



National Transportation Safety Board Aviation Accident Data Summary

Location:	Elk River, ID	Accident Number:	GAA16CA271
Date & Time:	06/01/2016, 1030 PDT	Registration:	N21242
Aircraft:	CESSNA 182	Injuries:	1 Minor, 1 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot reported that during takeoff with a tailwind, about 20-30 feet above the ground, the airplane aerodynamically stalled then impacted the ground.

The airplane sustained substantial damage to the left wing.

According to the pilot there were no preimpact mechanical failures or malfunctions with the airframe or engine that would have precluded normal operation.

The Federal Aviation Administration has published the Airplane Flying Handbook FAA-H-8083-3A (2004). This handbook discusses stalls and states in part:

The key to stall awareness is the pilot's ability to visualize the wing's angle of attack in any particular circumstance, and thereby be able to estimate his/her margin of safety above stall. This is a learned skill that must be acquired early in flight training and carried through the pilot's entire flying career. The pilot must understand and appreciate factors such as airspeed, pitch attitude, load factor, relative wind, power setting, and aircraft configuration in order to develop a reasonably accurate mental picture of the wing's angle of attack at any particular time. It is essential to flight safety that a pilot takes into consideration this visualization of the wing's angle of attack prior to entering any flight maneuver.

Stall accidents usually result from an inadvertent stall at a low altitude in which a recovery was not accomplished prior to contact with the surface.

Flight Events

Takeoff - Other weather encounter

Takeoff - Aerodynamic stall/spin

Takeoff - Collision with terr/obj (non-CFIT)

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The pilot exceeded the critical angle of attack during takeoff which resulted in an aerodynamic stall and impact with terrain.

Findings

Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Angle of attack-Capability exceeded - C

Aircraft-Aircraft oper/perf/capability-Aircraft capability-Climb capability-Capability exceeded

Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C

Environmental issues-Conditions/weather/phenomena-Wind-Tailwind-Effect on equipment

Pilot Information

Certificate:	Airline Transport	Age:	67
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	Airplane Single-engine
Flight Time:	(Estimated) 16000 hours (Total, all aircraft), 400 hours (Total, this make and model), 5000 hours (Pilot In Command, all aircraft), 5 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	CESSNA	Registration:	N21242
Model/Series:	182 P	Engines:	1 Reciprocating
Operator:	On file	Engine Manufacturer:	Continental
Air Carrier Operating Certificate:	None	Engine Model/Series:	O-470-R
Flight Conducted Under:	Part 91: General Aviation - Personal		

Meteorological Information and Flight Plan

Observation Facility, Elevation:	KPUW, 2551 ft msl	Weather Information Source:	Weather Observation Facility
Conditions at Accident Site:	Visual Conditions	Lowest Ceiling:	None
Condition of Light:	Day	Wind Speed/Gusts, Direction:	9 knots, 140°
Temperature:	20°C / 8°C	Visibility	10 Miles
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Elk River, ID (ID85)	Destination:	MOOSE CREEK RANGER STATION, ID (1U1)

Airport Information

Airport:	ELK RIVER (ID85)	Runway Surface Type:	Grass/turf; Gravel
Runway Used:	35	Runway Surface Condition:	Dry
Runway Length/Width:	3000 ft / 150 ft		

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	Jackie L Vanover	Adopted Date:	08/31/2016
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=93292		

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.