



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	BEMIDJI, MN	<b>Accident Number:</b>	CHI99LA156
<b>Date &amp; Time:</b>	05/17/1999, 1840 CDT	<b>Registration:</b>	N133BA
<b>Aircraft:</b>	Beech 99A	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None

**Flight Conducted Under:** Part 91: General Aviation -

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## Analysis

The pilot said that after takeoff and raising the landing gear, the red warning light in the landing gear handle failed to go out. The pilot recycled the landing gear, but could not get the red light to go out. On return to the airport, the pilot lowered the landing gear handle down, but nothing happened. He recycled the handle two additional times with no results. The pilot overflew the airport and confirmed that the landing gear were still up. The pilot manually pumped the landing gear down. Only the nose gear and right main gear green indicator lights illuminated. The pilot overflew the airport again. He was told that the three gear were down. During the landing, the pilot touched down on the right main gear first, and then gently lowered the left main gear to the runway. The landing gear held. As the pilot applied reverse thrust, the left main gear suddenly collapsed. The airplane slid off of the left side of the runway and came to a stop in the grass. Examination of the airplane revealed no anomalies.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Failure of the left main landing gear actuator for undetermined reasons.

## Findings

Occurrence #1: GEAR COLLAPSED  
Phase of Operation: LANDING - ROLL

### Findings

1. (C) HYDRAULIC SYSTEM,ACTUATOR - FAILURE
2. REASON FOR OCCURRENCE UNDETERMINED
3. EMERGENCY PROCEDURE - PERFORMED - PILOT IN COMMAND

## Factual Information

On May 17, 1999, at 1840 central daylight time (cdt), a Beech 99A, N133BA, operated by an airline transport pilot, sustained substantial damage when the airplane's left main landing gear collapsed during landing roll at the Bemidji-Beltrami County Airport, Bemidji, Minnesota. Visual meteorological conditions prevailed at the time of the accident. The systems flight test was being conducted under 14 CFR part 91. No flight plan was on file. The pilot reported no injuries. The local flight originated at Bemidji, Minnesota, at 1740 cdt.

In his written statement, the pilot said that following takeoff and raising the landing gear, the red warning light in the landing gear handle failed to go out. The pilot said that he recycled the landing gear, but could not get the red light to go out. The pilot said that he continued with the test flight. On his return to the airport the pilot said he put the landing gear handle down and nothing happened. He recycled the handle two additional times with no results. The pilot overflew the airport and confirmed with his company's maintenance that the landing gear were still up. The pilot said that he then manually pumped the landing gear down, but only the nose gear and right main gear green indicator lights illuminated. The pilot overflew the airport again. His company's maintenance told him that the three gear were down. The pilot came into land. He said that he touched down on the right main gear first, and then gently lowered the left main gear to the runway. The landing gear held. The pilot said he then tried to apply some reverse thrust. Suddenly, the left main gear collapsed, and the left wing struck the runway. The airplane slid off of the left side of the runway and came to a stop in the grass.

A Federal Aviation Administration (FAA) inspector examined the airplane at Bemidji-Beltrami County Airport. The outboard two feet of the airplane's left wing, to include the rear spar, was bent upward approximately 10 degrees. The bottom wing skin and wing tip showed heavy longitudinal scraping. The bottom outboard 12 inches of the left aileron was scraped longitudinally. The bottom of the left engine nacelle near the exhaust was bent inward and showed longitudinally-running scrapes in the metal. The trailing edge and bottom of the airplane's left flap was bent upward. The left propeller's three blades were bent rearward and showed torsional bending and chordwise scratches. The left main gear doors showed scraping. The left main landing gear actuator shaft was broken aft. Flight control continuity was confirmed. Examination of the airplane's engines, engines controls, and other airplane systems revealed no anomalies. An examination of the left main landing gear actuator revealed no anomalies.

## Pilot Information

<b>Certificate:</b>	Airline Transport	<b>Age:</b>	64, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land; Single-engine Sea	<b>Seat Occupied:</b>	Unknown
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<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 1 Valid Medical--w/ waivers/lim.	<b>Last Medical Exam:</b>	03/01/1999
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	18620 hours (Total, all aircraft), 480 hours (Total, this make and model), 17555 hours (Pilot In Command, all aircraft), 80 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	Beech	<b>Registration:</b>	N133BA
<b>Model/Series:</b>	99A 99A	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	U-142
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	05/13/1999, Continuous Airworthiness	<b>Certified Max Gross Wt.:</b>	10400 lbs
<b>Time Since Last Inspection:</b>	0 Hours	<b>Engines:</b>	2 Turbo Prop
<b>Airframe Total Time:</b>	8017 Hours	<b>Engine Manufacturer:</b>	P&W
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	PT6A-27
<b>Registered Owner:</b>	BEMIDJI AVIATION SERVICES, INC	<b>Rated Power:</b>	550 hp
<b>Operator:</b>	BEMIDJI AVIATION SERVICES, INC	<b>Air Carrier Operating Certificate:</b>	On-demand Air Taxi (135)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	BEMA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	PKD, 1443 ft msl	Observation Time:	1753 CDT
Distance from Accident Site:	37 Nautical Miles	Direction from Accident Site:	185°
Lowest Cloud Condition:	Clear / 0 ft agl	Temperature/Dew Point:	16° C / 4° C
Lowest Ceiling:	None / 0 ft agl	Visibility	10 Miles
Wind Speed/Gusts, Direction:	15 knots/ 22 knots, 310°	Visibility (RVR):	0 ft
Altimeter Setting:	29 inches Hg	Visibility (RVV):	0 Miles
Precipitation and Obscuration:			
Departure Point:	(BJI)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1740 CDT	Type of Airspace:	Class E

## Airport Information

Airport:	BEMEDJI-BELTRAMI COUNTY (BJI)	Runway Surface Type:	Concrete
Airport Elevation:	1390 ft	Runway Surface Condition:	Dry
Runway Used:	31	IFR Approach:	None
Runway Length/Width:	6598 ft / 150 ft	VFR Approach/Landing:	Full Stop; Straight-in

## Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	DAVID C BOWLING	Adopted Date:	06/21/2000
Additional Participating Persons:	BARRY JOHNSON; MINNEAPOLIS, MN		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</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.

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