



Aviation Investigation Final Report

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|--------------------------------|--------------------------------------|-------------------------|-------------|
| Location: | Longmont, Colorado | Accident Number: | CEN14LA267 |
| Date & Time: | June 1, 2014, 09:15 Local | Registration: | N206ND |
| Aircraft: | DIAMOND AIRCRAFT IND INC DA20-C1 | Aircraft Damage: | Substantial |
| Defining Event: | Loss of engine power (total) | Injuries: | 1 None |
| Flight Conducted Under: | Part 91: General aviation - Personal | | |

Analysis

The pilot reported that the engine lost all power after the airplane took off and climbed to about 400 feet. He then made a forced landing to a field adjacent to the airport. The airplane struck the ground nose first and skidded about 150 feet before coming to a stop; the nose gear was sheared off. During a postaccident examination of the airplane, only a few drops of fuel were recovered from the wing and gascolator fuel drains; no fuel could be seen in either tank. The pilot noted that fuel had been leaking from the tanks for three days before the examination. However, even if minimal fuel had been present during the accident flight, more than a few drops should have drained out of the gascolator drain. Had the pilot done a thorough preflight inspection, he should have noted the lack of fuel in the tanks.

Probable Cause and Findings

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

A loss of engine power due to fuel exhaustion. Contributing to the accident was the pilot's inadequate preflight inspection.

Findings

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|-------------------------|------------------------------|
| Personnel issues | Preflight inspection - Pilot |
| Aircraft | Fuel - Fluid level |

Factual Information

History of Flight

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|--------------------------|---|
| Initial climb | Loss of engine power (total) (Defining event) |
| Emergency descent | Off-field or emergency landing |
| Landing | Collision with terr/obj (non-CFIT) |
| Prior to flight | Aircraft servicing event |

On June 1, 2014, about 0915 mountain daylight time, a Diamond DA 20-C1, N206ND, collided with terrain after the engine lost power near Longmont, Colorado. The commercial pilot, the sole occupant on board, was not injured. The airplane was substantially damaged. The airplane was registered to and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Visual meteorological conditions prevailed at the time of the accident, and no flight plan had been filed. The local flight was originating when the accident occurred.

In a telephone interview, the pilot said the airplane had just come out of an annual inspection and his mechanic had performed a post-maintenance engine functional test up to full power. All systems operated normally and the engine performed well. The accident flight was a test flight after the annual inspection. The pilot said prior to takeoff, he also ran the engine up to full power. No anomalies were noted. The pilot took off and after climbing to about 400 feet, the engine lost power. The pilot made a forced landing in a field adjacent to the airport. The airplane struck the ground nose first, shearing off the nose gear, and skidded about 150 feet before coming to a stop. The empennage was separated from the fuselage.

On June 4, three Federal Aviation Administration inspectors examined the airplane in the presence of the pilot. According to the lead inspector, the airplane was equipped with two fuel drains --- one for the fuel tank and one for the gascolator. Only a few drops of fuel were recovered from each drain. No fuel could be seen in the fuel tank. The pilot said fuel had been leaking from the fuel tank for three days before the FAA inspectors arrived. According to the FAA inspector's report, if there had been minimal fuel aboard the airplane, fuel greater than a few drops would have drained out of the gascolator drain during the examination.

Pilot Information

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|----------------------------------|--|--|--------------|
| Certificate: | Commercial | Age: | 73 |
| 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): | Airplane single-engine | Toxicology Performed: | No |
| Medical Certification: | Class 3 With waivers/limitations | Last FAA Medical Exam: | May 1, 2014 |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | June 1, 2013 |
| Flight Time: | (Estimated) 1400 hours (Total, all aircraft), 700 hours (Total, this make and model) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|--------------------------|---------------------------------------|-----------------|
| Aircraft Make: | DIAMOND AIRCRAFT IND INC | Registration: | N206ND |
| Model/Series: | DA20-C1 | Aircraft Category: | Airplane |
| Year of Manufacture: | 1998 | Amateur Built: | |
| Airworthiness Certificate: | Utility | Serial Number: | C0020 |
| Landing Gear Type: | Tricycle | Seats: | 2 |
| Date/Type of Last Inspection: | | Certified Max Gross Wt.: | 1764 lbs |
| Time Since Last Inspection: | | Engines: | 1 Reciprocating |
| Airframe Total Time: | | Engine Manufacturer: | Continental |
| ELT: | | Engine Model/Series: | IO-240-B |
| Registered Owner: | KOSAIR INC | Rated Power: | 125 Horsepower |
| Operator: | KOSAIR INC | Operating Certificate(s) Held: | None |

Meteorological Information and Flight Plan

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|---|---------------------|---|-------------|
| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
| Observation Facility, Elevation: | KLMO,5055 ft msl | Distance from Accident Site: | |
| Observation Time: | 09:14 Local | Direction from Accident Site: | |
| Lowest Cloud Condition: | Clear | Visibility | 10 miles |
| Lowest Ceiling: | None | Visibility (RVR): | |
| Wind Speed/Gusts: | 3 knots / | Turbulence Type Forecast/Actual: | / None |
| Wind Direction: | 160° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 29.93 inches Hg | Temperature/Dew Point: | 23°C / 11°C |
| Precipitation and Obscuration: | | | |
| Departure Point: | Longmont, CO (KLMO) | Type of Flight Plan Filed: | |
| Destination: | Longmont, CO (KLMO) | Type of Clearance: | None |
| Departure Time: | 09:00 Local | Type of Airspace: | Class G |

Airport Information

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|-----------------------------|------------------|----------------------------------|----------------|
| Airport: | Vance Brand KLMO | Runway Surface Type: | Concrete |
| Airport Elevation: | 5055 ft msl | Runway Surface Condition: | Dry |
| Runway Used: | 29 | IFR Approach: | None |
| Runway Length/Width: | 4799 ft / 75 ft | VFR Approach/Landing: | Forced landing |

Wreckage and Impact Information

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|----------------------------|--------|-----------------------------|---------------------------|
| Crew Injuries: | 1 None | Aircraft Damage: | Substantial |
| Passenger Injuries: | | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 1 None | Latitude, Longitude: | 40.16909,-105.209907(est) |

Administrative Information

Investigator In Charge (IIC): Scott, Arnold

Additional Participating Persons:

Original Publish Date: October 27, 2014

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.ntsb.gov/Docket?ProjectID=89327>

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](#).