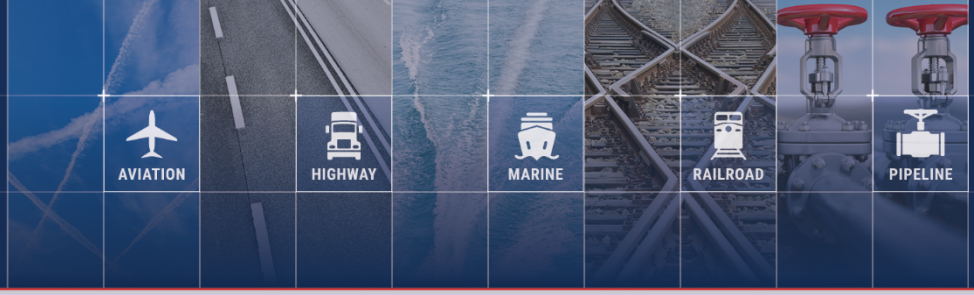

Aviation Investigation Final Report

Location:	RIDGELAND, South Carolina	**Accident Number:**	ATL95LA132
Date & Time:	July 12, 1995, 14:55 Local	**Registration:**	N3083D
Aircraft:	CESSNA 310	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

EN ROUTE, THE PILOT WAS INFORMED THAT HIS MODE C ENCODER WAS NOT BEING RECEIVED. THE AIRPLANE SLOWLY BEGAN LOSING ELECTRICAL POWER, WITH EVENTUAL FAILURE OF ALL COMMUNICATION AND NAVIGATION EQUIPMENT (INCLUDING A HAND-HELD GPS THAT USES POWER FROM THE AIRCRAFT'S BATTERIES.) THE PILOT CONTINUED THE FLIGHT USING PILOTAGE. THE PILOT REPORTED THAT WHEN THE FUEL GAGES WERE INDICATING 10 GALS IN EACH TANK, HE DECIDED TO MAKE AN OFF-AIRPORT LANDING ON AN INTERSTATE HIGHWAY. THE PILOT ATTEMPTED TO LOWER THE GEAR, BUT WAS UNSUCCESSFUL. AN ATTEMPT TO MANUALLY PUMP THE GEAR DOWN WAS NOT MADE. TRAFFIC ON THE INTERSTATE FORCED THE PILOT TO INITIATE A GEAR UP LANDING ON A SERVICE ROAD ADJACENT TO THE INTERSTATE. THE PILOT STATED THAT THE ENGINE MAINTAINED FULL POWER DURING THE ENTIRE SEQUENCE. AFTER THE ACCIDENT, THE BATTERIES WERE RECHARGED AND REPLACED IN THE AIRCRAFT. BOTH ALTERNATORS AND ALTERNATOR SWITCHES OPERATED NORMALLY. NO EVIDENACE OF CHARGING CIRCUIT MALFUNCTION OR FAILURE WAS NOTED.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT'S FAILURE TO ASSURE THAT THE AIRPLANE'S ALTERNATORS WERE ON WHICH LED TO A COMPLETE LOSS OF ELECTRICAL POWER, AND HIS FAILURE TO ATTEMPT TO LOWER THE LANDING GEAR BY EMERGENCY PROCEDURES.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: CRUISE - NORMAL

Findings
1. (C) ELECTRICAL SYSTEM,BATTERY - DISCHARGED
2. (C) ALTERNATOR - NOT USED - PILOT IN COMMAND
3. (C) IN-FLIGHT PLANNING/DECISION - IMPROPER - PILOT IN COMMAND

Occurrence #2: WHEELS UP LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings
4. PRECAUTIONARY LANDING - PERFORMED - PILOT IN COMMAND
5. (C) EMERGENCY PROCEDURE - NOT PERFORMED - PILOT IN COMMAND
6. (C) GEAR EXTENSION - NOT PERFORMED - PILOT IN COMMAND
7. WHEELS UP LANDING - PERFORMED - PILOT IN COMMAND

Factual Information

On July 12, 1995, about 1455 eastern daylight time, a Cessna 310, N3083D, collided with the terrain during an intentional gear up landing near Ridgeland, South Carolina. The airplane was operated by the owner/pilot under the provisions of 14 CFR Part 91, and visual flight rules. Visual meteorological conditions prevailed. A flight plan was not filed for the personal flight. There were no injuries to the private pilot nor his commercially rated pilot passenger. The airplane was substantially damaged. Origination of the flight was Titusville, Florida, about 1250 eastern daylight time, on the same day.

According to the pilot, the flight was normal until Daytona Beach Approach Control advised him that the mode "C" portion of the transponder was not being received. Approximately 50 minutes into the flight, the pilot realized that he had a failure of all of his communication and navigation equipment,including a hand held GPS that received power from the aircraft's battery. At this time the pilot also noticed that the fuel gauges were indicating a rapid loss of fuel.

The aircraft was approaching Savannah International Airport at an altitude of 8,500 feet, when the pilot made the decision to locate an uncontrolled field where he could make a safe landing. The pilot and his passenger then attempted to use pilotage to locate Ridgeland County Airport, in Ridgeland, South Carolina, which should have been a 15 minute flight.

The pilot stated that they were unsuccessful in locating the airport, and the fuel gauges continued to indicate an abnormal fuel burn. The pilot elected to land on an interstate highway, and a pre-landing checklist was completed. However, an attempt to lower the landing gear was unsuccessful. The pilot did not attempt to use the emergency extension system.

Traffic on the interstate forced the pilot to attempt a gear up landing on an adjacent service road. During the landing sequence, the airplane collided with trees, and was substantially damaged. The pilot stated that the engines never lost power.

A post crash examination of the aircraft was completed by the Federal Aviation Administration. The aircraft landing gear was raised and extended without any problem. Both alternators and regulators were secured, and the drive belts were installed. All electrical connections were tight. All circuit breakers were in.

The fuel quantity was checked in each tank, except the left tip tank which had been compromised in the landing. Both inboard tanks had fuel to a level four inches below the filler neck. The right tip tank had fuel to a level 11.5 inches below the filler neck.

The batteries were recharged and replaced in the aircraft. The damaged propellers were

removed,and the engines were run with a test propeller. Both of the alternators and alternator switches operated normally. No evidence of malfunction or failure was noted.

Pilot Information

Certificate:	Private	**Age:**	Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	March 31, 1995
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	292 hours (Total, all aircraft), 55 hours (Total, this make and model), 130 hours (Pilot In Command, all aircraft), 22 hours (Last 90 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	**Registration:**	N3083D
Model/Series:	310 310	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	35283
Landing Gear Type:	Retractable - Tricycle	**Seats:**	5
Date/Type of Last Inspection:	Annual	**Certified Max Gross Wt.:**	4600 lbs
Time Since Last Inspection:		**Engines:**	2 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	CONTINENTAL
ELT:	Installed	**Engine Model/Series:**	O-470M
Registered Owner:	ALLEN M. PROHASKA	**Rated Power:**	240 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	SAV ,51 ft msl	**Distance from Accident Site:**	25 Nautical Miles
Observation Time:	14:50 Local	**Direction from Accident Site:**	210°
Lowest Cloud Condition:	Scattered / 4500 ft AGL	**Visibility**	6 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	9 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	130°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	33°C / 21°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	TITUSVILLE , FL (X21)	**Type of Flight Plan Filed:**	None
Destination:	BECKLY , WV (BKW)	**Type of Clearance:**	None
Departure Time:	12:50 Local	**Type of Airspace:**	Class G

Airport Information

Airport:		**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Precautionary landing

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	32.480518,-80.979576(est)

Administrative Information

Investigator In Charge (IIC):	Hicks, Preston
Additional Participating Persons:	BILL NEELY;
Original Publish Date:	October 26, 1995
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=3592