Aviation Investigation Final Report

Location:	Chillicothe, Missouri	**Accident Number:**	CEN23LA365
Date & Time:	August 11, 2023, 10:30 Local	**Registration:**	N9237R
Aircraft:	Cessna A188B	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control on ground	**Injuries:**	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The pilot of a tailwheel equipped airplane reported that during the landing roll the tailwheel shimmied, and the airplane veered right of the runway centerline. He was able to maintain directional control and taxied to the loading area to prepare the airplane for the next agricultural application flight. He reported that this was the fourth landing of the day and there were no anomalies with the previous landings.

While taxiing the airplane to the runway for takeoff the pilot had to use left rudder and brake to keep the airplane going straight on the taxiway. During the takeoff roll the tailwheel began to shimmy again and the airplane veered to the right. The pilot reduced the engine power and applied brakes to abort the takeoff but was unable to maintain directional control of the airplane. The airplane exited the runway and ground looped in a grassy area adjacent to the runway. Substantial damage was noted to the tailwheel's empennage supporting structure and the tailwheel exhibited deformation to the right.

Examination of the airplane revealed the tailwheel assembly was partially separated from the empennage supporting structure and all observed fractures were consistent with overload separation. It is likely that the tailwheel was damaged during a previous landing and that damage resulted in the shimmy during the previous landing and the pilot's difficulty in maintaining control during the taxi and takeoff. An examination of the of the tailwheel assembly, tailwheel control, and rudder revealed no mechanical anomalies that would have precluded normal operations before the damage occurred. Given the difficulties taxiing for takeoff, the pilot should not have continued with the takeoff with a known anomaly.

Probable Cause and Findings

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

The pilot's decision to operate the airplane with a known tailwheel anomaly, which resulted in a loss of directional control.

Findings

Personnel issues	Decision making/judgment - Pilot
Aircraft	Nose/tail landing gear - Damaged/degraded
Personnel issues	Aircraft control - Pilot

Factual Information

History of Flight

Taxi-to runway	Miscellaneous/other
Takeoff	Loss of control on ground (Defining event)
Takeoff-rejected takeoff	Runway excursion

Pilot Information

Certificate:	Commercial	**Age:**	60,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Front
Other Aircraft Rating(s):	None	**Restraint Used:**	Unknown
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	May 11, 2023
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	May 30, 2023
Flight Time:	(Estimated) 696 hours (Total, all aircraft), 166 hours (Total, this make and model), 548 hours (Pilot In Command, all aircraft), 193 hours (Last 90 days, all aircraft), 122 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N9237R
Model/Series:	A188B	**Aircraft Category:**	Airplane
Year of Manufacture:	1975	**Amateur Built:**	
Airworthiness Certificate:	Restricted (Special)	**Serial Number:**	18802176T
Landing Gear Type:	Tailwheel	**Seats:**	1
Date/Type of Last Inspection:	July 21, 2023 100 hour	**Certified Max Gross Wt.:**	3300 lbs
Time Since Last Inspection:	345 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	7441 Hrs as of last inspection	**Engine Manufacturer:**	Continental
ELT:	Not installed	**Engine Model/Series:**	IO-520
Registered Owner:	SALE REPORTED	**Rated Power:**	300 Horsepower
Operator:	Justin Goad	**Operating Certificate(s) Held:**	Agricultural aircraft (137)
Operator Does Business As:	Goad Flying Service	**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KCDJ,758 ft msl	**Distance from Accident Site:**	4 Nautical Miles
Observation Time:	10:51 Local	**Direction from Accident Site:**	301°
Lowest Cloud Condition:		**Visibility**	10 miles
Lowest Ceiling:		**Visibility (RVR):**	
Wind Speed/Gusts:	8 knots /	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:	260°	**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:	29.82 inches Hg	**Temperature/Dew Point:**	29°C / 22°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Chillicothe, MO (KCHT)	**Type of Flight Plan Filed:**	None
Destination:	Chillicothe, MO	**Type of Clearance:**	None
Departure Time:	10:30 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	Chillicothe Municipal Airport CHT	**Runway Surface Type:**	Concrete
Airport Elevation:	783 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	14	**IFR Approach:**	None
Runway Length/Width:	3900 ft / 75 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	N/A	**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	1 None	**Latitude, Longitude:**	39.782015,-93.496236(est)

Administrative Information

Investigator In Charge (IIC):	Galbraith, Damian
Additional Participating Persons:	David Johnson; FAA; Kansas City, MO
Original Publish Date:	March 21, 2024
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=192885