



# National Transportation Safety Board Aviation Incident Final Report

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<b>Location:</b>	KNOXVILLE, TN	<b>Incident Number:</b>	ATL911A014
<b>Date &amp; Time:</b>	11/02/1990, 2125 EST	<b>Registration:</b>	N412UT
<b>Aircraft:</b>	BELL 412	<b>Aircraft Damage:</b>	Minor
<b>Defining Event:</b>		<b>Injuries:</b>	4 None

**Flight Conducted Under:** Part 135: Air Taxi & Commuter - Non-scheduled

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## Analysis

THE NIGHT, VFR FLIGHT WAS DISPATCHED TO A STRETCH OF INTERSTATE HIGHWAY TO PICK UP A PATIENT. PRIOR TO LANDING THE LZ WAS SEARCHED FOR OBSTRUCTIONS WITH THE 'NIGHT SUN', AND THE GROUND PERSONNEL ALSO INSPECTED THE LZ. NO OBSTRUCTIONS WERE REPORTED OR OBSERVED IN THE IMMEDIATE LZ AREA. AFTER LANDING, THE PILOT ALSO WALKED THE DEPARTURE CORRIDOR WITH A FLASHLIGHT. SHORTLY AFTER TAKEOFF, THE HELICOPTER COLLIDED WITH FOUR WIRES WHICH WERE STRUNG ACROSS THE HIGHWAY. NEITHER THE FLIGHT CREW NOR THE GROUND PERSONNEL SAW THE WIRES PRIOR TO THE COLLISION. THE WIRES WERE BLACK IN COLOR, AND THE POLES WERE HIDDEN BY BUILDINGS AND TREES. ALSO, HIGH INTENSITY LIGHT STANDARDS LINED THE HIGHWAY AT THE LZ.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be: THE PILOT'S FAILURE TO SEE AND AVOID THE WIRES PRIOR TO THE COLLISION. FACTORS IN THE INCIDENT WERE THE FAILURE OF THE GROUND PERSONNEL TO ADEQUATELY INSPECT THE LANDING ZONE, THE PRESENCE OF HIGH INTENSITY LIGHTS AT THE LZ, AND THE DARK LIGHTING CONDITIONS.

## Findings

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Occurrence #1: IN FLIGHT COLLISION WITH OBJECT  
Phase of Operation: TAKEOFF - INITIAL CLIMB

### Findings

1. TERRAIN CONDITION - ROADWAY/HIGHWAY
2. (F) LIGHT CONDITION - DARK NIGHT
3. OBJECT - WIRE, TRANSMISSION
4. (C) VISUAL LOOKOUT - INADEQUATE - PILOT IN COMMAND
5. (F) VISUAL LOOKOUT - INADEQUATE - GROUND PERSONNEL

## Factual Information

### Pilot Information

<b>Certificate:</b>	Airline Transport	<b>Age:</b>	39, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane; Helicopter	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>		<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 2 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	11/27/1989
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	6278 hours (Total, all aircraft), 556 hours (Total, this make and model), 4812 hours (Pilot In Command, all aircraft), 60 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	BELL	<b>Registration:</b>	N412UT
<b>Model/Series:</b>	412 412	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>		<b>Serial Number:</b>	33025
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	5
<b>Date/Type of Last Inspection:</b>	Unknown	<b>Certified Max Gross Wt.:</b>	11900 lbs
<b>Time Since Last Inspection:</b>	0 Hours	<b>Engines:</b>	2 Turbo Shaft
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	P&W
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	PT6T-3B
<b>Registered Owner:</b>	UNIVERSITY OF TENNESSEE	<b>Rated Power:</b>	1800 hp
<b>Operator:</b>	UNIVERSITY OF TENNESSEE	<b>Operating Certificate(s) Held:</b>	On-demand Air Taxi (135)
<b>Operator Does Business As:</b>	U.T. LIFESTAR	<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Night/Dark
Observation Facility, Elevation:	TYS, 981 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	2100 EST	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	10 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	Calm /	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	-18°C / -18°C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	2125 EST	Type of Airspace:	

## Wreckage and Impact Information

Crew Injuries:	3 None	Aircraft Damage:	Minor
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 None	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	RALPH E HICKS	Report Date:	12/30/1992
Additional Participating Persons:	JAMES PERKINS; NASHVILLE, TN		
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:pubinquiry@ntsb.gov">pubinquiry@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](#).