



# National Transportation Safety Board Aviation Accident Final Report

---

<b>Location:</b>	New Columbia, IL	<b>Accident Number:</b>	CEN11LA317
<b>Date &amp; Time:</b>	05/03/2011, 1830 CDT	<b>Registration:</b>	N38096
<b>Aircraft:</b>	Texas Helicopter Corporation OH-13E/M74	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Collision during takeoff/land	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

---

## Analysis

The aerial-application helicopter was operating from an uncultivated area of the wheat field being sprayed. The pilot stated that, shortly after takeoff, while accelerating through translational lift, the helicopter encountered a momentary loss of lift, consistent with an encounter with a wind gust, and settled into the wheat crop. The helicopter pitched down suddenly as the spray booms made contact with the crop and subsequently collided with terrain. The pilot reported that there were no preimpact mechanical malfunctions or failures that would have precluded normal operation of the helicopter.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain adequate clearance from the wheat crop during takeoff.

## Findings

---

<b>Aircraft</b>	Altitude - Not attained/maintained (Cause)
<b>Personnel issues</b>	Aircraft control - Pilot (Cause)
<b>Environmental issues</b>	Terrain - Contributed to outcome

## Factual Information

On May 3, 2011, at 1830 central daylight time, a Texas Helicopter Corporation model OH-13E/M74 helicopter, N38096, was substantially damaged when it collided with terrain during takeoff near New Columbia, Illinois. The pilot was not injured. The helicopter was registered to and operated by Hendrickson Flying Service Incorporated, under the provisions of 14 Code of Federal Regulations Part 137. Day visual meteorological conditions prevailed for the flight, which was operated without a flight plan. The local aerial-application flight was originating at the time of the accident.

The pilot reported that the helicopter was operating from an uncultivated area of the wheat field being sprayed. The helicopter had been refueled and loaded with fungicide immediately before the accident takeoff. The pilot stated that shortly after takeoff, while accelerating through translational lift, the helicopter encountered a momentary loss of lift consistent with a wind gust and settled into the wheat crop. The helicopter pitched down suddenly as the spray booms made contact with the crop, and subsequently collided with terrain. The helicopter came to rest on its right side about 75 yards from the takeoff position. The engine continued to run after impact and was subsequently turned-off by the pilot using the magneto switch. The helicopter sustained substantial damage to the main rotor system, fuselage, and tailboom. The pilot reported that there were no preimpact mechanical malfunctions or failures that would have precluded normal operation of the helicopter.

The nearest aviation weather observation station with recorded historical weather information was at Barkley Regional Airport (KPAH), about 19 nm south of the accident site, which was equipped with an automated surface observing system (ASOS).

At 1853, the KPAH ASOS reported the following weather conditions: Wind 320 degrees at 6 knots; visibility 10 miles; sky clear; temperature 16 degrees Celsius; dew point 1 degrees Celsius; altimeter setting 30.22 inches of mercury.

## History of Flight

Takeoff	Collision during takeoff/land (Defining event)
---------	--

## Pilot Information

Certificate:	Flight Instructor; Commercial	Age:	64, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Single
Other Aircraft Rating(s):	Helicopter	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	Helicopter	Toxicology Performed:	No
Medical Certification:	Class 2 With Waivers/Limitations	Last Medical Exam:	04/15/2011
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	06/01/2009
Flight Time:	15399 hours (Total, all aircraft), 2384 hours (Total, this make and model), 14933 hours (Pilot In Command, all aircraft), 12 hours (Last 90 days, all aircraft), 12 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	Texas Helicopter Corporation	<b>Registration:</b>	N38096
<b>Model/Series:</b>	OH-13E/M74	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Restricted	<b>Serial Number:</b>	77-005
<b>Landing Gear Type:</b>	Skid;	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	05/05/2010, Annual	<b>Certified Max Gross Wt.:</b>	2850 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	6040 Hours	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	VO-435-A1C
<b>Registered Owner:</b>	Hendrickson Flying Service, Inc.	<b>Rated Power:</b>	240 hp
<b>Operator:</b>	Hendrickson Flying Service, Inc.	<b>Air Carrier Operating Certificate:</b>	

## Meteorological Information and Flight Plan

<b>Observation Facility, Elevation:</b>	M30, 410 ft msl	<b>Observation Time:</b>	1853 CDT
<b>Distance from Accident Site:</b>	19 Nautical Miles	<b>Condition of Light:</b>	Day
<b>Direction from Accident Site:</b>	175°	<b>Conditions at Accident Site:</b>	Visual Conditions
<b>Lowest Cloud Condition:</b>	Clear	<b>Temperature/Dew Point:</b>	16°C / 1°C
<b>Lowest Ceiling:</b>	None	<b>Visibility</b>	10 Miles
<b>Wind Speed/Gusts, Direction:</b>	6 knots, 320°	<b>Visibility (RVR):</b>	
<b>Altimeter Setting:</b>	30.22 inches Hg	<b>Visibility (RVV):</b>	
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	New Columbia, IL	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	New Columbia, IL	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	1830 CDT	<b>Type of Airspace:</b>	Class G

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None		

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Andrew T Fox	<b>Adopted Date:</b>	01/17/2012
<b>Additional Participating Persons:</b>	Frank Crawford; Federal Aviation Administration - Springfield FSDO; Springfield, IL		
<b>Publish Date:</b>	01/17/2012		
<b>Investigation Docket:</b>	<a href="http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=79026">http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=79026</a>		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report.