Aviation Investigation Final Report

Location:	HOUSTON, Mississippi	**Accident Number:**	MIA98LA092
Date & Time:	March 4, 1998, 13:35 Local	**Registration:**	N53382
Aircraft:	Cessna 188B	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The pilot stated he was at an altitude of about 150 to 200 feet when he made an aileron input, which was hard enough to cause fluid in the hopper tank to 'slosh' around. The airplane shuddered as if in a stall. He moved the control stick forward to increase airspeed, and the shutter continued. The airplane started to turn to the left. The pilot applied right aileron and rudder, then he visually checked the ailerons and observed that both were in the up position. He reduced power, and the left wing dropped. The pilot increased power and applied rudder to maintain aircraft control. The airplane continued in a slight left turn. While making a forced landing in an open field, the pilot reduced power, and the left wing dropped and collided with the ground. Examination of the airplane revealed that the left aileron control rod end fitting had become disconnected at the adjustment jam nut. The rod end had lost its flexibility, because of rust (corrosion), due to lack of attention and/or lubrication.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: corrosion and subsequent disconnect of the left aileron control rod end fitting, which resulted in a loss of aileron (roll) control, a forced landing, and subsequent impact with the terrain. A factor related to the accident was: improper lubrication of the control rod.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: MANEUVERING

Findings
1. (C) FLIGHT CONTROL,AILERON ATTACHMENT - CORRODED
2. (F) MAINTENANCE,LUBRICATION - INADEQUATE - OTHER MAINTENANCE PERSONNEL
3. (C) FLIGHT CONTROL,AILERON ATTACHMENT - DISCONNECTED

Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: MANEUVERING

Findings
4. AILERON - RESTRICTED

Occurrence #3: FORCED LANDING
Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: EMERGENCY LANDING

Factual Information

On March 4, 1998, about 1335 central standard time, a Cessna 188B, N53382, registered to Kimmel Aviation, crashed near Houston, Mississippi, while making an emergency landing following a reported in-flight control system malfunction, while on a 14 CFR part 137 aerial application flight. Visual meteorological conditions prevailed at the time and no flight plan was filed. The airplane sustained substantial damage and the commercial-rated pilot reported no injuries. The flight originated about 10 minutes before the accident. The pilot stated he was about 150 to 200 feet when he made an aileron input which was hard enough for the water in the hopper tank to "slosh" around. The airplane shuddered as if in a stall. The pilot moved the control stick forward to increase airspeed and the shutter continued. The airplane started to turn to the left. He applied right aileron and rudder, looked outside and observed both ailerons in the up position. He reduced power and the left wing dropped. He increased power and applied rudder to maintain aircraft control. The airplane continued in a slight left turn. While making a forced landing in an open field he reduced power, the left wing dropped and collided with the ground.

According to the FAA Inspector's statement, when he examined the wreckage he found the "left aileron control rod end fitting broken...at the adjustment jam nut." He further stated that the rod end "had lost its flexibility, because of rust (corrosion)." The FAA Inspector wrote in his statement, "...when the rod end fitting broke the pilot lost control of the aircraft...[and] this accident occurred due to lack of attention and or lubrication of moving parts."

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	60,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Center
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	June 17, 1997
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	21494 hours (Total, all aircraft), 10000 hours (Total, this make and model), 21494 hours (Pilot In Command, all aircraft), 87 hours (Last 90 days, all aircraft), 47 hours (Last 30 days, all aircraft), 7 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N53382
Model/Series:	188B 188B	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Restricted (Special)	**Serial Number:**	18801800T
Landing Gear Type:	Tailwheel	**Seats:**	1
Date/Type of Last Inspection:	April 10, 1997 Annual	**Certified Max Gross Wt.:**	4200 lbs
Time Since Last Inspection:	299 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	6080 Hrs	**Engine Manufacturer:**	Continental
ELT:	Not installed	**Engine Model/Series:**	IO-520-D
Registered Owner:	KIMMEL AVIATION	**Rated Power:**	300 Horsepower
Operator:		**Operating Certificate(s) Held:**	
Operator Does Business As:		**Operator Designator Code:**	LUVG

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	TUP ,377 ft msl	**Distance from Accident Site:**	25 Nautical Miles
Observation Time:	13:53 Local	**Direction from Accident Site:**	210°
Lowest Cloud Condition:	Unknown	**Visibility**	10 miles
Lowest Ceiling:	Overcast / 1400 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	230°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	18°C / 16°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	, MS (M44)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	00:00 Local	**Type of Airspace:**	Class D

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:**	33.889904,-89.000297(est)

Administrative Information

Investigator In Charge (IIC):	Yurman, Alan
Additional Participating Persons:	BOBBY LOTT; JACKSON , MS
Original Publish Date:	October 30, 1998
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=38467