



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Blairstown, NJ	<b>Accident Number:</b>	NYC02LA090
<b>Date &amp; Time:</b>	05/01/2002, 1430 EDT	<b>Registration:</b>	N37731
<b>Aircraft:</b>	Bell 47J-2A	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None

**Flight Conducted Under:** Part 91: General Aviation - Other Work Use - Sightseeing

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## Analysis

During the flare, the tail rotor blades struck a tire, which was used to mark off the helipad. The helicopter rotated to the right and began to climb. The pilot closed the throttle, and the helicopter touched down hard, coming to rest upright.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper flare, and his failure to maintain obstacle clearance which resulted in a tail strike.

## Findings

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Occurrence #1: IN FLIGHT COLLISION WITH OBJECT  
Phase of Operation: LANDING - FLARE/TOUCHDOWN

### Findings

1. OBJECT - AIRPORT SIGN/MARKER
2. (C) FLARE - IMPROPER - PILOT IN COMMAND
3. (C) CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND

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Occurrence #2: HARD LANDING  
Phase of Operation: DESCENT - EMERGENCY

## Factual Information

On May 1, 2002, about 1430 eastern daylight time, a Bell 47J-2A helicopter, N37731, was substantially damaged while landing at the Blairstown Airport, Blairstown, New Jersey. The certificated commercial pilot was not injured. Visual meteorological conditions prevailed, and no flight plan was filed for the sightseeing flight conducted under 14 CFR Part 91.

According to the pilot, just after the helicopter lifted off the ground, the passenger advised that a camera had fallen under a seat, and he could not reach it. The pilot elected to hover to a helipad located in grass area, just east of the runway. Four tires marked off the helipad, one at each corner. As the helicopter neared the ground, the pilot flared, and the tail rotor blades struck one of the tires. The helicopter rotated to the right and began to climb. The pilot closed the throttle, and the helicopter touched down hard on the helipad, coming to rest upright.

Examination of the helicopter by a Federal Aviation Administration inspector revealed that the gearbox had separated from the tail boom, and the main landing skids were collapsed around both sides of the fuselage.

The recorded weather at a nearby airport, about the time of the accident, included winds from 290 degrees at 8 knots.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	49, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Multi-engine Sea; Single-engine Land; Single-engine Sea	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	Seatbelt
<b>Instrument Rating(s):</b>	Airplane; Helicopter	<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--no waivers/lim.	<b>Last FAA Medical Exam:</b>	10/23/2001
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	06/18/2001
<b>Flight Time:</b>	4900 hours (Total, all aircraft), 400 hours (Total, this make and model), 4000 hours (Pilot In Command, all aircraft), 6 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Make:	Bell	Registration:	N37731
Model/Series:	47J-2A	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	3702
Landing Gear Type:	Skid	Seats:	4
Date/Type of Last Inspection:	01/14/2002, Annual	Certified Max Gross Wt.:	2950 lbs
Time Since Last Inspection:	7 Hours	Engines:	1 Reciprocating
Airframe Total Time:	3605 Hours at time of accident	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	VO-540
Registered Owner:	Sparta Rotors	Rated Power:	260 hp
Operator:	Sparta Rotors	Operating Certificate(s) Held:	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	ABE, 394 ft msl	Distance from Accident Site:	28 Nautical Miles
Observation Time:	1451 EST	Direction from Accident Site:	241°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	290°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.88 inches Hg	Temperature/Dew Point:	17°C / -2°C
Precipitation and Obscuration:			
Departure Point:	Strousburg, PA (N53)	Type of Flight Plan Filed:	None
Destination:	Blairstown, NJ (1N7)	Type of Clearance:	None
Departure Time:	1400 EDT	Type of Airspace:	Class G

## Airport Information

Airport:	Blairstown Airport (1N7)	Runway Surface Type:	Grass/turf
Airport Elevation:	372 ft	Runway Surface Condition:	Dry
Runway Used:		IFR Approach:	Unknown
Runway Length/Width:		VFR Approach/Landing:	Full Stop

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<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>	40.974167, -74.999722

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Stephen M Demko	<b>Report Date:</b>	06/25/2003
<b>Additional Participating Persons:</b>	Arnie Roholt; FAA; Allentown, PA		
<b>Publish Date:</b>			
<b>Investigation Docket:</b>	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> .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).