



# Aviation Investigation Final Report

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<b>Location:</b>	Englewood, Colorado	<b>Accident Number:</b>	DEN08LA057
<b>Date &amp; Time:</b>	February 12, 2008, 15:05 Local	<b>Registration:</b>	N34KF
<b>Aircraft:</b>	Beech A45	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Electrical system malf/failure	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Other work use		

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## Analysis

The pilot stated that the airplane the battery was dead, and he used an external source to "charge/start the airplane." The taxi and initial takeoff were uneventful. During the landing gear retraction after takeoff, the airplane "lost total electrical power." The pilot elected to continue the flight and troubleshoot the electrical failure. With no electrical power, the pilot had no communications, and had to manually extend the landing gear. A second airplane flew near the accident airplane to help verify that the landing gear was extended. The landing gear appeared to be extended, and the pilot attempted to land the airplane. During the landing roll, the right main landing gear collapsed and the airplane went off the runway. The right wing impacted a runway sign, and the nose landing gear and left main landing gear collapsed. The airplane came to rest upright approximately 10 feet off the runway. An examination of the airplane showed that the aircraft battery was completely discharged. The owner of the airplane reported that the alternator would not be able to handle the electrical load during landing gear retraction without battery power.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper decision to fly the airplane with a discharged battery, which resulted in a total electrical failure during takeoff climb. Contributing factors were the pilot's inability to verify the landing gear position, and the impact with the runway sign.

## Findings

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<b>Aircraft</b>	Battery/charger - Damaged/degraded
<b>Personnel issues</b>	Preflight inspection - Pilot
<b>Aircraft</b>	(general) - Failure
<b>Personnel issues</b>	Incomplete action - Pilot
<b>Environmental issues</b>	Sign/marker - Not specified

## Factual Information

### History of Flight

<b>Initial climb</b>	Electrical system malf/failure (Defining event)
<b>Landing-landing roll</b>	Landing gear collapse
<b>Landing-landing roll</b>	Collision with terr/obj (non-CFIT)

On February 12, 2008, approximately 1505 mountain standard time, a Beech A45 single-engine airplane, N34KF, sustained substantial damage when the right wing impacted a runway sign following the collapsed of the right main landing gear during landing roll at Centennial Airport, Englewood, Colorado. The commercial pilot and passenger were not injured. The airplane was registered to a private individual and operated by Goldwing Aviation, LLC, Englewood, Colorado. Visual meteorological conditions prevailed, and a flight plan was not filed for the Title 14 Code of Federal Regulations Part 91 demonstration flight. The local flight departed at 1454.

According to the pilot, prior to starting the airplane the battery was dead, and he used an external source to "charge/start the airplane." The pilot stated the taxi and initial takeoff were uneventful. During the landing gear retraction after takeoff, the airplane "lost total electrical power." The pilot elected to continue the flight and troubleshoot the electrical failure. Due to the loss of electrical power, the pilot had no communications and had to manually extend the landing gear. A second airplane flew near the accident airplane to try and verify whether the landing gear was extended. The landing gear appeared to be extended, and the pilot attempted to land the airplane. During the landing roll, the right main landing gear collapsed and the airplane departed the runway surface. The right wing impacted a runway sign, and the nose landing gear and left main landing gear collapsed. The airplane came to rest upright approximately 10 feet off the runway.

Examination of the airplane by the owner and a local mechanic revealed the right wing spar and wing ribs were bent.

According to a maintenance technician who examined the airplane, the aircraft battery was completely discharged. The owner of the airplane reported that the alternator would not be able to handle the electrical load during landing gear retraction without battery power.

## Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	71, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Rear
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 With waivers/limitations	<b>Last FAA Medical Exam:</b>	July 1, 2007
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	March 1, 2006
<b>Flight Time:</b>	8340 hours (Total, all aircraft), 1844 hours (Total, this make and model), 8180 hours (Pilot In Command, all aircraft), 11 hours (Last 90 days, all aircraft), 6 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Beech	<b>Registration:</b>	N34KF
<b>Model/Series:</b>	A45	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Aerobatic	<b>Serial Number:</b>	G-120
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	July 1, 2007 Annual	<b>Certified Max Gross Wt.:</b>	2950 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	7847 Hrs as of last inspection	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	IO-520
<b>Registered Owner:</b>	Robert E. Gold	<b>Rated Power:</b>	285 Horsepower
<b>Operator:</b>	Goldwing Aviation, LLC	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	APA,5885 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	14:53 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Few / 7000 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	9 knots / 0 knots	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	30°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.03 inches Hg	<b>Temperature/Dew Point:</b>	6°C / -7°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Englewood, CO (APA )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	14:54 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	Centennial Airport APA	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	5885 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	35R	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	10002 ft / 100 ft	<b>VFR Approach/Landing:</b>	Full stop;Precautionary landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	39.569999,-104.849166

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Sauer, Aaron
<b>Additional Participating Persons:</b>	Brent Weckwerth; Federal Aviation Administration; Denver, CO
<b>Original Publish Date:</b>	April 30, 2008
<b>Last Revision Date:</b>	May 29, 2025
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=67545">https://data.nts.gov/Docket?ProjectID=67545</a>

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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](#).