



# Aviation Investigation Final Report

<b>Location:</b>	Brigham City, Utah	<b>Accident Number:</b>	WPR21LA178
<b>Date &amp; Time:</b>	April 27, 2021, 15:45 Local	<b>Registration:</b>	N350TS
<b>Aircraft:</b>	DIAMOND AIRCRAFT IND GMBH DA 42	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Landing gear collapse	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

## Analysis

The flight instructor of the multi-engine, retractable landing gear airplane reported that, while conducting a touch-and-go landing with the student pilot at the controls, during the landing roll, the student pilot intended to raise the flaps, but instead raised the landing gear lever from the down to the up position. The right main landing gear retracted, the right wing impacted the runway surface and the airplane veered right. The flight instructor observed that the landing gear lever was in the "up" position and immediately put the lever to the "down" position. The left main landing gear partially retracted, and the airplane exited the right side of the runway. The airplane sustained substantial damage to the rudder. The flight instructor reported that there were no preaccident mechanical failures or malfunctions with 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 student pilot's unintentional selection of raising the landing gear instead of the flaps during a touch-and-go landing, and the flight instructor's delayed remedial action, which resulted in the landing gear retracting during the landing roll.

## Findings

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<b>Aircraft</b>	Gear extension and retract sys - Incorrect use/operation
<b>Personnel issues</b>	Use of equip/system - Pilot
<b>Personnel issues</b>	Delayed action - Instructor/check pilot
<b>Personnel issues</b>	Monitoring other person - Instructor/check pilot

## Factual Information

### History of Flight

Landing-landing roll	Landing gear collapse (Defining event)
Landing-landing roll	Runway excursion

### Pilot Information

Certificate:	Private	Age:	24, Male
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:	
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	January 23, 2018
Occupational Pilot:	No	Last Flight Review or Equivalent:	September 26, 2020
Flight Time:	(Estimated) 200 hours (Total, all aircraft), 27 hours (Total, this make and model), 120 hours (Pilot In Command, all aircraft), 28 hours (Last 90 days, all aircraft), 19 hours (Last 30 days, all aircraft)		

### Flight instructor Information

Certificate:	Commercial; Flight instructor	Age:	22, Male
Airplane Rating(s):	Single-engine land; Single-engine sea	Seat Occupied:	Rear
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine	Toxicology Performed:	
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	August 20, 2018
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	January 21, 2021
Flight Time:	(Estimated) 546 hours (Total, all aircraft), 121 hours (Total, this make and model), 487 hours (Pilot In Command, all aircraft), 114 hours (Last 90 days, all aircraft), 60 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	DIAMOND AIRCRAFT IND GMBH	<b>Registration:</b>	N350TS
<b>Model/Series:</b>	DA 42	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	2005	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	42.061
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	April 9, 2021 Annual	<b>Certified Max Gross Wt.:</b>	3935 lbs
<b>Time Since Last Inspection:</b>	72 Hrs	<b>Engines:</b>	2 Reciprocating
<b>Airframe Total Time:</b>	5336 Hrs at time of accident	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	C91A installed, not activated	<b>Engine Model/Series:</b>	TAE 125-02-99
<b>Registered Owner:</b>	UTAH STATE UNIVERSITY	<b>Rated Power:</b>	135 Horsepower
<b>Operator:</b>	UTAH STATE UNIVERSITY	<b>Operating Certificate(s) Held:</b>	Pilot school (141)

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KBMC,4226 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	15:35 Local	<b>Direction from Accident Site:</b>	175°
<b>Lowest Cloud Condition:</b>	Scattered / 5500 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>		<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	12 knots / 21 knots	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	330°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	29.95 inches Hg	<b>Temperature/Dew Point:</b>	14°C / 2°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Logan, UT (KLGU)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Brigham City, UT	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	15:15 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	BRIGHAM CITY RGNL BMC	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	4229 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	35	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	8900 ft / 100 ft	<b>VFR Approach/Landing:</b>	Touch and go;Traffic pattern

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	41.554306,-112.06225

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Gutierrez, Eric
<b>Additional Participating Persons:</b>	Jeffery Smith; FAA; Salt Lake City, UT
<b>Original Publish Date:</b>	August 20, 2021
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class 4</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=102988">https://data.nts.gov/Docket?ProjectID=102988</a>

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](#).