



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Leesburg, Florida	Accident Number:	ERA23LA177
Date & Time:	March 31, 2023, 16:49 Local	Registration:	N306ER
Aircraft:	DIAMOND AIRCRAFT IND GMBH DA 42 NG	Aircraft Damage:	Substantial
Defining Event:	Hard landing	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

While on approach for a short field landing, the flight instructor reported that the pilot undergoing instruction added power to arrest an excessive rate of descent at his instruction but removed it when the flight descended below 100 ft. The airplane began to descend rapidly and during the flare touched down first on the nose landing gear. The flight instructor took control of the airplane and added power to abort the landing, but he reported the nose dropped and the airplane began to, "...porpoise down the runway while the stall warning was sounding." He attempted to keep the nose level but the airplane bounced about 5 or 6 times before coming to rest at the edge of the runway near the midpoint. The pilot reported that the approach was, "...a bit steep and fast due to gusty conditions." He also reported the canopy became unlatched during the porpoising, and he held it down to prevent getting hit by debris kicked up by the propeller. A review of pictures of the airplane revealed it came to rest with the right main landing gear partially collapsed. The top center portion of the fuselage was substantially damaged during the accident. The pilots reported that there were no mechanical malfunctions or failures of the airplane that would have precluded normal operation.

Probable Cause and Findings

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

The flight instructor's delayed remedial action, which resulted in a hard landing.

Findings

Personnel issues	Delayed action - Instructor/check pilot
Aircraft	Landing flare - Not attained/maintained

Factual Information

History of Flight

Landing-flare/touchdown	Hard landing (Defining event)
Landing-flare/touchdown	Landing gear collapse
Landing-flare/touchdown	Runway excursion

Flight instructor Information

Certificate:	Commercial; Flight instructor	Age:	26, Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	3-point
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 Without waivers/limitations	Last FAA Medical Exam:	November 20, 2021
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	June 8, 2021
Flight Time:	1322 hours (Total, all aircraft), 273 hours (Total, this make and model), 1218 hours (Pilot In Command, all aircraft), 278 hours (Last 90 days, all aircraft), 82 hours (Last 30 days, all aircraft)		

Student pilot Information

Certificate:	Commercial	Age:	21
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	March 22, 2019
Occupational Pilot:	No	Last Flight Review or Equivalent:	May 19, 2022
Flight Time:	240 hours (Total, all aircraft), 14 hours (Total, this make and model), 106 hours (Pilot In Command, all aircraft), 14 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	DIAMOND AIRCRAFT IND GMBH	Registration:	N306ER
Model/Series:	DA 42 NG	Aircraft Category:	Airplane
Year of Manufacture:	2016	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	42.N206
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	March 8, 2023 Annual	Certified Max Gross Wt.:	4407 lbs
Time Since Last Inspection:	80 Hrs	Engines:	2 Reciprocating
Airframe Total Time:	3880 Hrs as of last inspection	Engine Manufacturer:	Austro
ELT:	C126 installed, not activated	Engine Model/Series:	E4C
Registered Owner:	EMBRY-RIDDLE AERONAUTICAL UNIVERSITY INC	Rated Power:	168 Horsepower
Operator:	EMBRY-RIDDLE AERONAUTICAL UNIVERSITY INC	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:	KLEE,69 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	16:53 Local	Direction from Accident Site:	238°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	Unknown / None
Wind Direction:	150°	Turbulence Severity Forecast/Actual:	Unknown / N/A
Altimeter Setting:	30.17 inches Hg	Temperature/Dew Point:	29°C / 14°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Leesburg, FL	Type of Flight Plan Filed:	None
Destination:	Leesburg, FL	Type of Clearance:	VFR
Departure Time:		Type of Airspace:	

Airport Information

Airport:	Leesburg International Airport LEE	Runway Surface Type:	Asphalt
Airport Elevation:	76 ft msl	Runway Surface Condition:	Dry
Runway Used:	13	IFR Approach:	None
Runway Length/Width:	6300 ft / 100 ft	VFR Approach/Landing:	Traffic pattern

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	28.822304,-81.807596(est)

Administrative Information

Investigator In Charge (IIC):	Monville, Timothy
Additional Participating Persons:	Kevin Olenginski; FAA/FSDO; Orlando, FL
Original Publish Date:	July 27, 2023
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=106995

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).