



Aviation Investigation Final Report

Location:	New Carlisle, Ohio	Accident Number:	CEN21LA016
Date & Time:	October 13, 2020, 13:40 Local	Registration:	N47KC
Aircraft:	Kitfox Classic 4	Aircraft Damage:	Destroyed
Defining Event:	Nose over/nose down	Injuries:	2 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot and his pilot-rated-passenger were conducting a local flight in the tailwheel-equipped experimental airplane. The accident occurred during the first landing after the original main landing gear, equipped with bungee-cord shock absorber, had been replaced with a main landing gear equipped with a steel-spring shock absorber. The pilot reported that after a normal touchdown on the main landing gear he pushed the control stick slightly forward to keep the airplane from ballooning, but the airplane nosed over during the landing roll. A witness reported seeing the airplane's tail continue to rise during the landing roll until the airplane nosed over on the runway. A postaccident fire destroyed the airplane's cabin and the inboard halves of both wings.

A postaccident review of the airplane's weight-and-balance record indicated that the owner/builder had correctly recalculated the center-of-gravity (CG) position after the main landing gear replacement, and although the CG location had not moved appreciably, the wheel axle position had moved aft about 2.75 inches, thus increasing the airplane's tendency to nose over during ground operations.

Probable Cause and Findings

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

The pilot's failure to maintain pitch control of the airplane during landing, which caused the airplane to nose over during landing roll. Contributing to the accident was the main landing

gear modification which increased the airplane's tendency to nose over during ground operations.

Findings

Aircraft	Pitch control - Not attained/maintained
Personnel issues	Aircraft control - Pilot
Aircraft	Main landing gear - Design

Factual Information

History of Flight

Prior to flight	Aircraft maintenance event
Landing-landing roll	Nose over/nose down (Defining event)

Pilot Information

Certificate:	Private	Age:	73, Male
Airplane Rating(s):	Single-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:	
Medical Certification:	None None	Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	(Estimated) 1066 hours (Total, all aircraft), 45 hours (Total, this make and model), 824 hours (Pilot In Command, all aircraft)		

Pilot-rated passenger Information

Certificate:	Private	Age:	72, Female
Airplane Rating(s):	Single-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	BasicMed	Last FAA Medical Exam:	October 24, 2017
Occupational Pilot:	No	Last Flight Review or Equivalent:	July 13, 2018
Flight Time:	(Estimated) 365 hours (Total, all aircraft), 325 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Kitfox	Registration:	N47KC
Model/Series:	Classic 4 NO SERIES	Aircraft Category:	Airplane
Year of Manufacture:	2006	Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	C04060296
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	October 16, 2019 Condition	Certified Max Gross Wt.:	1320 lbs
Time Since Last Inspection:	4 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	45 Hrs at time of accident	Engine Manufacturer:	Rotec
ELT:	C91 installed, not activated	Engine Model/Series:	R2800
Registered Owner:	On file	Rated Power:	100 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:	FFO,823 ft msl	Distance from Accident Site:	6.5 Nautical Miles
Observation Time:	13:56 Local	Direction from Accident Site:	193°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	240°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.13 inches Hg	Temperature/Dew Point:	18°C / 2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	New Carlisle, OH	Type of Flight Plan Filed:	None
Destination:	New Carlisle, OH	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class E

Airport Information

Airport:	Andy Barnhart Memorial Airport 3OH0	Runway Surface Type:	Grass/turf
Airport Elevation:	895 ft msl	Runway Surface Condition:	Dry
Runway Used:	28	IFR Approach:	None
Runway Length/Width:	2000 ft / 150 ft	VFR Approach/Landing:	Straight-in

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Minor	Aircraft Fire:	On-ground
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	2 Minor	Latitude, Longitude:	39.930892,-84.013546

Administrative Information

Investigator In Charge (IIC):	Fox, Andrew
Additional Participating Persons:	Andrew C. Porter; Federal Aviation Administration (FAA) Cincinnati FSDO; Cincinnati, OH
Original Publish Date:	August 31, 2021
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=102140

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).