



Aviation Investigation Final Report

Location:	Stephenville, Texas	Accident Number:	GAA19CA192
Date & Time:	March 31, 2019, 10:15 Local	Registration:	N902RA
Aircraft:	Cessna 172	Aircraft Damage:	Substantial
Defining Event:	Loss of control on ground	Injuries:	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The solo student pilot reported that, during landing, the airplane was configured with flaps 30° and that the airspeed was 70 knots. When the airplane was over the runway, he reduced the throttle to idle and initiated the landing flare. The airplane descended rapidly, landed hard, and bounced. He aborted the landing, "but the wind caught me and the next thing I knew, I was facing the taxiway." The airplane exited the left side of the runway into grass and nosed over.

The airplane sustained substantial damage to the right wing lift strut.

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

The METAR at the airport reported that, at the time of the accident, the wind was from 050° at 12 knots, gusting to 20 knots. The pilot landed the airplane on runway 32.

According to the manufacturer's Pilot's Operating Handbook, the maximum demonstrated crosswind is 15 knots. The crosswind component for the accident flight was 16 knots.

Probable Cause and Findings

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

The student pilot's improper landing flare, which resulted in a hard landing, and his subsequent failure to maintain directional control in gusting crosswind conditions that exceeded the airplane's demonstrated crosswind for landing, which resulted in a runway excursion and nose-over.

Findings

Personnel issues	Aircraft control - Student/instructed pilot
Aircraft	Landing flare - Incorrect use/operation
Aircraft	Directional control - Not attained/maintained
Environmental issues	Gusts - Effect on operation
Environmental issues	Crosswind - Effect on operation
Aircraft	Maximum crosswind component - Capability exceeded
Environmental issues	Soft surface - Effect on operation

Factual Information

History of Flight

Landing-flare/touchdown	Hard landing
Landing-aborted after touchdown	Loss of control on ground (Defining event)
Landing-aborted after touchdown	Runway excursion
Landing-aborted after touchdown	Nose over/nose down

Student pilot Information

Certificate:	Student	Age:	41,Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	August 7, 2018
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	(Estimated) 42.2 hours (Total, all aircraft), 38.2 hours (Total, this make and model), 6.1 hours (Pilot In Command, all aircraft), 10.1 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N902RA
Model/Series:	172 L	Aircraft Category:	Airplane
Year of Manufacture:	1971	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	17260190
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	August 8, 2018 100 hour	Certified Max Gross Wt.:	2300 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	as of last inspection	Engine Manufacturer:	Lycoming
ELT:	Installed, activated, aided in locating accident	Engine Model/Series:	O-320
Registered Owner:		Rated Power:	150 Horsepower
Operator:		Operating Certificate(s) Held:	Pilot school (141)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KSEP, 1321 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	17:15 Local	Direction from Accident Site:	214°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	12 knots / 20 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	50°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.42 inches Hg	Temperature/Dew Point:	9°C / -5°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Weatherford, TX (WEA)	Type of Flight Plan Filed:	VFR
Destination:	Weatherford, TX (WEA)	Type of Clearance:	None
Departure Time:	09:30 Local	Type of Airspace:	Class G

Airport Information

Airport:	Stephenville Clark Rgnl SEP	Runway Surface Type:	Asphalt
Airport Elevation:	1321 ft msl	Runway Surface Condition:	Dry
Runway Used:	32	IFR Approach:	None
Runway Length/Width:	4209 ft / 75 ft	VFR Approach/Landing:	Full stop;Traffic pattern

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:	32.215278,-98.17778(est)

Administrative Information

Investigator In Charge (IIC):	Hicks, Michael
Additional Participating Persons:	Michael Baker; FAA; Irving, TX
Original Publish Date:	November 6, 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=99210

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