



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Baldwin City, KS	<b>Accident Number:</b>	CEN18LA246
<b>Date &amp; Time:</b>	06/30/2018, 1155 CDT	<b>Registration:</b>	N107BL
<b>Aircraft:</b>	Cessna 337	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Flight control sys malf/fail	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

The commercial pilot was conducting a local flight to practice single-engine maneuvers. After taking off and climbing the airplane to 3,500 ft, he shut down the rear engine and feathered the propeller. After performing some turns and climbs, the pilot attempted to unfeather the propeller and restart the engine but was unsuccessful. He returned to the airport to set up for a single-engine approach. During the approach, the pilot realized that the flaps were no longer in the full-flap setting and that a landing on the grass runway was going to be close, so he chose to perform a go-around. However, as the pilot began to go around, he realized that the airplane could not maintain altitude. He maneuvered the airplane for an off-airport landing to a nearby field, during which the airplane struck small trees and a fence and sustained substantial damage to the left wing and fuselage.

The rear engine propeller had a remote hydraulic accumulator that assisted in unfeathering the propeller and was normally serviced to 120 pounds per square inch (psi). During an annual inspection that took place 4 flight hours before the accident flight, it was noted that the pressure was slightly low. During postaccident examination, the accumulator pressure was 85 psi. It is likely that a nitrogen leak occurred between the time the accumulator was last serviced and the time of the accident; however, the reason for the nitrogen leak could not be determined. Further, the flap switch was not holding position due to a loss of tension at the flap switch pivot, which is likely why the flaps were not in the full-flap setting as reported by the pilot.

## Probable Cause and Findings

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

The loss of hydraulic accumulator pressure for reasons that could not be determined, which prevented the propeller from unfeathering, and the pilot's improper decision to attempt a go-around, which resulted in an off-airport landing and the airplane impacting trees and a fence. Contributing to the accident was the loss of tension at the flap switch pivot, which prevented it from holding position.

## Findings

<b>Aircraft</b>	Engine (reciprocating) - Malfunction (Cause) TE flap control system - Malfunction (Cause)
<b>Personnel issues</b>	Scheduled/routine maintenance - Pilot (Cause)

## Factual Information

*\*\*\*This report was modified on November 7, 2019. Please see the docket for this accident to view the original report.\*\*\**

On June 30, 2018, about 1155 central daylight time, a Cessna 337F, N107BL, a multiengine centerline thrust airplane, was substantially damaged when it struck trees and a fence during a forced landing about one mile southeast of Vinland Valley Aerodrome (K64), Baldwin City, Kansas. The commercial pilot was not injured. The airplane was registered to and operated by Vinland Aerodrome, Baldwin City, Kansas, under the provisions of Title 14 *Code of Federal Regulations* Part 91. Visual meteorological conditions prevailed at the time of the accident, and no flight plan had been filed for the local personal flight.

According to the pilot, who is also an airframe and powerplant (A&P) mechanic, he took off and climbed to 3,500 ft to practice single-engine operations. He shut down the rear engine and feathered the propeller. After doing some air work, the pilot attempted to unfeather the propeller and restart the rear engine but was unsuccessful. He returned to the airport and made a single-engine landing approach.

During the approach, the pilot noticed [he had lost his] full flap down setting and determined a full stop landing on the grass runway was going to be close. He reduced flaps to 10°. The flap setting "relaxed" and the pilot determined there was insufficient altitude available to retract the landing gear. The pilot maneuvered to avoid houses and made a forced landing in a crosswind. Full power and full flaps were used until touchdown. The airplane struck small trees, shrubs, and a fence. The left wing was bent and the fuselage was buckled.

The rear engine propeller has a remote hydraulic accumulator that assists in unfeathering the propeller and is serviced to 120 psi. During annual inspection 4 hours prior to the accident flight, it was found to be slightly low. Post-accident examination revealed the pressure to be 85 psi. It is most likely a nitrogen leakage had developed during those 4 hours. The flap switch was not holding position; the reason for this anomaly could not be determined.

## History of Flight

Maneuvering	Engine shutdown Attempted remediation/recovery
Approach-VFR pattern final	Flight control sys malf/fail (Defining event)
Landing-landing roll	Collision with terr/obj (non-CFIT)

## Pilot Information

<b>Certificate:</b>	Flight Instructor; Commercial	<b>Age:</b>	67, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane Single-engine	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 With Waivers/Limitations	<b>Last FAA Medical Exam:</b>	06/04/2018
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	12/08/2017
<b>Flight Time:</b>	8691 hours (Total, all aircraft), 47 hours (Total, this make and model), 8627 hours (Pilot In Command, all aircraft), 40 hours (Last 90 days, all aircraft), 22 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N107BL
<b>Model/Series:</b>	337 F	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1970	<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	33701330
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	06/22/2018, Annual	<b>Certified Max Gross Wt.:</b>	4630 lbs
<b>Time Since Last Inspection:</b>	4 Hours	<b>Engines:</b>	2 Reciprocating
<b>Airframe Total Time:</b>	2918 Hours as of last inspection	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	IO-360-C
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	210 hp
<b>Operator:</b>	On file	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	LWC, 833 ft msl	Distance from Accident Site:	11 Nautical Miles
Observation Time:	1152 CDT	Direction from Accident Site:	360°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	200°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.87 inches Hg	Temperature/Dew Point:	34° C / 23° C
Precipitation and Obscuration:			
Departure Point:	Baldwin City, KS (K64)	Type of Flight Plan Filed:	None
Destination:	Baldwin City, KS (K64)	Type of Clearance:	None
Departure Time:	1140 CDT	Type of Airspace:	Class E; Class G

## Airport Information

Airport:	Vinland Valley Aerodrome (K64)	Runway Surface Type:	Grass/turf
Airport Elevation:	884 ft	Runway Surface Condition:	Dry
Runway Used:	16	IFR Approach:	None
Runway Length/Width:	3030 ft / 80 ft	VFR Approach/Landing:	Forced Landing

## Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	38.836111, -95.181944 (est)

## Administrative Information

Investigator In Charge (IIC):	Arnold W Scott	Report Date:	04/20/2020
Additional Participating Persons:	Keith Allen; FAA Flight Standards District Office; Wichita, KS		
Publish Date:	04/20/2020		
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	<a href="http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=97650">http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=97650</a>		

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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](#).