



Aviation Investigation Final Report

Location:	Snohomish, Washington	Accident Number:	GAA18CA177
Date & Time:	March 12, 2018, 14:00 Local	Registration:	N6509L
Aircraft:	Cessna 152	Aircraft Damage:	Substantial
Defining Event:	Hard landing	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that, during the landing flare, the airplane encountered a wind gust and the airplane pitched upward. During landing, the airplane bounced twice and each time it touched down on the nose landing gear, and subsequently both wings struck the ground.

The airplane sustained substantial damage to the left and the right-wing spar.

The pilot reported that the wind at the airport about the time of the accident was from 100° at 12kts, gusting to 30kts. The pilot landed on runway 33.

Probable Cause and Findings

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

The pilot's decision to land with a tailwind and in his failure to maintain pitch control of the airplane in gusting wind conditions.

Findings

Personnel issues	Decision making/judgment - Pilot
Personnel issues	Aircraft control - Pilot
Aircraft	Pitch control - Not attained/maintained
Environmental issues	Gusts - Effect on operation
Environmental issues	Tailwind - Effect on operation

Factual Information

History of Flight

Landing-flare/touchdown	Other weather encounter
Landing-flare/touchdown	Hard landing (Defining event)
Landing	Abnormal runway contact

Pilot Information

Certificate:	Private	Age:	55, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Unknown
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	June 29, 2017
Occupational Pilot:	No	Last Flight Review or Equivalent:	June 28, 2016
Flight Time:	(Estimated) 175 hours (Total, all aircraft), 160 hours (Total, this make and model), 84 hours (Pilot In Command, all aircraft), 4 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 Make:	Cessna	Registration:	N6509L
Model/Series:	152 NO SERIES	Aircraft Category:	Airplane
Year of Manufacture:	1980	Amateur Built:	
Airworthiness Certificate:	Normal; Utility	Serial Number:	15284425
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	February 24, 2018 100 hour	Certified Max Gross Wt.:	1670 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	13717.4 Hrs at time of accident	Engine Manufacturer:	LYCOMING
ELT:	C91 installed, not activated	Engine Model/Series:	O-235-L2C
Registered Owner:		Rated Power:	110 Horsepower
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KPAE, 606 ft msl	Distance from Accident Site:	7 Nautical Miles
Observation Time:	20:53 Local	Direction from Accident Site:	272°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	15 knots / 20 knots	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	80°	Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	29.98 inches Hg	Temperature/Dew Point:	21°C / 1°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Snohomish, WA (S43)	Type of Flight Plan Filed:	None
Destination:	Snohomish, WA (S43)	Type of Clearance:	VFR
Departure Time:	14:00 Local	Type of Airspace:	Class G

Airport Information

Airport:	HARVEY FIELD S43	Runway Surface Type:	Asphalt
Airport Elevation:	22 ft msl	Runway Surface Condition:	Dry
Runway Used:	33R	IFR Approach:	None
Runway Length/Width:	2672 ft / 36 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	47.904998,-122.102775(est)

Administrative Information

Investigator In Charge (IIC):	Hicks, Michael
Additional Participating Persons:	Bill Shin; FAA; Seattle, WA
Original Publish Date:	September 10, 2018
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=96923

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. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).