Aviation Investigation Final Report

Location:	Oklahoma City, Oklahoma	**Accident Number:**	CEN23LA148
Date & Time:	March 27, 2023, 12:26 Local	**Registration:**	N550DW
Aircraft:	Cessna 550	**Aircraft Damage:**	Substantial
Defining Event:	Hard landing	**Injuries:**	4 None
Flight Conducted Under:	Part 91: General aviation - Business		

Analysis

The pilot reported that he had recently completed his initial training, and the accident flight was his first flight in the airplane. The pilot entered the traffic pattern with the autopilot engaged and was told by the co-pilot to “keep it tight.” The autopilot did not command a steep enough bank, and the pilot disconnected the autopilot in an attempt to align with the runway centerline. On final approach about 50 ft above ground level (agl), the airplane was aligned to the right of the runway centerline. The airplane landed hard, bounced multiple times, exited the runway, and impacted a runway sign. The pilot then executed a go-around and landed without further incident at an alternate airport. The airplane sustained substantial damage to the right wing spar. The pilot reported that there were no preimpact mechanical failures or malfunctions with the airplane that would have precluded normal operation.

The pilot reported that prior to and during the flight, challenge-response checklist reading was not utilized between he and the co-pilot, and callouts were not used below 1,000 ft agl.

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 a hard, bounced landing, runway excursion, and subsequent collision with a runway sign. Contributing to the accident was the pilot’s lack of experience in the airplane, the unstabilized approach, and inadequate crew resource management.

Findings

Aircraft	Landing flare - Not attained/maintained
Personnel issues	Aircraft control - Pilot
Personnel issues	Total experience w/ equipment - Pilot
Personnel issues	CRM/MRM techniques - Flight crew
Personnel issues	Delayed action - Flight crew
Environmental issues	Sign/marker - Contributed to outcome

Factual Information

History of Flight

Landing	Hard landing (Defining event)
Landing	Runway excursion
Landing-aborted after touchdown	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Airline transport; Commercial; Flight engineer; Flight instructor	**Age:**	63,
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	**Toxicology Performed:**	
Medical Certification:	Class 1 With waivers/limitations	**Last FAA Medical Exam:**	October 28, 2022
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	13302 hours (Total, all aircraft), 3 hours (Total, this make and model), 3 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft)		

Co-pilot Information

Certificate:	Commercial	**Age:**	36,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Right
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	Yes
Instructor Rating(s):		**Toxicology Performed:**	
Medical Certification:	Class 2	**Last FAA Medical Exam:**	June 1, 2022
Occupational Pilot:		**Last Flight Review or Equivalent:**	
Flight Time:	(Estimated) 1986.1 hours (Total, all aircraft), 50 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N550DW
Model/Series:	550	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	550-0487
Landing Gear Type:	Retractable - Tricycle	**Seats:**	8
Date/Type of Last Inspection:		**Certified Max Gross Wt.:**	
Time Since Last Inspection:		**Engines:**	2 Turbo fan
Airframe Total Time:		**Engine Manufacturer:**	Pratt and Whitney
ELT:		**Engine Model/Series:**	
Registered Owner:	XCEED MANAGEMENT GROUP LLC	**Rated Power:**	
Operator:	XCEED MANAGEMENT GROUP LLC	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KPWA,1280 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	11:53 Local	**Direction from Accident Site:**	353°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	7 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	60°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.18 inches Hg	**Temperature/Dew Point:**	8°C / -1°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Pella, IA (KPEA)	**Type of Flight Plan Filed:**	IFR
Destination:	Oklahoma City, OK (KPWA)	**Type of Clearance:**	IFR
Departure Time:	10:30 Local	**Type of Airspace:**	Class D

Airport Information

Airport:	WILEY POST PWA	**Runway Surface Type:**	Asphalt
Airport Elevation:	1299 ft msl	**Runway Surface Condition:**	
Runway Used:	35R	**IFR Approach:**	Visual
Runway Length/Width:	7199 ft / 150 ft	**VFR Approach/Landing:**	

Wreckage and Impact Information

Crew Injuries:	2 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	2 None	**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	4 None	**Latitude, Longitude:**	35.52998,-97.645455(est)

Administrative Information

Investigator In Charge (IIC):	Rutt, Brian
Additional Participating Persons:	James Wirt; FAA - Will Rogers FSDO
Original Publish Date:	June 29, 2023
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=106997