



Aviation Investigation Final Report

Location:	Tyler, Minnesota	Accident Number:	CEN23LA335
Date & Time:	July 28, 2023, 11:02 Local	Registration:	N7094Z
Aircraft:	Piper PA-25-235	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The pilot attempted the takeoff with the flaps in the half or first notch position. Unable to rotate during the takeoff roll, the pilot selected the full flap position, and the agricultural airplane lifted off the 2,500-ft long turf airstrip about 150 feet before the end of the runway. The airplane was unable to climb out of ground effect and contacted corn stalks that were located past the end of the runway. The airplane descended into the vegetation and came to rest nose down and upright. The airplane sustained substantial damage to both wings.

According to the airplane owner's handbook, a takeoff distance of about 1,370 feet was required to clear a 50-foot obstacle with the sprayer configuration. The handbook recommended that the wing flaps be retracted at all times during takeoff.

Probable Cause and Findings

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

The pilot's improper flap position during takeoff, which resulted in degraded climb performance and a collision with terrain.

Findings

Aircraft	Trailing edge flaps - Incorrect use/operation
Personnel issues	Incorrect action selection - Pilot
Aircraft	Climb rate - Attain/maintain not possible

Factual Information

History of Flight

Prior to flight	Preflight or dispatch event
Initial climb	Loss of control in flight (Defining event)
Initial climb	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Commercial	Age:	25, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Single
Other Aircraft Rating(s):	None	Restraint Used:	4-point
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:	February 3, 2021
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	March 21, 2022
Flight Time:	1126 hours (Total, all aircraft), 837 hours (Total, this make and model), 1070 hours (Pilot In Command, all aircraft), 60 hours (Last 90 days, all aircraft), 25 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N7094Z
Model/Series:	PA-25-235	Aircraft Category:	Airplane
Year of Manufacture:	1969	Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	25-5052
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	March 4, 2023 100 hour	Certified Max Gross Wt.:	2900 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	7029 Hrs as of last inspection	Engine Manufacturer:	Lycoming
ELT:	Not installed	Engine Model/Series:	O-540-B2-B5
Registered Owner:	On file	Rated Power:	235 Horsepower
Operator:	On file	Operating Certificate(s) Held:	Agricultural aircraft (137)
Operator Does Business As:	On file	Operator Designator Code:	1JKG

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KMML, 1179 ft msl	Distance from Accident Site:	17 Nautical Miles
Observation Time:	10:56 Local	Direction from Accident Site:	57°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	30°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.96 inches Hg	Temperature/Dew Point:	26°C / 22°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Tyler, MN (63Y)	Type of Flight Plan Filed:	None
Destination:	Tyler, MN (63Y)	Type of Clearance:	None
Departure Time:	11:00 Local	Type of Airspace:	Class G

Airport Information

Airport:	Tyler Municipal Airport 63Y	Runway Surface Type:	Grass/turf
Airport Elevation:	1742 ft msl	Runway Surface Condition:	Dry;Vegetation
Runway Used:	32	IFR Approach:	None
Runway Length/Width:	2517 ft / 160 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:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	44.291693,-96.153769

Administrative Information

Investigator In Charge (IIC):	Finne, Andrew
Additional Participating Persons:	Thurston, Gregory ; FAA-FSDO; Minneapolis, MN
Original Publish Date:	October 5, 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=192748

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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](#).