located on the field reported that 3 minutes before the accident the wind was a left quartering tailwind at 5 knots, while shortly after the accident the wind was a left quartering tailwind at 22 knots, gusting to 32 knots with respect to the airplane's takeoff runway direction. The pilot reported that there were no preimpact mechanical malfunctions or failures with the airframe or engine that would have precluded normal flight.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's decision to attempt a takeoff at a density altitude that was outside the performance envelope of the airplane. Also causal was the flight's likely encounter with a sudden tailwind gust.

Findings

Aircraft	Aircraft capability - Capability exceeded (Cause) Performance/control parameters - Not attained/maintained (Cause)
Personnel issues	Aircraft control - Pilot (Cause) Decision making/judgment - Pilot (Cause) Use of manual - Pilot (Cause)
Environmental issues	Tailwind - Effect on operation High density altitude - Effect on operation

Factual Information

History of Flight

Prior to flight	Preflight or dispatch event
Takeoff	Windshear or thunderstorm Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Sport Pilot	Age:	77, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without Waivers/Limitations	Last Medical Exam:	04/01/2004
Occupational Pilot:	No	Last Flight Review or Equivalent:	05/22/2011
Flight Time:	5994 hours (Total, all aircraft), 76 hours (Total, this make and model), 80 hours (Last 90 days, all aircraft), 31 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	CESSNA	Registration:	N7024V
Model/Series:	162	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Special Light-Sport	Serial Number:	16200066
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	05/16/2011, AAIP	Certified Max Gross Wt.:	1320 lbs
Time Since Last Inspection:	79 Hours	Engines:	1 Reciprocating
Airframe Total Time:	85 Hours	Engine Manufacturer:	Continental
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	O-200D
Registered Owner:	The Jerome L. Quint Living Trust	Rated Power:	100 hp
Operator:	The Jerome L. Quint Living Trust	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	KRWL, 6813 ft msl	Observation Time:	1553 MDT
Distance from Accident Site:	0 Nautical Miles	Condition of Light:	Day
Direction from Accident Site:	0°	Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Thin Broken / 6500 ft agl	Temperature/Dew Point:	22° C / 14° C
Lowest Ceiling:	Overcast / 8000 ft agl	Visibility	9 Miles
Wind Speed/Gusts, Direction:	22 knots/ 32 knots, 250°	Visibility (RVR):	
Altimeter Setting:	30.24 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	Light - Thunderstorms - Rain; No Obscuration		
Departure Point:	Rawlins, WY (KRWL)	Type of Flight Plan Filed:	None
Destination:	Burns Field, WY (KEVW)	Type of Clearance:	None
Departure Time:	1545 MDT	Type of Airspace:	

Airport Information

Airport:	Rawlins Muni/Harvey Field (KRWL)	Runway Surface Type:	Asphalt
Airport Elevation:	6813 ft	Runway Surface Condition:	Dry
Runway Used:	10L	IFR Approach:	None
Runway Length/Width:	4118 ft / 60 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None		

Administrative Information

Investigator In Charge (IIC):	Jefferey R Rich	Adopted Date:	10/17/2011
Additional Participating Persons:	Darrel K Woodworth; Federal Aviation Administration; Casper, WY		
Publish Date:	10/17/2011		
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.		
Investigation Docket:	http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=81372		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report.