



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Murray, Kentucky	Accident Number:	ERA23LA002
Date & Time:	October 2, 2022, 10:30 Local	Registration:	N3005E
Aircraft:	Aeronca 7AC	Aircraft Damage:	Substantial
Defining Event:	Flight control sys malf/fail	Injuries:	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane had been in maintenance for repair work on the airplane's tail section. On the first flight after the completed work, following a preflight inspection and engine run-up, the pilot taxied the airplane to the runway for departure. During the takeoff roll, when the pilot applied forward stick controls to raise the tail, the tail did not rise, and the airplane instead "shot straight up, stalled, then descended nose-first onto the runway."

Examination of the airplane by a Federal Aviation Administration inspector revealed substantial damage to the fuselage. The inspector also noted that the elevator control cables were installed incorrectly such that the elevator moved in the direction opposite to that commanded.

Probable Cause and Findings

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

The incorrect (reverse) rigging of the elevator cables by maintenance personnel and their subsequent failure to verify that the rigging was correct during post-maintenance checks and the pilot's inadequate preflight check.

Findings

Aircraft	Elevator control system - Incorrect service/maintenance
Aircraft	Elevator control system - Inadequate inspection
Personnel issues	Replacement - Maintenance personnel
Personnel issues	Post maintenance inspection - Maintenance personnel
Personnel issues	Lack of action - Pilot

Factual Information

History of Flight

Prior to flight	Aircraft maintenance event
Prior to flight	Aircraft inspection event
Takeoff	Flight control sys malf/fail (Defining event)
Takeoff	Loss of control in flight
Uncontrolled descent	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Commercial; Private	Age:	69, Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	Glider	Restraint Used:	Lap only
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	November 11, 2020
Occupational Pilot:	No	Last Flight Review or Equivalent:	October 23, 2021
Flight Time:	2900 hours (Total, all aircraft), 125 hours (Total, this make and model), 2740 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Aeronca	Registration:	N3005E
Model/Series:	7AC	Aircraft Category:	Airplane
Year of Manufacture:	1946	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	7AC-6591
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	October 15, 2021 Annual	Certified Max Gross Wt.:	1220 lbs
Time Since Last Inspection:	1 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3363 Hrs at time of accident	Engine Manufacturer:	CONT MOTOR
ELT:	C91A installed, activated, did not aid in locating accident	Engine Model/Series:	C85-12F
Registered Owner:	On file	Rated Power:	85 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:	CEY, 578 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	12:35 Local	Direction from Accident Site:	337°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	13 knots / 20 knots	Turbulence Type Forecast/Actual:	Unknown / None
Wind Direction:	350°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.19 inches Hg	Temperature/Dew Point:	23°C / 3°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Murray, KY	Type of Flight Plan Filed:	None
Destination:	Murray, KY	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class E

Airport Information

Airport:	KYLE-OAKLEY FLD CEY	Runway Surface Type:	Grass/turf
Airport Elevation:	577 ft msl	Runway Surface Condition:	Dry
Runway Used:	5	IFR Approach:	None
Runway Length/Width:	6200 ft / 100 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	36.664581,-88.372776(est)

Administrative Information

Investigator In Charge (IIC):	Spencer, Lynn
Additional Participating Persons:	Mark Potter; FAA/FSDO; Louisville, KY
Original Publish Date:	May 11, 2023
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=106053

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).