



Aviation Investigation Final Report

Location:	Beaumont, Kansas	Accident Number:	GAA16CA379
Date & Time:	July 16, 2016, 12:30 Local	Registration:	N801G
Aircraft:	JESSE SAINT/TROY TOWNSEND/ETHA CH-801	Aircraft Damage:	Substantial
Defining Event:	Hard landing	Injuries:	1 Minor, 1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot of an experimental amateur-built airplane reported that during the landing flare he encountered a wind shift and gust that resulted in a direct crosswind. The pilot further reported that he applied additional rudder to compensate for the wind shift, but the airspeed decayed and the airplane bounced hard on the grass runway. After the bounce, the pilot reported that he continued to apply left rudder to compensate for the wind, but the airplane would not respond. Subsequently, the airplane touched down in a crab configuration, the nose landing gear collapsed, and the airplane nosed over.

The vertical stabilizer, firewall, and right wing sustained substantial damage.

During a postaccident examination, the pilot reported that the nose landing gear "support bungee" had failed and the nose landing gear strut jammed upward during the hard landing. He further reported that oil residue was found on the inner strands of the bungee. The pilot reported that this bungee had been in service for 21 months with 195 hours and about 400 landings on the part.

According to the airplane kit manufacturer, the rudder should still be controllable, even with a failed bungee. However, the manufacturer further reported that if the nose landing gear strut were to become stuck or lodged into place due to a hard landing, the rudder would also become stuck and uncontrollable. The airplane kit manufacturer does not publish service life limitations for bungees.

Because the pilot reported not having rudder authority after the first touchdown, it is likely that the nose landing gear support bungee failed during the first hard touchdown, which resulted in the nose landing gear becoming jammed upward at the upper strut limit resulting in the loss of rudder authority.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:
The pilot's incorrect pitch control during the landing flare in gusty crosswind conditions, which resulted in a hard bounced landing and a nose over.

Findings

Personnel issues	Aircraft control - Pilot
Aircraft	Pitch control - Incorrect use/operation
Aircraft	Landing flare - Incorrect use/operation
Aircraft	Nose/tail landing gear - Capability exceeded
Environmental issues	Sudden wind shift - Ability to respond/compensate
Environmental issues	Gusts - Ability to respond/compensate
Environmental issues	Crosswind - Ability to respond/compensate

Factual Information

History of Flight

Landing-flare/touchdown	Other weather encounter
Landing-flare/touchdown	Hard landing (Defining event)
Landing-landing roll	Landing gear collapse
Landing-landing roll	Nose over/nose down
Landing-landing roll	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Commercial	Age:	62, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-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:	October 30, 2014
Occupational Pilot:	No	Last Flight Review or Equivalent:	October 28, 2015
Flight Time:	(Estimated) 2202 hours (Total, all aircraft), 159 hours (Total, this make and model), 2040 hours (Pilot In Command, all aircraft), 21 hours (Last 90 days, all aircraft), 11 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Passenger Information

Certificate:		Age:	Male
Airplane Rating(s):		Seat Occupied:	Right
Other Aircraft Rating(s):		Restraint Used:	3-point
Instrument Rating(s):		Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	JESSE SAINT/TROY TOWNSEND/ETHA	Registration:	N801G
Model/Series:	CH-801 NO SERIES	Aircraft Category:	Airplane
Year of Manufacture:	2013	Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	8-7059
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	December 5, 2015 Condition	Certified Max Gross Wt.:	2400 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	195.6 Hrs at time of accident	Engine Manufacturer:	Superior
ELT:	C126 installed, activated, did not aid in locating accident	Engine Model/Series:	XP-360
Registered Owner:	On file	Rated Power:	170 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KEQA,1379 ft msl	Distance from Accident Site:	15 Nautical Miles
Observation Time:	17:35 Local	Direction from Accident Site:	330°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	130°	Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	31°C / 22°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Wichita, KS (NONE)	Type of Flight Plan Filed:	None
Destination:	BEAUMONT, KS (07S)	Type of Clearance:	VFR flight following
Departure Time:	11:30 Local	Type of Airspace:	Class G

Airport Information

Airport:	BEAUMONT HOTEL 07S	Runway Surface Type:	Grass/turf
Airport Elevation:	1617 ft msl	Runway Surface Condition:	Dry
Runway Used:	18	IFR Approach:	None
Runway Length/Width:	2400 ft / 80 ft	VFR Approach/Landing:	Full stop;Traffic pattern

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
Total Injuries:	1 Minor, 1 None	Latitude, Longitude:	37.659168,-96.527778(est)

Administrative Information

Investigator In Charge (IIC):	Gerhardt, Adam
Additional Participating Persons:	Richard Terrell; FAA; Wichita, KS
Original Publish Date:	September 12, 2016
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=93624

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