
 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: WPR11LA122		Aircraft Registration Number: N416WC	
		Occurrence Date: 02/04/2011		Most Critical Injury: Minor	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place Elverta		State CA	Zip Code 95626	Local Time 1422	Time Zone PST
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility:			
Aircraft Information Summary					
Aircraft Manufacturer McDonnell Douglas Helicopters		Model/Series 369E (MD500E)		Type of Aircraft Helicopter	
Revenue Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
<p>Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:</p> <p>*** Note: NTSB investigators may not have traveled in support of this investigation and used data provided by various sources to prepare this aircraft accident report. ***</p> <p>HISTORY OF FLIGHT</p> <p>On February 4, 2011, about 1422 Pacific standard time, a McDonnell Douglas Helicopters 369E (MD500E), N416WC, became entangled with a sock line rope used to string power lines near Elverta, California. Wilson Construction Company was operating the helicopter under the provisions of 14 Code of Federal Regulations (CFR) Part 133. The commercial pilot and one passenger sustained minor injuries; the helicopter sustained substantial damage to the airframe and main rotor blades. Visual meteorological conditions prevailed, and no flight plan had been filed.</p> <p>The operator reported that the helicopter was working on a project to construct 30 miles of high power electrical lines, which are oriented north-south. It is not possible to pull the conductor wire through bundled travelers unless the sock line is actually in contact with the roller. Construction crews install a hold down, which is a temporary block that they secure to a ground anchor. They adjust the anchor rope to force the sock line to rest in the bundle block traveler when in tension. The operator noted that it is standard industry practice to use a helicopter to install a hold down.</p> <p>A lineman was on the skid of the helicopter, which was in position to install a hold down at a power line structure. The pilot positioned the helicopter about 30-50 feet south of the structure; his flagman was facing the west. The pilot believed that he was properly positioned near the sock line so that they could perform the task safely.</p> <p>The lineman on the skid placed the larger of the two hold down ropes over the sock line, and allowed it to fall onto the west side. The lineman allowed the hold down block to hang by the large rope just below and on the east side of the sock line. The large rope tangled as it fell to the ground. The lineman on the ground grabbed the end of the rope, and tried to clear the tangle. The lineman on the skid had one hand on the hold down, and was preparing to release the second, smaller rope downward on the western side of the sock line with the other hand.</p> <p>The main rotor blades made contact with the sock line rope, which wrapped around the mast as the blades pulled it in. The pilot lost control of the helicopter, and it began an uncontrolled descent to the ground. The helicopter came to rest upright about 10 feet south of the power line structure. The lineman on the skid was lying on the ground, but still attached to the helicopter by her fall restraint and positioning belt. The pilot extricated himself from the helicopter.</p> <p>TESTS AND RESEARCH</p>					
FACTUAL REPORT - AVIATION					


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Narrative (Continued)

Investigators from the FAA, Boeing, and Rolls-Royce Allison (RR) examined the wreckage at the operator's facilities at McLellan Airfield, Sacramento, California, on February 9, 2011.

The investigators examined the airframe and engine, with no mechanical anomalies identified that would have precluded normal operation.

Updated on Mar 28 2012 10:59AM

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Landing Facility/Approach Information					
Airport Name	Airport ID:	Airport Elevation Ft. MSL	Runway Used N/A	Runway Length	Runway Width
Runway Surface Type:					
Runway Surface Condition:					
Approach/Arrival Flown: NONE					
VFR Approach/Landing: None					
Aircraft Information					
Aircraft Manufacturer McDonnell Douglas Helicopters		Model/Series 369E (MD500E)		Serial Number 0268E	
Airworthiness Certificate(s): Normal					
Landing Gear Type: Skid					
Amateur Built Acft? No	Number of Seats: 4	Certified Max Gross Wt. 3000 LBS	Number of Engines: 1		
Engine Type: Turbo Shaft	Engine Manufacturer: Rolls-Royce Allison	Model/Series: 250-C20B	Rated Power: 420 HP		
- Aircraft Inspection Information					
Type of Last Inspection 100 Hour	Date of Last Inspection 01/2011	Time Since Last Inspection Hours	Airframe Total Time 6256 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed?/Type Yes / Unknown	ELT Operated? Yes	ELT Aided in Locating Accident Site? No			
Owner/Operator Information					
Registered Aircraft Owner Wilson Construction Company		Street Address			
		City Canby	State OR	Zip Code 97013	
Operator of Aircraft Wilson Construction Company		Street Address			
		City Canby	State OR	Zip Code 97013	
Operator Does Business As:			Operator Designator Code:		
- Type of U.S. Certificate(s) Held:					
Air Carrier Operating Certificate(s):					
Operating Certificate:			Operator Certificate: Aircraft External Load		
Regulation Flight Conducted Under: Part 133: Rotorcraft Ext. Load					
Type of Flight Operation Conducted: Other Work Use					
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First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 57
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Sex: M	Seat Occupied: Left	Occupational Pilot? Yes	Certificate Number: On File
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Certificate(s): Commercial

Airplane Rating(s): None

Rotorcraft/Glider/LTA: Helicopter

Instrument Rating(s): Helicopter

Instructor Rating(s): None

Current Biennial Flight Review? 02/2010

Medical Cert.: Class 2	Medical Cert. Status: With Waivers/Limitations	Date of Last Medical Exam: 07/2010
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- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	22500	17600						22500		
Pilot In Command(PIC)	22500	17600						22500		
Instructor										
Instruction Received										
Last 90 Days	75	75						75		
Last 30 Days	20	20						20		
Last 24 Hours	5	5						5		

Seatbelt Used? Yes	Shoulder Harness Used? Yes	Toxicology Performed? No	Second Pilot? No
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Flight Plan/Itinerary

Type of Flight Plan Filed: None

Departure Point Same as Accident/Incident Location	State	Airport Identifier	Departure Time	Time Zone PST
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Destination Local Flight	State CA	Airport Identifier	
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Type of Clearance: None

Type of Airspace:

Weather Information

UAT/CA Source of Wx Information:

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Weather Information

WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
KSMF	1353	PST	27 Ft. MSL	6 NM	252 Deg. Mag.
Sky/Lowest Cloud Condition: Clear			Ft. AGL	Condition of Light: Dawn	
Lowest Ceiling: None			Ft. AGL	Visibility: 10 SM	Altimeter: 30.31 "Hg
Temperature: 15 °C	Dew Point: 6 °C	Weather Conditions at Accident Site: Visual Conditions			
Wind Direction:	Wind Speed: Calm		Wind Gusts:		
Visibility (RVR): Ft.	Visibility (RVV) SM				
Precip and/or Obscuration: No Obscuration; No Precipitation					

Accident Information

Aircraft Damage: Substantial	Aircraft Fire: None	Aircraft Explosion: None
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- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot			1		1
Second Pilot					
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants					
Other Crew					
Passengers			1		1
- TOTAL ABOARD -			2		2
Other Ground					
- GRAND TOTAL -			2		2

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Administrative Information

Investigator-In-Charge (IIC)
Howard D. Plagens

Additional Persons Participating in This Accident/Incident Investigation:

Gerry Griswold
FAA FSDO
Sacramento, CA

Adrian Booth
Boeing
Mesa, AZ

Jon-Adam Michael
Rolls-Royce
Indianapolis, IN

Anthony Helbling
Wilson Construction
Canby, OR