



Aviation Investigation Final Report

Location:	Westport, Oklahoma	Accident Number:	DFW08CA079
Date & Time:	March 8, 2008, 15:00 Local	Registration:	N5251B
Aircraft:	Wiley Rotorway Exec 90	Aircraft Damage:	Substantial
Defining Event:	Electrical system malf/failure	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The certified flight instructor and the student pilot were on an instructional flight to practice autorotations and simulated engine failures. About 45 minutes into the flight the instructor noticed the engine tachometer read lower than the rotor tachometer. The student pilot checked the battery voltage and said that it was "low". The instructor reported that the engine's fuel pump and ignition systems were not independent and he did not want to risk a downwind autorotation landing. When the instructor saw the rotor tachometer drop to 90 percent, he initiated an autorotation, assuming the helicopter had or was about to lose engine power. During the landing the left skid sank into the soft terrain and the helicopter subsequently rolled on to its side. The helicopter sustained substantial damage during the precautionary landing.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: An unsuccessful precautionary landing due to an electrical system malfunction.

Findings

Aircraft	(general) - Malfunction
Environmental issues	Soft surface - Not specified

Factual Information

History of Flight

Maneuvering	Electrical system malf/failure (Defining event)
Autorotation	Collision with terr/obj (non-CFIT)

Flight instructor Information

Certificate:	Commercial	Age:	48, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	Glider; Helicopter	Restraint Used:	
Instrument Rating(s):	Helicopter	Second Pilot Present:	
Instructor Rating(s):	Helicopter; Instrument helicopter	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	July 1, 2007
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	November 1, 2007
Flight Time:	498 hours (Total, all aircraft), 22 hours (Total, this make and model), 113 hours (Last 90 days, all aircraft), 19 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Student pilot Information

Certificate:	Sport Pilot	Age:	32, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Sport pilot	Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Willey	Registration:	N5251B
Model/Series:	Rotorway Exec 90	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	5251
Landing Gear Type:	Skid	Seats:	
Date/Type of Last Inspection:	March 1, 2008 Condition	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	983 Hrs as of last inspection	Engine Manufacturer:	Rotorway
ELT:	Not installed	Engine Model/Series:	RW-100
Registered Owner:	On file	Rated Power:	
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KRVS	Distance from Accident Site:	20 Nautical Miles
Observation Time:	14:53 Local	Direction from Accident Site:	150°
Lowest Cloud Condition:	Unknown	Visibility	10 miles
Lowest Ceiling:	Overcast / 6000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	12 knots / 16 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	10°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.13 inches Hg	Temperature/Dew Point:	2°C / -5°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	CLEVELAND, OK (95F)	Type of Flight Plan Filed:	None
Destination:	WESTPORT, OK (4F1)	Type of Clearance:	None
Departure Time:		Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	36.222221,-96.344444

Administrative Information

Investigator In Charge (IIC):	Hatch, Craig
Additional Participating Persons:	Robert Terry; FAA FSDO; Oklahoma City, OK
Original Publish Date:	April 30, 2008
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=67640

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