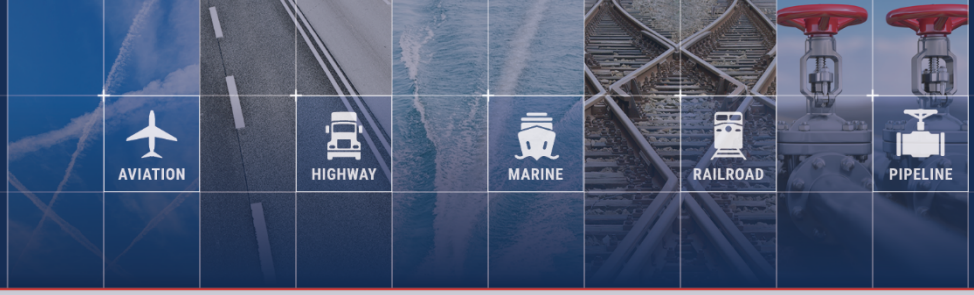

Aviation Investigation Final Report

Location:	Tulsa, Oklahoma	**Accident Number:**	CEN19TA327
Date & Time:	September 2, 2019, 10:20 Local	**Registration:**	N1R
Aircraft:	Piper PA60	**Aircraft Damage:**	Substantial
Defining Event:	Aerodynamic stall/spin	**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The private pilot reported that he flew a normal approach; however, he initiated the landing flare too high. The airplane subsequently stalled and dropped about 10 ft, which caused the nose landing gear to collapse and damaged the forward pressure bulkhead. The pilot stated that he had verified that the landing gear were down and locked before landing, and reported that the accident was "not caused by any apparent mechanical failures."

Probable Cause and Findings

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

The pilot's improper landing flare, which resulted in an aerodynamic stall and hard landing.

Findings

Aircraft	Landing flare - Not attained/maintained
Aircraft	Angle of attack - Not attained/maintained
Personnel issues	Aircraft control - Pilot

Factual Information

History of Flight

Landing-flare/touchdown	Aerodynamic stall/spin (Defining event)
Landing-flare/touchdown	Hard landing
Landing	Landing gear collapse

On September 2, 2019, about 1020 central daylight time, a Piper PA-60 Aerostar airplane, N1R, sustained substantial damage during a hard landing on runway 36L at Tulsa International Airport (TUL), Tulsa, Oklahoma. The pilot and passenger were not injured. The nose landing gear collapsed which resulted in damage to the forward pressure bulkhead. The airplane was registered to CBU Aviation LLC and operated by the pilot as a Title 14 *Code of Federal Regulations* Part 91 personal flight. Visual meteorological conditions prevailed at the airport, and the flight was operated on an instrument flight rules flight plan. The flight originated from Rogers Executive Airport (ROG), Rogers, Arkansas, about 0945 and was destined for TUL.

The pilot reported flying a normal approach to runway 36L; however, he initiated the landing flare too high. The airplane subsequently stalled and dropped about 10 ft which caused the nose landing gear to collapse. The airplane came to rest on an adjacent taxiway. He had verified that the landing gear was down and locked (three green indicator panel lights) before landing. He stated the accident was "not caused by any apparent mechanical failures."

Pilot Information

Certificate:	Private	**Age:**	81,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	3-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 With waivers/limitations	**Last FAA Medical Exam:**	June 1, 2019
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	November 6, 2017
Flight Time:	2300 hours (Total, all aircraft), 500 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N1R
Model/Series:	PA60 602P	**Aircraft Category:**	Airplane
Year of Manufacture:	1982	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	60-8265043
Landing Gear Type:	Retractable - Tricycle	**Seats:**	5
Date/Type of Last Inspection:	May 1, 2019 Annual	**Certified Max Gross Wt.:**	6800 lbs
Time Since Last Inspection:		**Engines:**	2 Reciprocating
Airframe Total Time:	3571.2 Hrs as of last inspection	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	TIO-540-U2A
Registered Owner:	On file	**Rated Power:**	350 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:	TUL,678 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	09:53 Local	**Direction from Accident Site:**	180°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	200°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.09 inches Hg	**Temperature/Dew Point:**	27°C / 24°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Rogers, AR (ROG)	**Type of Flight Plan Filed:**	IFR
Destination:	Tulsa, OK (TUL)	**Type of Clearance:**	IFR
Departure Time:	09:30 Local	**Type of Airspace:**	Class E

Airport Information

Airport:	Tulsa International TUL	**Runway Surface Type:**	Asphalt
Airport Elevation:	678 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	36L	**IFR Approach:**	RNAV
Runway Length/Width:	6101 ft / 150 ft	**VFR Approach/Landing:**	Full stop;Straight-in

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	36.198333,-95.888053(est)

Administrative Information

Investigator In Charge (IIC):	Sorensen, Timothy
Additional Participating Persons:	Renae Allmond; FAA Flight Standards; Oklahoma City, OK
Original Publish Date:	January 28, 2021
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=100308