



# Aviation Investigation Final Report

<b>Location:</b>	Winder, Georgia	<b>Accident Number:</b>	GAA19CA016
<b>Date &amp; Time:</b>	October 4, 2018, 19:30 Local	<b>Registration:</b>	N8220P
<b>Aircraft:</b>	Piper PA24	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Landing area undershoot	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The pilot reported that, during a night flight, while lowering the flaps for landing, the cockpit lights turned off. He attempted to turn the lights back on to no avail. He added that the precision approach path indicator (PAPI) lights were off and that he could not get the runway lights to turn on either. As he was landing past "the first arrow in front [chevron in the displaced threshold]," he heard a "thump." He taxied the airplane to the ramp without further incident.

The passenger, an airframe and powerplant mechanic, reported that, during approach after the cockpit lights went out, he used his flashlight to light up the cockpit. He was unable to correct the panel lights but observed that the runway lights were "bright." He added that, during the landing, he felt the "bottom drop out" and that the airplane landed hard and bounced.

Postaccident examination revealed that the right horizontal stabilator sustained substantial damage. The pilot added that he and the passenger went to the beginning of the approach runway and found pieces of broken runway lights.

Archived NOTAMs for the date of the accident stated that:

*RWY 31 PAPI UNUSABLE*

## Probable Cause and Findings

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

The pilot's failure to maintain an adequate approach path at night after an electrical failure, which resulted in the airplane striking runway lights.

## Findings

<b>Aircraft</b>	Descent/approach/glide path - Not attained/maintained
<b>Personnel issues</b>	Aircraft control - Pilot
<b>Aircraft</b>	(general) - Inoperative
<b>Environmental issues</b>	Runway/taxi/approach light - Effect on operation

## Factual Information

### History of Flight

<b>Approach-VFR pattern final</b>	Electrical system malf/failure
<b>Landing</b>	Landing area undershoot (Defining event)
<b>Landing</b>	Collision with terr/obj (non-CFIT)

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	72, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Lap only
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 With waivers/limitations	<b>Last FAA Medical Exam:</b>	January 30, 2018
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	December 16, 2017
<b>Flight Time:</b>	(Estimated) 1226.5 hours (Total, all aircraft), 40.2 hours (Total, this make and model), 181.1 hours (Pilot In Command, all aircraft), 8.6 hours (Last 90 days, all aircraft), 2.4 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N8220P
<b>Model/Series:</b>	PA24 250	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1963	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	24-3473
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	May 14, 2018 Annual	<b>Certified Max Gross Wt.:</b>	2900 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	5145.31 Hrs as of last inspection	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	O-540-A1D5
<b>Registered Owner:</b>		<b>Rated Power:</b>	250 Horsepower
<b>Operator:</b>	On file	<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>	Night
<b>Observation Facility, Elevation:</b>	KWDR, 943 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	23:35 Local	<b>Direction from Accident Site:</b>	295°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	30.1 inches Hg	<b>Temperature/Dew Point:</b>	27°C / 20°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Winder, GA (WDR )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Winder, GA (WDR )	<b>Type of Clearance:</b>	VFR
<b>Departure Time:</b>	17:45 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	BARROW COUNTY WDR	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	943 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	31	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	5500 ft / 100 ft	<b>VFR Approach/Landing:</b>	Full stop;Traffic pattern

## 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>	33.980278,-83.660835(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Benhoff, Kathryn
<b>Additional Participating Persons:</b>	Steve Newcomer; FAA; College Park, GA
<b>Original Publish Date:</b>	April 8, 2019
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=98462">https://data.nts.gov/Docket?ProjectID=98462</a>

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.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).