



Aviation Investigation Final Report

Location:	GLEN ALLAN, Mississippi	Accident Number:	ATL99LA101
Date & Time:	June 19, 1999, 14:00 Local	Registration:	N53198
Aircraft:	Cessna A188B	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Aerial application		

Analysis

The pilot reported that, while surveying a field for future work, the airplane became uncontrollable. He selected an emergency landing area, and made a forced landing in a field. The airplane sustained structural damage during the forced landing when the left wing collided with the ground, and the airplane cartwheeled. During the examination of the airplane, the pilot reported that the left aileron control bolt had separated from the control surface. When the left aileron was removed from the airframe, the missing bolt was recovered from the inter-structure of the wing area. The bolt was reinstalled through the aileron assembly, and appeared to provide enough thread material to secure the aileron assembly. The examination of the bolt assembly also disclosed that the bolt that connected the forward end of the control rod to the bell crank was too short and did not protrude through the nylon lock on the nut. The rod-end bearing was also seized and would not move.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The improper installation of a nut and bolt assembly by a maintenance personnel that resulted in the in-flight loss of control of the left aileron.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: MANEUVERING - AERIAL APPLICATION

Findings

1. (C) FLIGHT CONTROL,AILERON - NOT SECURED
2. (C) MISCELLANEOUS,BOLT/NUT/FASTENER/CLAMP/SPRING - IMPROPER
3. (C) MAINTENANCE,INSTALLATION - INADEQUATE - OTHER MAINTENANCE PERSONNEL

Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - EMERGENCY

Findings

4. TERRAIN CONDITION - ROUGH/UNEVEN

Factual Information

On June 19, 1999, at 1400 central daylight time, a Cessna A188B, N53198, collided with the ground during a forced landing near Glen Allan, Mississippi, following an in-flight malfunction of the aileron control system. The business flight was operated by the pilot under the provisions of Title 14 CFR Part 91 with no flight plan filed. Visual meteorological conditions prevailed at the time of the accident. The airplane sustained substantial damage and the commercial pilot was not injured. The flight initially departed Glen Allan, Mississippi, at 1355.

The pilot reported that, while surveying a field for future work, the airplane became uncontrollable when the ailerons malfunctioned. The pilot selected an emergency landing area, and made a forced landing in a field. The airplane sustained structural damage during the forced landing when the left wing collided with the ground, and the airplane cartwheeled.

During the examination of the airplane, the pilot reported that the left aileron control bolt had separated from the control surface. When the left aileron was removed from the airframe the missing bolt was recovered from the inter-structure of the wing area. The bolt was reinstalled through the aileron assembly, and appeared to provide enough thread material to secure the aileron assembly. The examination of the bolt assembly also disclosed that the bolt that connects the forward end of the control rod to the bell crank was too short and did not protrude through the nylon lock on the nut. The rod-end bearing was also seized and would not move.

Pilot Information

Certificate:	Commercial	Age:	39, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Center
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	April 21, 1999
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	3000 hours (Total, all aircraft), 2000 hours (Total, this make and model), 200 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N53198
Model/Series:	A188B A188B	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	18801677T
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	March 25, 1999 Annual	Certified Max Gross Wt.:	4200 lbs
Time Since Last Inspection:	49 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	4342 Hrs	Engine Manufacturer:	Continental
ELT:		Engine Model/Series:	IO-520-D
Registered Owner:	ROBERT FLYING SERVICE	Rated Power:	285 Horsepower
Operator:	MICHAEL LEWIS	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:	GLH ,131 ft msl	Distance from Accident Site:	
Observation Time:	13:50 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	7 miles
Lowest Ceiling:	Broken / 6500 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	130°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	30°C / 21°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	, MS	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	13:55 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:	Forced landing

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:	34.849689,-88.380287(est)

Administrative Information

Investigator In Charge (IIC):	Powell, Phillip
Additional Participating Persons:	GERALD DOIZER; JACKSON , MS
Original Publish Date:	August 3, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=46571

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](#).