Aviation Investigation Final Report

Location:	Lake City, Arkansas	**Accident Number:**	CEN13LA359
Date & Time:	June 19, 2013, 16:20 Local	**Registration:**	N467AE
Aircraft:	Bell 206 - L4	**Aircraft Damage:**	Substantial
Defining Event:	Loss of engine power (partial)	**Injuries:**	3 None
Flight Conducted Under:	Part 135: Air taxi & commuter - Non-scheduled - Air Medical (Discretionary)		

Analysis

The pilot stated he was on final approach to a private helipad about 80 to 100 feet above the ground at an airspeed of 40 knots when the engine lost partial power. He lowered the collective and touched down short of the helipad on the edge of tall grass and dirt, and the helicopter subsequently bounced. A postaccident examination of the airframe and a test run of the engine in a test cell and on the airframe identified no anomalies that would have precluded normal operation. The cause of the partial loss of engine power could not be determined.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

A partial loss of engine power for reasons that could not be determined because postaccident examination of the airframe and engine did not reveal any anomalies that would have precluded normal operation.

Findings

Not determined	(general) - Unknown/Not determined

Factual Information

History of Flight

Approach-VFR pattern final	Loss of engine power (partial) (Defining event)

On June 19, 2013, about 1620 central daylight time, N467AE, a Bell BH-206 L-4 helicopter, sustained substantial damage when it made a forced landing after a partial loss of engine power while on final approach to a private helipad (AE02) in Lake City, Arkansas. The commercial pilot, flight nurse, and the paramedic were not injured. The helicopter was registered to a private entity and operated by Air Evac EMS, Incorporated, O'Fallon, Missouri. Visual meteorological conditions prevailed and a company visual flight rules flight plan was filed for the repositioning flight conducted under 14 Code of Federal Regulations Part 91. The flight originated from a private helipad (AE03) in Sikeston, Missouri, about1534.

The pilot reported that the helicopter was approximately 80-100 feet above the ground at an airspeed of 40 knots when the engine lost power. He described the power loss as being similar to when a turbine engine rolls back to flight idle. The pilot lowered the collective to conserve rotor rpm, and touched down short of the landing pad on tall grass/dirt and bounced, which resulted in damage to the skids and the tail boom.

According to the operator, the helicopter and the engine had accrued a total of 154.3 hours since new. An airframe examination was conducted on June 25, 2013, at the operator's maintenance facility in Pomona, Missouri, under the supervision of the Federal Aviation Administration (FAA). Examination of the helicopter's main rotor, tail rotor, flight control, and hydraulic systems revealed no pre-impact anomalies. In addition, examination of the fuel system revealed no leaks or discrepancies that would have contributed to a loss of engine power.

The engine was examined at Rolls Royce in Indianapolis, Indiana, on July 9, 2013, under the supervision of the National Transportation Safety Board (NTSB). The engine was placed on a test-cell stand where it was visually examined and checked for leaks. No leaks or discrepancies were observed that would have precluded the engine from being run. The engine was then placed in an engine test-cell and run in accordance to the Rolls-Royce 250-C30 series overhaul manual. The engine was started and ran through its full power range twice. No anomalies were identified that would have contributed to a loss of engine power.

The engine was returned to the operator and re-installed on the helicopter using the same controllers and a ground run was conducted in accordance with the manufacturer's Operational Acceptance Flight Checklist for the BH-206L. The purpose of the test was to try and duplicate the loss of engine power reported by the pilot and to determine if any other anomalies may have contributed to the accident. The ground run did not identify any anomalies with either the airframe or engine that would have contributed to a partial loss of engine power.

The pilot held a commercial pilot certificate for rotorcraft-helicopter, and an instrument rating for rotorcraft-helicopter. He reported a total flight time of 5,380 hours; of which, 2,007 hours were in the same make/model helicopter as the accident helicopter.

Weather at Jonesboro Municipal airport (JBR), about 10 miles southwest, at 1553 was reported as calm wind, 10 miles visibility, few clouds at 4,400 feet, temperature 29 degrees C, and a dewpoint 20 degrees C.

Pilot Information

Certificate:	Commercial	**Age:**	58
Airplane Rating(s):	None	**Seat Occupied:**	Right
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	4-point
Instrument Rating(s):	Helicopter	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	October 19, 2012
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	March 4, 2013
Flight Time:	5380 hours (Total, all aircraft), 2007 hours (Total, this make and model), 5270 hours (Pilot In Command, all aircraft), 33 hours (Last 90 days, all aircraft), 14 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bell	**Registration:**	N467AE
Model/Series:	206 - L4 L4	**Aircraft Category:**	Helicopter
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	52438
Landing Gear Type:	High skid; Skid	**Seats:**	4
Date/Type of Last Inspection:	May 19, 2013 AAIP	**Certified Max Gross Wt.:**	4450 lbs
Time Since Last Inspection:	154 Hrs	**Engines:**	1 Turbo shaft
Airframe Total Time:	154 Hrs as of last inspection	**Engine Manufacturer:**	Rolls Royce
ELT:	Installed, not activated	**Engine Model/Series:**	CAE-896154
Registered Owner:	JP Morgan Chase Bank	**Rated Power:**	650 Horsepower
Operator:	Air Evac EMS INC	**Operating Certificate(s) Held:**	On-demand air taxi (135)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	JBR,262 ft msl	**Distance from Accident Site:**	10 Nautical Miles
Observation Time:	15:53 Local	**Direction from Accident Site:**	270°
Lowest Cloud Condition:	Few / 4400 ft AGL	**Visibility**	10 miles
Lowest Ceiling:		**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	29°C / 20°C
Precipitation and Obscuration:			
Departure Point:	Sikeston, MO (AE03)	**Type of Flight Plan Filed:**	Company VFR
Destination:	Lake City, AR (AE02)	**Type of Clearance:**	None
Departure Time:	15:34 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	Air Evac Helipad AE02	**Runway Surface Type:**	Concrete
Airport Elevation:	235 ft msl	**Runway Surface Condition:**	Dry;Soft;Vegetation
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	2 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	3 None	**Latitude, Longitude:**	35.825553,-90.641113(est)

Administrative Information

Investigator In Charge (IIC):	Yeager, Leah
Additional Participating Persons:	Brian Love; FAA/FSDO; Little Rock, AR Jon Michael; Rolls Royce; Indianapolis, IN David Hardin; Air Evac Lifeteam; O'Fallon, MO Joan Gregoire; Bell Helicopter (Tech advisor to TSB); Hurst, TX
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Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=87240