

# Aviation Investigation Final Report

Location: LaGrange, Georgia Accident Number: GAA18CA282

Date & Time: May 13, 2018, 17:20 Local Registration: N143MA

Aircraft: DIAMOND AIRCRAFT IND INC DA 20 Aircraft Damage: Substantial

**Defining Event:** Loss of control on ground **Injuries:** 2 None

Flight Conducted Under: Part 91: General aviation - Instructional

#### **Analysis**

The flight instructor reported that, during a soft-field takeoff, the student kept the stick back and allowed the airplane's nose to rise. The airplane drifted to the left and he reminded the student to apply right rudder and right aileron. He added that it seemed like the student applied too much right aileron, and the right wing was close to dragging on the runway. The flight instructor prepared to take the flight controls, and the student overcorrected to the left and the left wing impacted the ground. The flight instructor took control of the airplane, reduced power, and taxied to park without further incident.

The student pilot reported that, during a soft-field takeoff, about 30 to 35 knots, the airplane lifted off the ground and encountered a crosswind that rolled the airplane to the right. The right wing dragged on the ground, he rolled the airplane to the left, and the left wing then impacted the ground.

The airplane sustained substantial damage to the left aileron.

The school's chief 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 failure to maintain lateral control during a soft-field takeoff.

#### **Findings**

Aircraft Lateral/bank control - Not attained/maintained

Personnel issues Aircraft control - Student/instructed pilot

**Environmental issues** Crosswind - Effect on operation

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# **Factual Information**

# **History of Flight**

| Takeoff | Loss of control on ground (Defining event) |
|---------|--|
| Takeoff | Dragged wing/rotor/float/other             |
| Takeoff | Attempted remediation/recovery             |
| Takeoff | Collision with terr/obj (non-CFIT)         |

### **Student pilot Information**

| Certificate:              | Student   | Age:                              | 21,Male           |
|---------------------------|---|-----------------------------------|-------------------|
| Airplane Rating(s):       | None  | Seat Occupied:                    | Left              |
| Other Aircraft Rating(s): | None  | Restraint Used:                   | 4-point           |
| Instrument Rating(s):     | None  | Second Pilot Present:             | Yes               |
| Instructor Rating(s):     | None  | Toxicology Performed:             | No                |
| Medical Certification:    | Class 3 Without waivers/limitations   | Last FAA Medical Exam:            | December 20, 2017 |
| Occupational Pilot:       | No  | Last Flight Review or Equivalent: |                   |
| Flight Time:              | (Estimated) 34 hours (Total, all aircraft), 34 hours (Total, this make and model), 1 hours (Pilot In Command, all aircraft), 31 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft) |                                   |                   |

## Flight instructor Information

| Certificate:              | Commercial; Flight instructor   | Age:                              | 32,Male          |
|---------------------------|---|-----------------------------------|------------------|
| Airplane Rating(s):       | Single-engine land; Multi-engine land   | Seat Occupied:                    | Right            |
| Other Aircraft Rating(s): | None  | Restraint Used:                   | 4-point          |
| Instrument Rating(s):     | Airplane  | Second Pilot Present:             | Yes              |
| Instructor Rating(s):     | Airplane multi-engine; Airplane single-engine; Instrument airplane  | Toxicology Performed:             | No               |
| Medical Certification:    | Class 1 Without waivers/limitations   | Last FAA Medical Exam:            | February 1, 2018 |
| Occupational Pilot:       | Yes   | Last Flight Review or Equivalent: | May 5, 2018      |
| Flight Time:              | (Estimated) 635 hours (Total, all aircraft), 246 hours (Total, this make and model), 564 hours (Pilot In Command, all aircraft), 239 hours (Last 90 days, all aircraft), 77 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft) |                                   |                  |

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## Aircraft and Owner/Operator Information

| Aircraft Make:                | DIAMOND AIRCRAFT IND INC      | Registration:                     | N143MA             |
|-------------------------------|-------------------------------|-----------------------------------|--------------------|
| Model/Series:                 | DA 20 C1                      | Aircraft Category:                | Airplane           |
| Year of Manufacture:          | 2003                          | Amateur Built:                    |                    |
| Airworthiness Certificate:    | Utility                       | Serial Number:                    | C0243              |
| Landing Gear Type:            | Tricycle                      | Seats:                            | 2                  |
| Date/Type of Last Inspection: | May 5, 2018 Annual            | Certified Max Gross Wt.:          |                    |
| Time Since Last Inspection:   |                               | Engines:                          | 1 Reciprocating    |
| Airframe Total Time:          | 6429.9 Hrs                    | Engine Manufacturer:              | Continental        |
| ELT:                          | C91A installed, not activated | Engine Model/Series:              | IO-240-B           |
| Registered Owner:             |                               | Rated Power:                      | 125 Horsepower     |
| Operator:                     |                               | Operating Certificate(s)<br>Held: | Pilot school (141) |

# Meteorological Information and Flight Plan

| Conditions at Accident Site:     | Visual (VMC)                     | Condition of Light:                  | Day               |
|----------------------------------|----------------------------------|--------------------------------------|-------------------|
| Observation Facility, Elevation: | KCCO,970 ft msl                  | Distance from Accident Site:         | 24 Nautical Miles |
| Observation Time:                | 21:15 Local                      | Direction from Accident Site:        | 40°               |
| <b>Lowest Cloud Condition:</b>   | Clear                            | Visibility                           | 10 miles          |
| Lowest Ceiling:                  | None                             | Visibility (RVR):                    |                   |
| Wind Speed/Gusts:                | /                                | Turbulence Type<br>Forecast/Actual:  | None / None       |
| Wind Direction:                  |                                  | Turbulence Severity Forecast/Actual: | N/A / N/A         |
| Altimeter Setting:               | 30.04 inches Hg                  | Temperature/Dew Point:               | 32°C / 8°C        |
| Precipitation and Obscuration:   | No Obscuration; No Precipitation |                                      |                   |
| Departure Point:                 | Atlanta, GA (CCO)                | Type of Flight Plan Filed:           | VFR               |
| Destination:                     | LaGrange, GA (LGC )              | Type of Clearance:                   | None              |
| Departure Time:                  | 16:00 Local                      | Type of Airspace:                    | Class G           |
|                                  |                                  |                                      |                   |

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#### **Airport Information**

| Airport:             | LAGRANGE-CALLAWAY LGC | Runway Surface Type:      | Asphalt |
|----------------------|-----------------------|---------------------------|---------|
| Airport Elevation:   | 693 ft msl            | Runway Surface Condition: | Dry     |
| Runway Used:         | 31                    | IFR Approach:             | None    |
| Runway Length/Width: | 5599 ft / 150 ft      | VFR Approach/Landing:     | None    |

#### **Wreckage and Impact Information**

| Crew Injuries:      | 2 None | Aircraft Damage:        | Substantial               |
|---------------------|--------|-------------------------|---------------------------|
| Passenger Injuries: |        | Aircraft Fire:          | None                      |
| Ground Injuries:    | N/A    | Aircraft Explosion:     | None                      |
| Total Injuries:     | 2 None | Latitude,<br>Longitude: | 33.009166,-85.069725(est) |

#### **Administrative Information**

| Investigator In Charge (IIC):     | Benhoff, Kathryn  |
|-----------------------------------|---|
| Additional Participating Persons: | Jim Chaney; FAA; Atlanta, GA  |
| Original Publish Date:            | October 24, 2018  |
| Note:                             | This accident report documents the factual circumstances of this accident as described to the NTSB. |
| Investigation Docket:             | https://data.ntsb.gov/Docket?ProjectID=97268  |

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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