



# Aviation Investigation Final Report

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<b>Location:</b>	Jacksonville, Florida	<b>Accident Number:</b>	ATL01LA102
<b>Date &amp; Time:</b>	August 25, 2001, 14:50 Local	<b>Registration:</b>	N521U
<b>Aircraft:</b>	Beech 55	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

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## Analysis

The pilot completed the landing check and verified that the landing gear cockpit indicators light showed that the landing gear was down and locked position. The pilot continued the approach and the airplane touched down with the left wheel retracted. The subsequent examination of the airplane revealed that the left main landing gear extension rod was bent. The landing gear extension rod was replaced, and a successful functional check of the landing gear system was accomplished. According to the flying club assistant chief pilot, this airplane was used for training, and the origin of the extension rod deformation was not determined. Additionally, the pilot had no means of verifying when the main and nose gear assemblies are in the extended and locked positions.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The failure of the left landing gear extension rod for undetermined reasons that resulted in a landing with the gear retracted.

## Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION

Phase of Operation: LANDING

### Findings

1. (C) LANDING GEAR,NORMAL RETRACTION/EXTENSION ASSEMBLY - BENT

## Factual Information

On August 25, 2001, at 1450 eastern daylight time, a Beech 55, N521U, landed with left main landing gear up at the Mayport Airport, in Jacksonville, Florida the training flight was operated by the Navy Flying Club under the provisions of CFR 14 Part 91 with no flight plan filed. Visual weather conditions prevailed at the time of the accident. The certified flight instructor and his student were not injured. The airplane received substantial structural damage. The flight departed Jacksonville, Florida, at 1405.

During the seventh touch and go landing, the left main landing gear failed to extend. According to the pilot, he completed the landing check and verified that the landing gear cockpit indicators light showed a down and locked position. The pilot continued the approach and the airplane touched down with the left wheel retracted.

The subsequent examination of the airplane revealed that the left main landing gear extension rod was bent. The examination also revealed that the uplock rollers were maintained in accordance with required maintenance procedures and performed without discrepancies during the post-accident functional check. The landing gear extension rod was replaced, and a successful functional check of the landing gear system was accomplished. According to the flying club assistant chief pilot, this airplane was used for training, and the origin of the extension rod deformation was not determined. Since, the landing gear indicator system only shows the position of the landing gear motor, the pilot had no means of verifying when the main and nose gear assemblies were in the extended and locked positions.

### Flight instructor Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	36, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>		<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 With waivers/limitations	<b>Last FAA Medical Exam:</b>	May 14, 2001
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	May 4, 2001
<b>Flight Time:</b>	1358 hours (Total, all aircraft), 97 hours (Total, this make and model), 34 hours (Last 90 days, all aircraft)		

## Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	36, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane; Helicopter	<b>Second Pilot Present:</b>	
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 None	<b>Last FAA Medical Exam:</b>	March 31, 2001
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	2100 hours (Total, all aircraft), 5 hours (Total, this make and model), 5 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Beech	<b>Registration:</b>	N521U
<b>Model/Series:</b>	55	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	TE-85
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	100 hour	<b>Certified Max Gross Wt.:</b>	4880 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	2 Reciprocating
<b>Airframe Total Time:</b>	8109 Hrs	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	IO-520-C
<b>Registered Owner:</b>	Jax Navy Flying Club NAS	<b>Rated Power:</b>	285 Horsepower
<b>Operator:</b>		<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>	Day
<b>Observation Facility, Elevation:</b>	JAX,41 ft msl	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	14:55 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Scattered / 7000 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	11 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	50°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.04 inches Hg	<b>Temperature/Dew Point:</b>	30°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Jacksonville (NRB )	<b>Type of Flight Plan Filed:</b>	VFR
<b>Destination:</b>		<b>Type of Clearance:</b>	VFR
<b>Departure Time:</b>	14:05 Local	<b>Type of Airspace:</b>	Class D

## Airport Information

<b>Airport:</b>	Mayport Airport KNRB	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	050	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	8004 ft / 200 ft	<b>VFR Approach/Landing:</b>	Touch and go

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 None	<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>	2 None	<b>Latitude, Longitude:</b>	30.247222,-81.680557

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Powell, Phillip
<b>Additional Participating Persons:</b>	Alan C Nemcik; FAA Orlando FSDO; Orlando, FL
<b>Original Publish Date:</b>	September 30, 2003
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=53243">https://data.nts.gov/Docket?ProjectID=53243</a>

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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](#).