



National Transportation Safety Board Aviation Accident Final Report

Location:	Friday Harbor, WA	Accident Number:	GAA18CA104
Date & Time:	01/14/2018, 1600 PST	Registration:	N145JG
Aircraft:	GELDERMANN BERT E LANCAIR LEGACY	Aircraft Damage:	Substantial
Defining Event:	Miscellaneous/other	Injuries:	1 Minor
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot reported that, before a local flight, he placed the airplane's wing and canopy covers and his small dog in the baggage compartment. During the initial climb, after retracting the landing gear, the cockpit canopy, which tips forward for entry into the cockpit, came unlatched and opened to about a 45° angle. He attempted to close and relatch the canopy to no avail and decided to return to the departure airport.

Subsequently, after extending the landing gear on final, the airplane lost speed, and the descent rate increased. He applied full power, but the airplane landed hard and short of the runway, and the landing gear collapsed.

The pilot reported that the airplane had an after-market, drop-down step kit that had been removed; however, during the kit removal, the step mechanism had been removed, but the brackets that extended into the baggage compartment had been overlooked. The brackets were attached to the canopy latching mechanism, and he believed his dog accidentally hit the protruding brackets and inadvertently opened the canopy in flight.

The airplane sustained substantial damage to the center wing spar.

The pilot reported that, before the canopy opened, there were no preaccident mechanical failures or malfunctions with the airplane that would have precluded normal operation.

Probable Cause and Findings

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

The pilot's inability to maintain the landing flare, which resulted in the airplane landing hard short of the runway. Contributing to the accident was the cockpit canopy opening in flight.

Findings

Aircraft	Landing flare - Attain/maintain not possible (Cause) Passenger/crew doors - Unintentional use/operation (Factor)
Personnel issues	Aircraft control - Pilot (Cause)

Factual Information

History of Flight

Takeoff	Miscellaneous/other (Defining event) Attempted remediation/recovery
Landing	Landing area undershoot Hard landing Landing gear collapse

Pilot Information

Certificate:	Private	Age:	66, Male
Airplane Rating(s):	Single-engine Land; Single-engine Sea	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	5-point
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 With Waivers/Limitations	Last FAA Medical Exam:	09/17/2016
Occupational Pilot:	No	Last Flight Review or Equivalent:	09/23/2016
Flight Time:	(Estimated) 1300 hours (Total, all aircraft), 200 hours (Total, this make and model), 1250 hours (Pilot In Command, all aircraft), 15 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	GELDERMANN BERT E	Registration:	N145JG
Model/Series:	LANCAIR LEGACY NO SERIES	Aircraft Category:	Airplane
Year of Manufacture:	2005	Amateur Built:	Yes
Airworthiness Certificate:	Experimental	Serial Number:	L2K-230
Landing Gear Type:	Retractable - Tricycle	Seats:	2
Date/Type of Last Inspection:	09/04/2017, Annual	Certified Max Gross Wt.:	2300 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	426 Hours as of last inspection	Engine Manufacturer:	CONT MOTOR
ELT:	C91 installed, not activated	Engine Model/Series:	IO-550 SERIES
Registered Owner:	On file	Rated Power:	310 hp
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	KFHR, 109 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	2353 UTC	Direction from Accident Site:	103°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	330°	Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	30.14 inches Hg	Temperature/Dew Point:	7° C / 4° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Friday Harbor, WA (FHR)	Type of Flight Plan Filed:	None
Destination:	Friday Harbor, WA (FHR)	Type of Clearance:	None
Departure Time:	1600 PST	Type of Airspace:	Class G

Airport Information

Airport:	FRIDAY HARBOR (FHR)	Runway Surface Type:	Asphalt
Airport Elevation:	112 ft	Runway Surface Condition:	Dry
Runway Used:	34	IFR Approach:	None
Runway Length/Width:	3402 ft / 75 ft	VFR Approach/Landing:	Full Stop; Precautionary Landing; Straight-in

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	48.522222, -123.024444 (est)

Administrative Information

Investigator In Charge (IIC):	Eric A Swenson	Report Date:	04/23/2018
Additional Participating Persons:	Bruce Kitelinger; FAA; Seattle, WA		
Publish Date:	04/23/2018		
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=96608		

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