 National Transportation Safety Board PRELIMINARY REPORT AVIATION		NTSB ID: NYC08FA071		Most Critical Injury: Fatal	
		Occurrence Date: 12/30/2007		Investigated By: NTSB	
		Occurrence Type: Accident		ICAO Report Submitted:	
Location/Time					
Nearest City/Place		State	Zip Code	Local Time	Time Zone
Cherokee		AL	35616	0306	CST
Aircraft Information					
Registration Number		Aircraft Manufacturer		Model/Series Number	
N109AE		Bell		206L-3	
Type of Aircraft: Helicopter			Homebuilt Aircraft? No		
Injury Summary:		Fatal	3	Serious	Minor
					None
Sightseeing Flight: No			Air Medical Transport Flight: Discretionary		
Narrative					
Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:					
<p>On December 30, 2007, at 0306 central standard time, a Bell 206L-3, N109AE, owned and operated by Air Evac EMS Inc., was destroyed during collision with terrain while maneuvering near Cherokee, Alabama. The certificated airline transport pilot, paramedic, and flight nurse were fatally injured. Night visual meteorological conditions prevailed, and no flight plan was filed for the local search flight conducted under 14 Code of Federal Regulations (CFR) Part 91.</p> <p>According to the Safety Program Manager at Air Evac, the flight was initiated after they were notified of a missing hunter, who may have been injured or suffering from exposure. The flight was a voluntary mission, as the operator would not receive payment for the flight unless the hunter required air transport to a hospital. The Safety Program Manager further stated that the three occupants were all employees of Air Evac, and as such, the flight was conducted under CFR Part 91. Although no flight plan was filed with the Federal Aviation Administration (FAA), Air Evac had a dispatch department, and maintained its own computerized flight-tracking program. According to the tracking data, the flight departed Northwestern Alabama Regional Airport (MSL), Muscle Shoals, Alabama about 0200, and arrived over the search area about 0215.</p> <p>Several emergency personnel were on the ground, also searching for the hunter, and witnessed the accident. They reported that the helicopter crewmembers were about to terminate the search, when ground personnel heard a gunshot, which they perceived as a signal from the lost hunter. The ground personnel followed the gun shot noise, and located the hunter's vehicle. The helicopter subsequently illuminated a searchlight in the vicinity of the vehicle, and then located the hunter. The helicopter crewmembers intended to maintain the light on the hunter until ground personnel could also locate him. At that time, the helicopter was about 100 to 150 feet above the trees, and in a hover or very slow flight, when the witnesses heard a decrease in engine noise, followed by an increase in engine noise. They then observed the helicopter spinning right, with a "fireball" near the engine exhaust, as it descended vertically into wooded terrain. The helicopter subsequently came to rest inverted, and a post crash fire ensued.</p> <p>The wreckage was examined at the site on December 30 and 31, 2007. The accident site was located in the Freedom Hills Wildlife Management Area, a large hunting preserve with trees ranging in height about 60 to 80 feet. Numerous tree strikes were noted in the immediate vicinity above the main wreckage, and the terrain near the wreckage sloped 20 to 30 degrees. The main wreckage consisted of the cockpit, fuselage, and a majority of the tail boom. The wreckage was oriented about a 345-degree magnetic heading, at an elevation approximately 725 feet above mean sea level (msl). The cockpit and fuselage were consumed by fire. The tail boom had separated about 1 foot aft of the tail boom attach point. That separation exhibited crushing damage, consistent with ground impact overstress separation. The aft section of tail boom separated about 2 feet aft of the horizontal stabilizer. The aft tail boom separation point exhibited cutting damage from left to right, which was consistent with main rotor blade strike damage. The aft portion of the tail boom, upper portions of the left vertical fin, and tail rotor assembly were found approximately 150</p>					
PRELIMINARY INFORMATION - SUBJECT TO CHANGE					

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Narrative (Continued)

feet southeast of the main wreckage. The forward end of the tail cone also exhibited left to right damage consistent with a main rotor blade strike. Numerous pieces of tail boom shards and a damaged section of tail rotor drive shaft were found in an arc from east to south, about the same distance from the main wreckage as the aft tail cone and tail rotor assembly. Among the shards was a partial piece of tail rotor drive shaft, and two pieces of the upper left vertical fin, which had been cut from left to right, consistent with main rotor blade contact. Both main rotor blades were found in the wreckage, and had separated about 3 feet outboard of the rotor hub. They were partially burned and exhibited leading edge damage and red paint transfer, consistent with one or more tail boom strikes. The outboard sections of the rotor blades exhibited s-bending, consistent with tree and ground impact.


Continuity of the main rotor drive train was confirmed from the engine, through the K-Flex shaft, to the transmission, and through the main rotor mast. The mast was imbedded in the ground and extended through the main rotor hub. The trunion remained attached to the top of the mast by the mast retention nut. The inboard section of the main rotor blades remained attached to the hub at ground level. The main rotor pitch change links were separated mid-span consistent with overstress. Continuity of the tail rotor drive train, and the tail rotor pitch change linkage was established from the engine, to the tail rotor, except for the damaged locations where the tail boom separated.

The engine sustained post crash fire damage and was retained for further examination.

According to company records, the helicopter was maintained under an FAA Approved Airworthiness Inspection Program. The helicopter's most recent inspection was an "Event 1 Check," which was completed four days prior to the accident. The helicopter had flown 4.9 hours since that inspection, and had accumulated 5,087 total hours of operation at the time of the accident.

According to company records, the pilot began employment during March 2007. He had accumulated approximately 3,500 hours of flight experience; of which, 2,900 hours were in helicopters, with 400 hours in the same make and model as the accident helicopter.

The reported weather at MSL, which was located about 15 nautical miles east of the accident site, at 0253, was: wind calm; visibility 5 miles in mist; broken ceiling at 7,500 feet; overcast ceiling at 8,500 feet, temperature 5 degrees Celsius, dew point 4 degrees Celsius; altimeter 30.02 inches of mercury.

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Other Aircraft Involved		
Registration Number	Aircraft Manufacturer	Model/Series Number


Accident Information	
Aircraft Damage: Destroyed	Accident Occurred During: Maneuvering
Property Damage:	

Crew	Name	Certificate No.	Injury
Pilot	On File	On File	Fatal
2			
3			
4			
5			
6			

Operator Information			
Name Air Evac EMS Inc.	Operator Designator Code	Doing Business As	
Street Address	City West Plains	State MO	Zip Code 65775
-Type of Certificate(s) Held: None			
Air Carrier Operating Certificate(s):			
Operating Certificate:		Operator Certificate:	
Regulation Flight Conducted Under: Part 91: General Aviation			
Type of Flight Operations Conducted: Other Work Use			

Flight Plan/Itinerary			
Type of Flight Plan Filed: None			
Last Departure Point	State	Airport Identifier	
Muscle Shoals	AL	MSL	
Destination	State	Airport Identifier	
Local Flight		MSL	

Weather Information			
Investigator's Source:	Facility ID: MSL	Observation Time (Local): 0253	
Sky/Lowest Cloud Condition:		Ft. AGL	
Lowest Ceiling: Broken	7500 Ft. AGL	Visibility: 5 SM	Altimeter: 30.02 "Hg

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Weather Information (Continued from page 2)			
Temperature: 5 °C	Dew Point: 4 °C	Wind Direction:	
Wind Speed: Kts.	Gusts: Kts.	Weather Conditions at Accident Site: Visual Conditions	

Administration Data		
Notification From FAA Southern Region Comm Ctr	Date 12/30/2007	Local Time
FAA District Office/Coordinator Birmingham, AL George Castleberry	Investigator-In-Charge (IIC) Robert J. Gretz	