



National Transportation Safety Board Aviation Accident Final Report

Location:	Hooper, WA	Accident Number:	GAA19CA495
Date & Time:	08/16/2019, 1030 PDT	Registration:	N433CT
Aircraft:	Flight Design CT2K	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (total)	Injuries:	2 Minor
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot reported that, 1 hour after takeoff, turbulence was getting bad, so he decided to return to the departure airport. Subsequently, the airplane ran out of fuel, and he made an off-airport landing in an open field. Upon landing, the airplane bounced, the nose landing gear collapsed, and the airplane nosed over.

The airplane sustained substantial damage to the right wing and fuselage.

The pilot reported that 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 improper fuel planning, which resulted in fuel exhaustion, a total loss of engine power, an off-airport landing to a field, and a subsequent nose-over.

Findings

Aircraft	Fuel - Fluid level (Cause)
Personnel issues	Fuel planning - Pilot (Cause)
Environmental issues	Soft surface - Effect on operation (Cause)

Factual Information

History of Flight

Enroute	Other weather encounter
Enroute-cruise	Fuel exhaustion
Enroute	Loss of engine power (total) (Defining event)
Landing	Off-field or emergency landing Landing gear collapse Nose over/nose down

Pilot Information

Certificate:	Airline Transport; Flight Instructor; Commercial	Age:	82, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Right
Other Aircraft Rating(s):	Glider	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine; Glider	Toxicology Performed:	No
Medical Certification:	BasicMed With Waivers/Limitations	Last FAA Medical Exam:	07/01/2018
Occupational Pilot:	No	Last Flight Review or Equivalent:	08/06/2018
Flight Time:	(Estimated) 16600 hours (Total, all aircraft), 35.6 hours (Total, this make and model), 29.5 hours (Last 90 days, all aircraft), 21.3 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Flight Design	Registration:	N433CT
Model/Series:	CT2K No Series	Aircraft Category:	Airplane
Year of Manufacture:	2003	Amateur Built:	No
Airworthiness Certificate:	Special Light-Sport	Serial Number:	02.08.04.33
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	10/15/2018, Annual	Certified Max Gross Wt.:	1320 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	583 Hours at time of accident	Engine Manufacturer:	ROTAX
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	912
Registered Owner:	On file	Rated Power:	100 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:	KALW, 1205 ft msl	Distance from Accident Site:	35 Nautical Miles
Observation Time:	1753 UTC	Direction from Accident Site:	190°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	11 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	210°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.01 inches Hg	Temperature/Dew Point:	25° C / 10° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Starbuck, WA (16W)	Type of Flight Plan Filed:	None
Destination:	Connell, WA (WA14)	Type of Clearance:	None
Departure Time:	0930 PDT	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor	Latitude, Longitude:	46.672778, -118.136667 (est)

Administrative Information

Investigator In Charge (IIC):	Eric M Gutierrez	Report Date:	02/11/2020
Additional Participating Persons:	Kevin Marsac; FAA; Spokane, WA		
Publish Date:	02/11/2020		
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=100093		

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](#).