



Aviation Investigation Final Report

Location:	Mooresville, Indiana	Accident Number:	CHI06CA155
Date & Time:	June 17, 2006, 12:20 Local	Registration:	N9164X
Aircraft:	McFarland Rotorway Exec	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The amateur-built helicopter was destroyed by a fire that began in-flight and continued on the ground after landing. The flight instructor and dual student were not injured. The instructor and dual student reported that the instructional flight consisted of practicing hovering. They stated that approximately 20 minutes into the flight they thought they smelled smoke and decided to make a precautionary landing. The pilots reported that once they landed, smoke was coming out of the engine compartment and the engine had stopped. Both pilots exited the helicopter safely. Subsequent efforts to extinguish the fire were unsuccessful. A post accident examination was unable to determine the source of the fire due to the extensive damage to the helicopter.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: An in-flight fire for undetermined reasons.

Findings

Occurrence #1: FIRE
Phase of Operation: HOVER

Findings

1. (C) REASON FOR OCCURRENCE UNDETERMINED

Factual Information

The amateur-built helicopter was destroyed by a fire that began in-flight and continued on the ground after landing. The flight instructor and dual student were not injured. The instructor and dual student reported that the instructional flight consisted of practicing hovering. They stated that approximately 20 minutes into the flight they thought they smelled smoke and decided to make a precautionary landing. The pilots reported that once they landed, smoke was coming out of the engine compartment and the engine had stopped. Both pilots exited the helicopter safely. Subsequent efforts to extinguish the fire were unsuccessful. A post accident examination was unable to determine the source of the fire due to the extensive damage to the helicopter.

Flight instructor Information

Certificate:	Commercial; Flight instructor	Age:	61, Male
Airplane Rating(s):	None	Seat Occupied:	Right
Other Aircraft Rating(s):	Gyroplane; Helicopter	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	Gyroplane; Helicopter	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	June 1, 2006
Occupational Pilot:	No	Last Flight Review or Equivalent:	July 1, 2003
Flight Time:	3100 hours (Total, all aircraft), 15 hours (Total, this make and model), 3100 hours (Pilot In Command, all aircraft), 90 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Student pilot Information

Certificate:	None	Age:	49, Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	None	Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	McFarland	Registration:	N9164X
Model/Series:	Rotorway Exec	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	8601439
Landing Gear Type:	Skid	Seats:	2
Date/Type of Last Inspection:	October 1, 2005 Condition	Certified Max Gross Wt.:	1425 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	340 Hrs at time of accident	Engine Manufacturer:	Rotorway
ELT:	Not installed	Engine Model/Series:	RI-162
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:	IND,797 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	11:54 Local	Direction from Accident Site:	45°
Lowest Cloud Condition:	Few / 15000 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	6 knots / 0 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	220°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.04 inches Hg	Temperature/Dew Point:	29°C / 16°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Mooresville, IN (PVT)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	12:00 Local	Type of Airspace:	

Airport Information

Airport:	Private PVT	Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Precautionary landing

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Destroyed
Passenger Injuries:		Aircraft Fire:	Both in-flight and on-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	39.717498,-86.30194

Administrative Information

Investigator In Charge (IIC):	Sorensen, Timothy
Additional Participating Persons:	Mary J Ballard; FAA-Indianapolis FSDO
Original Publish Date:	October 3, 2006
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=64103

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