



National Transportation Safety Board Aviation Accident Final Report

Location:	Arlington, WI	Accident Number:	CEN16LA255
Date & Time:	07/03/2016, 1650 CDT	Registration:	N6803Z
Aircraft:	PIPER PA 25-235	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	1 Minor
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The commercial pilot reported that he was conducting an agricultural application flight with the airplane at its maximum gross takeoff weight. He added that, after taking off toward the west, the airplane settled into a cornfield. He stated that there were no failures or malfunctions with the airplane preceding the accident, that the engine was running "fine," and that there were no flight control anomalies at the time of the accident. The pilot stated that the prevailing wind was from the east gusting to 18 knots, which resulted in a gusting tailwind during the takeoff.

The density altitude was calculated to be about 3,000 ft. It is likely that the combined effects of the airplane operating at its maximum gross weight, the elevated density altitude, and the gusting tailwind resulted in the airplane becoming airborne at an airspeed that could not be maintained outside of ground effect. The pilot subsequently failed to maintain the proper angle-of-attack as he attempted to climb the airplane out of ground effect, which resulted in an aerodynamic stall.

Probable Cause and Findings

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

The pilot's failure to establish proper airspeed and angle-of-attack during takeoff with the airplane at its maximum gross weight in elevated density altitude and gusting tailwind conditions, which resulted in an aerodynamic stall.

Findings

Aircraft	Airspeed - Not attained/maintained (Cause) Angle of attack - Not attained/maintained (Cause) Maximum weight - Not specified
Personnel issues	Aircraft control - Pilot (Cause)
Environmental issues	Gusts - Effect on operation Tailwind - Effect on operation High density altitude - Effect on operation

Factual Information

On July 3, 2016, about 1650 central daylight time, a Piper PA-25-235 airplane, N6803Z, was substantially damaged when it impacted terrain after takeoff from runway 27 (2,500 feet by 50 feet, turf) at a private airstrip in Arlington, Wisconsin. The pilot sustained minor injuries. The airplane was registered to and operated by Kazs Flying Service, Ltd. under the provisions of 14 Code of Federal Regulations Part 137 as an aerial application flight. Day visual meteorological conditions prevailed for the flight, which was not operated on a flight plan. The local flight was originating at the time of the accident.

The pilot reported that the airplane settled into a corn field about one-quarter mile west of the airstrip after takeoff. The airplane was operating at the maximum gross takeoff weight. He stated that there were no failures or malfunctions with the airplane preceding the accident. He informed a Federal Aviation Administration inspector that the engine was running "fine" and there were no flight control anomalies at the time of the accident.

Weather conditions at the Dane County Regional Airport, located about 13 miles south of the accident site, at 1653, included: wind from 090 degrees at 10 knots; temperature 24 degrees Celsius; dew point 11 degrees Celsius; and altimeter 30.01 inches of mercury. The preceding observation, at 1553, included: wind from 110 degrees at 12 knots, gusting to 16 knots; temperature 25 degrees Celsius; dew point 12 degrees Celsius; and altimeter 30.03 inches of mercury. The associated density altitudes were about 2,117 feet and 2,219 feet, respectively.

The pilot noted that the airstrip was about 1,060 feet elevation and the prevailing wind was from the east (090 degrees) at 5 knots, with gusts to 18 knots. The temperature was about 30 degrees Celsius. Based on these conditions, the associated density altitude was about 3,020 feet.

History of Flight

Takeoff	Loss of control in flight (Defining event) Collision with terr/obj (non-CFIT)
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Pilot Information

Certificate:	Commercial	Age:	60, Male
Airplane Rating(s):	Multi-engine Land; 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:	No
Medical Certification:	Class 2 With Waivers/Limitations	Last FAA Medical Exam:	12/17/2015
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	04/27/2016
Flight Time:	9850 hours (Total, all aircraft), 9700 hours (Total, this make and model), 8904 hours (Pilot In Command, all aircraft), 60 hours (Last 90 days, all aircraft), 60 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N6803Z
Model/Series:	PA 25-235	Aircraft Category:	Airplane
Year of Manufacture:	1963	Amateur Built:	No
Airworthiness Certificate:	Restricted	Serial Number:	25-2452
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	04/23/2016, Annual	Certified Max Gross Wt.:	2497 lbs
Time Since Last Inspection:	70 Hours	Engines:	1 Reciprocating
Airframe Total Time:	10234.9 Hours as of last inspection	Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	O-540-B4B5
Registered Owner:	Kazs Flying Service Ltd.	Rated Power:	250 hp
Operator:	Kazs Flying Service Ltd.	Operating Certificate(s) Held:	Agricultural Aircraft (137)
Operator Does Business As:		Operator Designator Code:	ZELG

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	MSN, 887 ft msl	Distance from Accident Site:	13 Nautical Miles
Observation Time:	1653 CDT	Direction from Accident Site:	180°
Lowest Cloud Condition:	Few / 5500 ft agl	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	90°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.01 inches Hg	Temperature/Dew Point:	24° C / 11° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Arlington, WI (PVT)	Type of Flight Plan Filed:	None
Destination:	Arlington, WI (PVT)	Type of Clearance:	None
Departure Time:	1650 CDT	Type of Airspace:	Class G

Airport Information

Airport:	Kazs Flying Service (PVT)	Runway Surface Type:	Grass/turf
Airport Elevation:	1060 ft	Runway Surface Condition:	Dry
Runway Used:	27	IFR Approach:	None
Runway Length/Width:	2500 ft / 50 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	43.333333, -89.520833 (est)

Administrative Information

Investigator In Charge (IIC):	Timothy Sorensen	Report Date:	12/12/2016
Additional Participating Persons:	Raymond Yank; FAA Flight Standards; Milwaukee, WI		
Publish Date:	12/12/2016		
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=93562		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).