



Aviation Investigation Final Report

Location:	Vega, Texas	Accident Number:	CEN25LA188
Date & Time:	May 26, 2025, 15:40 Local	Registration:	N7175D
Aircraft:	Piper PA-18	Aircraft Damage:	Substantial
Defining Event:	Collision with terr/obj (non-CFIT)	Injuries:	2 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported the airplane departed from the airport with a passenger onboard for a local area flight. The pilot maneuvered the airplane for landing on a grass strip, that parallels the asphalt runway. As the airplane descended and turned from base to final, the airplane encountered a “pocket of unstable air” and a “heavy gust” that pushed the right wing up and caused the airplane to rapidly descend. The pilot applied right aileron and full power. The pilot was able to level the airplane; however, it continued to descend. Due to the location of the airplane at the time, the pilot decided to impact the lighted wind cone (a L-807 structure, size 2, located inside of a segmented circle) with the airplane, as opposed to performing an aggressive turn and the right wing impacting the ground. The airplane impacted the wind cone, the wind cone structure collapsed, and the windsock separated from the structure. The airplane came to rest upright on the grass strip. The pilot and the passenger were able to egress from the airplane without further incident.

The airplane sustained substantial damage to the fuselage, the right wing, and the right wing strut. The pilot reported there were no preimpact mechanical malfunctions or failures with the airframe or the engine that would have precluded normal operation. A weather study showed that at the time of the accident, a line of cumulus clouds along a convergence zone had passed with a wind shift to the north. This convergence zone likely amplified the turbulence in the low-level boundary layer and resulted in localized gusty winds and convective turbulence. A review of available weather information revealed that the wind shift was not forecasted.

Probable Cause and Findings

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

The airplane's inadvertent encounter with a localized low boundary layer, which caused a wind shift, and a gusting tailwind during final approach, that resulted in the pilot deciding to impact a wind cone and a subsequent impact with terrain. Contributing was the low-level convective turbulence.

Findings

Personnel issues	Aircraft control - Pilot
Personnel issues	Knowledge of meteorologic cond - Pilot
Personnel issues	Decision making/judgment - Pilot
Environmental issues	(general) - Effect on equipment
Environmental issues	(general) - Contributed to outcome
Environmental issues	(general) - Awareness of condition
Environmental issues	(general) - Ability to respond/compensate

Factual Information

History of Flight

Approach-VFR pattern final	Other weather encounter
Approach-VFR pattern final	Attempted remediation/recovery
Approach-VFR pattern final	Loss of control in flight
Approach-VFR pattern final	Collision with terr/obj (non-CFIT) (Defining event)
Landing	Collision during takeoff/land
Post-impact	Evacuation

Pilot Information

Certificate:	Private	Age:	41, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	October 5, 2023
Occupational Pilot:	No	Last Flight Review or Equivalent:	December 17, 2024
Flight Time:	(Estimated) 1780 hours (Total, all aircraft), 440 hours (Total, this make and model), 1780 hours (Pilot In Command, all aircraft), 40 hours (Last 90 days, all aircraft), 16 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N7175D
Model/Series:	PA-18 NO SERIES	Aircraft Category:	Airplane
Year of Manufacture:	1957	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	18-5634
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	November 15, 2024 Annual	Certified Max Gross Wt.:	1400 lbs
Time Since Last Inspection:	8 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	8052 Hrs at time of accident	Engine Manufacturer:	Continental Motors
ELT:	C126 installed, not activated	Engine Model/Series:	C90
Registered Owner:	N7175D LLC	Rated Power:	95 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None
Operator Does Business As:	None	Operator Designator Code:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KHRX,3783 ft msl	Distance from Accident Site:	23 Nautical Miles
Observation Time:	15:35 Local	Direction from Accident Site:	172°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	11 knots / 15 knots	Turbulence Type Forecast/Actual:	None / Convective
Wind Direction:	140°	Turbulence Severity Forecast/Actual:	N/A / Moderate
Altimeter Setting:	30.03 inches Hg	Temperature/Dew Point:	25°C / 13°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Vega, TX	Type of Flight Plan Filed:	None
Destination:	Vega, TX	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class G

Airport Information

Airport:	OLDHAM COUNTY E52	Runway Surface Type:	Grass/turf
Airport Elevation:	3995 ft msl	Runway Surface Condition:	Dry;Vegetation
Runway Used:	17/35	IFR Approach:	None
Runway Length/Width:	4200 ft / 60 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor	Latitude, Longitude:	35.235842,-102.39919(est)

Administrative Information

Investigator In Charge (IIC):	Hodges, Michael
Additional Participating Persons:	Jason Wilson; FAA Lubbock FSDO; Lubbock, TX
Original Publish Date:	July 17, 2025
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=200228

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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](#).