



Aviation Investigation Final Report

Location:	Center, Texas	Accident Number:	GAA19CA123
Date & Time:	December 20, 2018, 14:30 Local	Registration:	N8487X
Aircraft:	Cessna 172	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that, during the landing flare, a wind gust "lifted the wing up 90 degrees." She then leveled the wings and added full power. When the wings were leveled, the airplane was above a drainage ditch between the runway and parallel taxiway. She realized that the airplane would not gain enough airspeed to "make the [taxiway]," so she intentionally aerodynamically stalled the airplane to "prevent flipping" it. The airplane descended and impacted the drainage ditch.

The airplane sustained substantial damage to the right and left wings.

The pilot reported that there were no preaccident mechanical failures or malfunctions with the airplane that would have precluded normal operation.

The airport's automated weather observation system reported that the wind was from 310° at 14 knots, gusting to 23 knots. A weather station located about 2 miles southwest of the airport reported that, about the time of the accident, the wind was from 311° at 2.7 mph (about 2 knots), gusting to 12.1 mph (about 11 knots). The pilot was landing the airplane on runway 35.

Probable Cause and Findings

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

The pilot's exceedance of the airplane's critical angle of attack during landing in gusting crosswind conditions, which resulted in an aerodynamic stall.

Findings

Personnel issues	Aircraft control - Pilot
Aircraft	Angle of attack - Capability exceeded
Environmental issues	Crosswind - Effect on operation
Environmental issues	Gusts - Effect on operation
Environmental issues	(general) - Contributed to outcome

Factual Information

History of Flight

Landing	Other weather encounter
Landing	Loss of control in flight (Defining event)
Landing	Attempted remediation/recovery
Landing	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Private	Age:	30,Female
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	March 17, 2014
Occupational Pilot:	No	Last Flight Review or Equivalent:	June 16, 2018
Flight Time:	(Estimated) 163.5 hours (Total, all aircraft), 163.5 hours (Total, this make and model), 108.4 hours (Pilot In Command, all aircraft), 13.5 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N8487X
Model/Series:	172 C	Aircraft Category:	Airplane
Year of Manufacture:	1962	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	17248987
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	June 1, 2018 Annual	Certified Max Gross Wt.:	2250 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	45.33 Hrs as of last inspection	Engine Manufacturer:	Continental
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	O-300-D
Registered Owner:		Rated Power:	145 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:	KOCH, 355 ft msl	Distance from Accident Site:	32 Nautical Miles
Observation Time:	20:56 Local	Direction from Accident Site:	241°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	22 knots / 30 knots	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	320°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.79 inches Hg	Temperature/Dew Point:	15°C / 2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Mc Pherson, KS (MPR)	Type of Flight Plan Filed:	None
Destination:	Center, TX (F17)	Type of Clearance:	VFR; VFR flight following
Departure Time:	11:00 Local	Type of Airspace:	Class G

Airport Information

Airport:	CENTER MUNI F17	Runway Surface Type:	Asphalt
Airport Elevation:	318 ft msl	Runway Surface Condition:	Dry
Runway Used:	35	IFR Approach:	None
Runway Length/Width:	5501 ft / 75 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	31.835277,-94.157218(est)

Administrative Information

Investigator In Charge (IIC):	Benhoff, Kathryn
Additional Participating Persons:	Ronald Jacobs; FAA; Houston, TX
Original Publish Date:	September 26, 2019
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=98932

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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](#).