



# Aviation Investigation Final Report

<b>Location:</b>	HAYTI, Missouri	<b>Accident Number:</b>	CHI00LA094
<b>Date &amp; Time:</b>	March 21, 2000, 15:00 Local	<b>Registration:</b>	N4859Q
<b>Aircraft:</b>	Cessna                      A188B	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 Serious
<b>Flight Conducted Under:</b>	Part 91: General aviation		

## Analysis

The airplane had just received an annual inspection and a maintenance test flight was being performed. The pilot reported that during the flight the aileron control was ineffective. He reported that the '...right aileron appeared to be disconnected, moving up and down, [with] no response.' The pilot said that he was in a right turn and was unable to bring up the right wing. He said that he was losing altitude and decided to land the airplane on '... soft plowed ground...' The pilot said that, during the landing, the right wing struck the ground. During a postaccident examination of the aircraft, the right aileron pushrod end bearing bolt was found installed in the bellcrank, but the bolt did not pass through the rod end bearing. According to maintenance records, the aileron pushrod end bearings were replaced during the annual inspection due to excessive play. No other anomalies were found with respect to the aircraft or aircraft systems.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the failure of maintenance personnel to properly install and connect the aileron control rod. Factors were the inadequate annual inspection by maintenance personnel and the aileron control not possible by the pilot.

## Findings

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

Findings

1. (C) FLT CONTROL SYST,AILERON CONTROL CABLE/ROD - NOT CONNECTED
2. (C) MAINTENANCE,INSTALLATION - IMPROPER - OTHER MAINTENANCE PERSONNEL
3. (F) MAINTENANCE,ANNUAL INSPECTION - INADEQUATE - OTHER MAINTENANCE PERSONNEL
4. (F) AIRCRAFT CONTROL - NOT POSSIBLE - PILOT IN COMMAND

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Occurrence #2: FORCED LANDING

Phase of Operation: EMERGENCY DESCENT/LANDING

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Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: EMERGENCY LANDING

## Factual Information

On March 21, 2000, at 1500 central standard time, a Cessna A188B, N4859Q, sustained substantial damage when it impacted the terrain during a forced landing following a loss of aileron control during flight. The 14 CFR Part 91 maintenance flight was operating in visual meteorological conditions and was not on a flight plan. The commercial rated pilot received serious injuries. The flight originated from the Mid Continent Airport, Hayti, Missouri about 1450 for a local flight.

The airplane had just received an annual inspection and a maintenance test flight was being performed. The pilot reported, in a written statement, that during the flight the aileron control was ineffective. He reported that the "...right aileron appeared to be disconnected, moving up and down, [with] no response." The pilot said that he was in a right turn and was unable to bring up the right wing. He said that he was losing altitude and decided to land the airplane on "... soft plowed ground..." The pilot said that, during the landing, the right wing struck the ground.

During a postaccident examination of the aircraft, the right aileron pushrod end bearing bolt was found installed in the bellcrank, but the bolt did not pass through the rod end bearing. According to maintenance records, the aileron pushrod end bearings were replaced during the annual inspection due to excessive play. No other anomalies were found with respect to the aircraft or aircraft systems.

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	77, Male
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea; Multi-engine land	<b>Seat Occupied:</b>	Center
<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>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	April 9, 1999
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	13362 hours (Total, all aircraft), 300 hours (Total, this make and model), 13362 hours (Pilot In Command, all aircraft), 20 hours (Last 90 days, all aircraft), 11 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N4859Q
<b>Model/Series:</b>	A188B A188B	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Restricted (Special)	<b>Serial Number:</b>	188-02595
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	March 21, 2000 Annual	<b>Certified Max Gross Wt.:</b>	3300 lbs
<b>Time Since Last Inspection:</b>	0 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	5138 Hrs	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	IO-520D
<b>Registered Owner:</b>	MID CONTINENT AIRCRAFT CORP.	<b>Rated Power:</b>	300 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Not reported
<b>Observation Facility, Elevation:</b>	HKA ,255 ft msl	<b>Distance from Accident Site:</b>	18 Nautical Miles
<b>Observation Time:</b>	14:53 Local	<b>Direction from Accident Site:</b>	198°
<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>	5 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	60°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	14°C / 9°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	(M28 )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	14:50 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Serious	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Serious	<b>Latitude, Longitude:</b>	36.230449,-89.739418(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Brannen, John
<b>Additional Participating Persons:</b>	JOEL PETTUS; ST. ANN , MO
<b>Original Publish Date:</b>	March 2, 2001
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=48844">https://data.ntsb.gov/Docket?ProjectID=48844</a>

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