



# **Aviation Investigation Final Report**

Location: Westminister, Maryland Accident Number: ERA18LA034

Date & Time: November 29, 2017, 09:30 Local Registration: N690RU

Aircraft: Aero Commander 112 Aircraft Damage: Substantial

**Defining Event:** Landing area undershoot **Injuries:** 1 None

Flight Conducted Under: Part 91: General aviation - Instructional

### **Analysis**

The student pilot reported that, during the cross-country flight, he thought that the airplane had experienced an electrical failure, and he chose to divert to an airport. During final approach to the diversion airport, the student descended the airplane too low and then attempted to correct it by increasing engine power. Subsequently, the airplane impacted a grassy area just before the runway, which resulted in all three landing gear separating.

Examination of the wreckage revealed that the electrical system was functional but that an avionics panel had failed. The failed avionics panel likely distracted the student pilot and led to his failure to maintain a proper glidepath during the approach, which resulted in the runway undershoot. The student reported that there were no other preimpact mechanical malfunctions or failures 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 a proper glidepath during the approach due to his distraction by the failure of an avionics panel, which resulted in a runway undershoot.

# **Findings**

Personnel issues Aircraft control - Student/instructed pilot

Aircraft Descent/approach/glide path - Not attained/maintained

Personnel issues Attention - Student/instructed pilot

Aircraft (general) - Failure

Page 2 of 6 ERA18LA034

### **Factual Information**

### **History of Flight**

Landing	Landing area undershoot (Defining event)	
Landing	Collision with terr/obj (non-CFIT)	
Landing	Part(s) separation from AC	

On November 29, 2017, about 0930 eastern standard time, an Aero Commander 112, N690RU, owned and operated by the student pilot, was substantially damaged during a precautionary landing at Clearview Airpark (2W2), Westminster, Maryland. The student pilot was not injured. The solo instructional flight was conducted under the provisions of Title 14 *Code of Federal Regulations* Part 91. Visual meteorological conditions prevailed and no flight plan was filed for the flight that originated from Martin State Airport (MTN), Baltimore, Maryland, about 0900. The flight was destined to Eastern WV Regional Airport (MRB), Martinsburg, West Virginia.

The student pilot reported that 2W2 was his second checkpoint along the cross-country flight. Upon reaching 2W2, the airplane experienced an electrical failure that affected the communication radios and GPS. The student pilot then elected to divert to 2W2 and entered the airport traffic pattern for runway 32, an 1,840-foot long, 30-foot wide asphalt runway. While completing landing procedures, the student pilot extended the landing gear, but did not observe the corresponding green indicator lights in the cockpit. He could not be certain if he did not see the lights due to the electrical failure or because of sun glare. While on the left base leg of the traffic pattern, the student pilot lowered the nose of the airplane to cease the stall warning horn and the airplane flew beyond the extended runway centerline; however, the student pilot corrected and aligned the airplane on final approach. While on short final approach, the airplane descended suddenly and the student pilot immediately compensated by increasing engine power, but the landing gear contacted a grass area before runway and all three landing gear separated. The airplane came to rest upright just prior to the runway.

Examination of the wreckage by a Federal Aviation Administration inspector revealed substantial damage to the fuselage. When the inspector tested the airplane's electrical system, it functioned, but the avionics panel extinguished after approximately 10 seconds of operation.

The recorded wind at an airport located about 10 miles north of the accident site, at 0925, was from 230° at 6 knots. The student pilot reported that the wind at 2W2 was from 140° at 8 knots, gusting to 12 knots, at the time of the accident.

Page 3 of 6 ERA18LA034

### **Pilot Information**

Certificate:	Student	Age:	62,Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	BasicMed	Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	179 hours (Total, all aircraft), 39 hours (Total, this make and model), 16 hours (Pilot In Command, all aircraft), 16 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

# **Aircraft and Owner/Operator Information**

Aircraft Make:	Aero Commander	Registration:	N690RU
Model/Series:	112 UNDESIGNAT	Aircraft Category:	Airplane
Year of Manufacture:	1973	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	33
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	May 12, 2017 Annual	Certified Max Gross Wt.:	2650 lbs
Time Since Last Inspection:	19 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3692 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	C91 installed, not activated	Engine Model/Series:	10-360
Registered Owner:	On file	Rated Power:	200 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Page 4 of 6 ERA18LA034

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	DMW,789 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	09:25 Local	Direction from Accident Site:	190°
<b>Lowest Cloud Condition:</b>	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	230°	Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	30.17 inches Hg	Temperature/Dew Point:	12°C / 0°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Baltimore, MD (MTN )	Type of Flight Plan Filed:	None
Destination:	Martinsburg, WV (MRB )	Type of Clearance:	None
Departure Time:	09:00 Local	Type of Airspace:	

# **Airport Information**

Airport:	Clearview Airpark 2W2	Runway Surface Type:	Asphalt
Airport Elevation:	799 ft msl	<b>Runway Surface Condition:</b>	Dry
Runway Used:	32	IFR Approach:	None
Runway Length/Width:	1840 ft / 30 ft	VFR Approach/Landing:	Full stop;Precautionary landing;Traffic pattern

## Wreckage and Impact Information

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:	39.466945,-77.017501(est)

Page 5 of 6 ERA18LA034

#### **Administrative Information**

Investigator In Charge (IIC): Gretz, Robert

Additional Participating Persons: Steven O'Rourke; FAA/FSDO; Baltimore, MD

Original Publish Date: July 23, 2019

Last Revision Date: Investigation Class: Class

Note: The NTSB did not travel to the scene of this accident.

Investigation Docket: https://data.ntsb.gov/Docket?ProjectID=96400

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.

Page 6 of 6 ERA18LA034