



# Aviation Investigation Factual Report

<b>Location:</b>	Belleville, Illinois	<b>Accident Number:</b>	CHI07LA056
<b>Date &amp; Time:</b>	December 28, 2006, 16:12 Local	<b>Registration:</b>	N9284P
<b>Aircraft:</b>	Piper PA-24-260B	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	3 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Factual Information

On December 28, 2006, at 1612 central standard time, a Piper PA-24-260B (Comanche), piloted by a commercial pilot, was substantially damaged while landing at Scott AFB/MidAmerica Airport (BLV), Belleville, Illinois. Visual meteorological conditions prevailed at the time of the accident. The personal flight was operating under the provisions of 14 Code of Federal Regulations (CFR) Part 91 without a flight plan. The pilot and his two passengers were not injured. The flight originated from Piatt County Airport (2K0), Monticello, Illinois, at 1507.

The pilot reported that after takeoff he selected landing gear-up, but the corresponding position light did not illuminate. He checked the landing gear motor circuit breaker and found it tripped. He selected landing gear-down and reset the circuit breaker. The landing gear did not fully extend, as indicated by the position of the emergency extension handle and the position lights. The pilot again attempted to retract the landing gear, but it only retracted about 90-percent before the landing gear motor circuit breaker tripped. The pilot decided to continue to BLV where he planned to perform an emergency landing gear extension prior to landing.

As the airplane neared BLV, the pilot attempted to lower the landing gear without success using the normal extension procedure. He then proceeded with the emergency landing gear extension procedure. The pilot was unable to get the landing gear to fully extend or retract during subsequent attempts. The control tower verified that the landing gear was not fully extended during a fly-by. The pilot decided to retract the landing gear as much as possible and perform a wheels-up landing in the grass area adjacent to runway 14. The airplane sustained substantial damage to a fuselage bulkhead during landing.

Inspection of the airplane showed that the left main and nose landing gear were completely retracted into their respective wheelwells. The right main landing gear was partially extended with its wheel and lower strut assembly rotated in the wheelwell. The AN174-13 bolt (p/n 402-313) that attached the upper and lower portions of the torque link assembly (p/n 20735-03) was sheared in half. The lower torque link was jammed against the wheelwell structure, which restricted the movement of the entire landing gear assembly.

The torque link assembly and bolt were sent to the National Transportation Safety Board's Materials Laboratory in Washington, D.C., for further examination. The bolt fracture features were consistent with shear overstress, as a result of torsion during the action of the torque link assembly. The bolt fracture face did not contain any evidence of fatigue cracking. The separated bolt sections were seized within the upper and lower torque links, as a result of surface corrosion.

## Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	39,Male
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea; Multi-engine land; Multi-engine sea	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Balloon; Glider; Gyroplane	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine; Glider; Gyroplane; Instrument airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	January 1, 2004
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	October 1, 2005
<b>Flight Time:</b>	2128 hours (Total, all aircraft), 543 hours (Total, this make and model), 1856 hours (Pilot In Command, all aircraft), 14 hours (Last 90 days, all aircraft), 8 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N9284P
<b>Model/Series:</b>	PA-24-260B	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	24-4784
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	August 1, 2006 Annual	<b>Certified Max Gross Wt.:</b>	3100 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	5228 Hrs at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	IO-540-C4D5D
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	260 Horsepower
<b>Operator:</b>	On file	<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>	BLV,459 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	15:55 Local	<b>Direction from Accident Site:</b>	0°
<b>Lowest Cloud Condition:</b>	Scattered / 25000 ft AGL	<b>Visibility</b>	7 miles
<b>Lowest Ceiling:</b>		<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	11 knots / None	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	180°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.14 inches Hg	<b>Temperature/Dew Point:</b>	8°C / 1°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Monticello, IL (2K0 )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Belleville, IL (BLV )	<b>Type of Clearance:</b>	VFR flight following
<b>Departure Time:</b>	15:07 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	Scott AFB/Mid America Airport BLV	<b>Runway Surface Type:</b>	Grass/turf
<b>Airport Elevation:</b>	459 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>		<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	Forced landing;Full stop;Traffic pattern

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	2 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	3 None	<b>Latitude, Longitude:</b>	38.552776,-89.836112

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Fox, Andrew
<b>Additional Participating Persons:</b>	Norman Loftsgard; Federal Aviation Administration - St. Louis FSDO; St. Ann, MO
<b>Report Date:</b>	January 29, 2008
<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=65208">https://data.nts.gov/Docket?ProjectID=65208</a>

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